### NC

#### I negate. First, knowledge requires certainty. The statement “I know how to solve this math problem but I’m not certain how to solve it” is a contradiction. Two implications:

#### 1] A 1% risk that our epistemic viewpoints are unreliable means you vote neg on skep

#### 2] Presumption negates since it proves there is uncertainty related to the aff, meaning that we can’t justifiably believe in it.

#### Now, we lack free will –

#### 1] Double bind – proving determinism true or false both means free will is nonexistent.

Colin McGinn, Problems in Philosophy: The Limits of Inquiry. London: Wiley, 1993. P. 80, //AHS PB rc

The argument is exceedingly familiar, and runs as follows. Either determinism is true or it is not. If it is true, then all our chosen actions are uniquely necessitated by prior states of the world., just like every other event. But then it cannot be the case that we could have acted otherwise, since this would require a possibility determinism rules out. Once the initial conditions are set and the laws fixed, causality excludes genuine freedom. On the other hand, if indeterminism is true, then, though things could have happened otherwise, it is not the case that we could have chosen otherwise, since a merely random event is no kind of free choice. That some events occur causelessly, or are not subject to law, or only to probabilistic law, is not sufficient for those events to be free choices. Thus one horn of the dilemma represents choices as predetermined happenings in a predictable causal sequence, while the other construes them as inexplicable lurches to which the universe is randomly prone. Neither alternative supplies what the notion of free will requires,, and no other alternative suggests itself. Therefore freedom is not possible in any kind of possible world. The concept contains the seeds of its own destruction.

#### 2] Neuroscience proves conscious will is an illusion.

Wegner, Daniel M., 2002, *The Illusion of Conscious Will*, Cambridge, MA: MIT Press. JS

RP = Readiness Potential,

The results were truly noteworthy, although in some sense this is exactly what you would have to expect: The conscious willing of finger movement occurred at a significant interval after the onset of the RP but also at a significant interval before the actual finger movement (and also at a significant interval before the awareness of movement). The time line for the RP, W, M, and actual movement events is shown in figure 2.8. These findings suggest that the brain starts doing something first (we don’t know just what that is). Then the person becomes conscious of wanting to do the action. This would be where the conscious will kicks in, at least, in the sense that the person first becomes conscious of trying to act. Then, and still a bit prior to the movement, the person reports becoming aware of the finger actually moving.6 Finally, the finger moves. Libet and colleagues suggested that the S series could be used as a guide to estimating how long any hand-to-brain activity might take. It took about 47 milliseconds for people to report being consciously aware of a stimulus to the hand, so Libet reasoned it might be useful to subtract this number from the W and M series values to adjust for this part of the process. This doesn’t really change the overall conclusion; it just moves the “aware of wanting” time to 157 milliseconds and the “aware of moving” time to 39 milliseconds. One other quibble: You may have noticed that the RP in this study occurred later (535 milliseconds) than the one in Kornhuber and Deecke’s experiment (approximately 800 milliseconds). This is because Libet made a special point of asking participants to mention if they had done any preplanning of the finger movement and eliminated those instances from the analysis. In a separate study, Libet, Wright, and Gleason (1982) had learned that the RP occurred as much as a second or two earlier on trials when participants were allowed to plan for their movement, so the conscious will study avoided this by emphasizing spontaneous, unplanned movements. The conclusion suggested by this research is that the experience of conscious will kicks in at some point after the brain has already started preparing for the action. Libet sums up these observations by saying that “the initiation of the voluntary act appears to be an unconscious cerebral process. Clearly, free will or free choice of whether to act now could not be the initiating agent, contrary to one widely held view. This is of course also contrary to each individual’s own introspective feeling that he/she consciously initiates such voluntary acts; this provides an important empirical example of the possibility that the subjective experience of a mental causality need not necessarily reflect the actual causative relationship between mental and brain events” (Libet 1992, 269)

#### 3] Induction – because something cannot come from nothing according to the laws of thermodynamics, every action must have a cause – that means a causal chain of actions that eventually began before we existed structures our actions rather than our will.

#### Determinism disproves the resolution –

#### 1] Free will and determinism can’t coexist since a will is not truly free if they could not change the choice they willed, which determinism denies – moral responsibility requires free will – that’s why we don’t mark people who were misguided, deceived, or coerced into taking immoral action as inherently bad people.

#### That negates: the act of assigning unjustness presumes something that is morally right that is violated.

Lexico Dictionaries, "UNJUST English Definition and Meaning," <https://www.lexico.com/en/definition/unjust> JS

not based on or behaving according to what is morally right and fair.

#### 2] Even if util’s true and morality’s possible, determinism negates – util requires we compare between different worlds and see if one produces more pleasure than an alternate action, but insofar as alternate actions don’t exist comparison is impossible – thus we can’t say the aff world is better than the neg.

### T

#### A topical affirmative must prohibit appropriation of areas of outer space.

#### They violate—they only regulate resources from space.

#### 1. Legal precision—their plan misinterprets the OST. Taking things from space is not appropriation “of outer space”

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Rishiraj Baruah (International Institute of Air and Space Law, Leiden University, Netherlands) and Nandini Paliwal (International Institute of Air and Space Law, Leiden University, Netherlands). “Sustainable Space Exploration and Use: Space Mining in Present and Future Perspectives.” International Astronautical Federation, Paper IAC-15,E7,1,3,x29545. 2015. JDN. https://swfound.org/media/205300/rishirajbaruah-sustainable-space-exploration-and-use.pdf

For promoting mining in outer space, the distinction between **appropriation of an area** or part thereof by claim of sovereignty must be distinguished from **appropriation of** particular **resources** existing in that area.25 The national appropriation principle discussed prohibits any public or private property rights in outer space. Now, any interpretation of a treaty has to be done by reference to its context and object and purpose.26 Article I literal 1 of OST read with Article I literal 2 OST forwards a view that as the exploration and use of outer space should be carried out for benefit and in interests of all countries, any claim of sovereignty in outer space would run contrary to Article I literal 1.27 Hence, the purpose of Article II is to prevent exclusive claims to outer space due to its res communis nature.28 The resources present in a commons regime can be exploited by all. For example, fisheries wherein the area is a common pool and the resource i.e. the fishes can be utilized by everyone. 29 Just as the mineral resources in the High Seas are open to all, subject to international regulations, outer space mineral resources are open to all.30 Freedom of exploration and use is the fundamental principle of space law and has **no express prohibition** on exploitation of mineral resources. As a corollary to the freedom of exploration and use in the OST, the residuary rule of presumptive freedom of action as a principle of international law, permits what is not prohibited.31 Jurists like Professors Gorove 32 and Jenks33 opine that the non-appropriation principle applies only to landed areas of the moon and other celestial bodies and does not extend to mineral resources. Keeping in view the aforementioned contentions, it can be said that **the** national appropriation **principle only prohibits appropriation of ‘areas’ in outer space** including the Moon and other celestial bodies, however does not prohibit the appropriation of mineral resources in outer space. The Space Benefits Declaration34 can be considered as an interpretation of Article 1 of the OST.35 While the Declaration expands the OST with regard to apportionment of benefits, it does not prohibit the appropriation of resources. In presence of express prohibition of public and private property rights in Article II of OST, if the appropriation of natural resources was also to be prohibited, then such stipulation should have been included. Hence, it can be concluded that appropriation of natural resources are not prohibited under the OST, while the amount of international cooperation in benefit sharing that a state is willing to do is at its own discretion in accordance with the Space Benefits Declaration.36

#### 2. Ground—their interp lets in tiny trivial affs, like banning auctions of moon rocks, or nationalizing meteorites because those came from space. Those evade the core topic question of what legal regime should exist in space.

#### Vote neg—T is a question of competing models so it doesn’t matter if their plan seems fair in isolation. You should use competing interps to avoid judge intervention.

### Case

#### No asteroid mining – it’s all hype, but there’s no risk it’s feasible anytime soon and it’s self-defeating.

Dorminey ‘21

[Bruce, covers aerospace and astronomy for Forbes. 08/31/2021. “Does Commercial Asteroid Mining Still Have A Future?” <https://www.forbes.com/sites/brucedorminey/2021/08/31/does-commercial-asteroid-mining-still-have-a-future/?sh=a6bef1e1a93f>] pat

But there has been little action since. It’s precisely this kind of space hype that makes the mainstream public so cynical and weary of the best laid plans. How many times will we hear the mantra ‘it’s back to the Moon and then on to Mars,’ before anyone ever sets foot on the red planet? Much less thinks about mining Mars? Or reaping the riches from an accessible mineral-rich asteroid?

“I think we all overestimated what could be done,” Jeff Kargel, a former U.S. Geological Survey (USGS) geologist who is now a senior scientist at The Planetary Science Institute in Tucson, Arizona, told me.

There has yet to be any commercial mining reconnaissance and the idea of sending astronauts to reconnoiter near-Earth asteroids now seems antiquated.

“I don’t think sending astronauts to an asteroid makes a whole lot of economic sense,” said Kargel, an expert on asteroid compositions. He argues that there’s not much that can’t be managed via robotics when it comes to mining water, iron and nickel, as well as platinum group metals (PGM)s from asteroids.

The advent of small and very inexpensive cubesats are a potential major boon for the space mining industry, says Kargel. Most of these new-type spacecraft are spin-stabilized and don’t last long, he notes. But the basic idea of having very inexpensive spacecraft which can be mass produced are fortuitous for future asteroid mining efforts, he says.

Can we do that in situ or do they need to be lassoed and towed back into some sort of cis-lunar orbit?

Kargel has soured on the idea of moving asteroids for mining into low earth orbit or cis-lunar space simply because it would be extremely dangerous to tamper with such an object’s orbit.

As for mining KREEPs (rocks containing potassium, rare-earth elements, and phosphorus) from the Moon?

Kargel says the KREEP soils from the Moon would seem to be the better source because it’s extremely enriched in Rare Earth Elements (REEs).

As for mining Helium-3 from the Moon?

There’s been talk about mining Helium-3 on the Moon for the past thirty years at least and it still hasn’t happened.

A decade ago, I was distinctly unimpressed about Helium-3 because it is tied to controlled nuclear fusion, says Kargel. But Helium-3's practicality is tied to national and international physics making big further progress, he says.

Helium-3 mining would not be that hard or expensive, relatively speaking, says Kargel. But the energy market for it depends on needed further physics advances which seem potentially near, possibly this decade, he says.

Although the Moon may offer commercial space prospectors a more immediate commercial space mining than asteroids, these potentially PGM-rich bodies still hold an allure for anyone in need of precious metals for potential use in the building of space architecture.

By some estimates a 100-meter diameter metallic asteroid might contain PGMs worth as much as $12 billion.

And if PGMs are ever imported back to Earth, as Kargel told me in a Forbes post nearly a decade ago, “Metals used sparingly because of their high prices would suddenly become much more available for applications that we might not even dream of now.”

Thus, Kargel says that commercial mining of PGM asteroids may still have a future but refuses to put a date on when he thinks it will finally happen. It’s going to take an Elon Musk-type figure to either kill the idea or proceed with the idea, he says.

Kargel says not only will asteroid mining require additional new advances in both spacecraft technology and launch capability, it will need someone with deep pockets to fund serious space-mining development in a way that enables them to absorb losses of billions of dollars year after year until the technology and mining operations can be scaled up to be profitable.

Then unless the metals mined from the asteroids are only used for offworld construction and resources, there’s a potential problem with the economics of importing innumerable quantities of PGMs back to Earth.

Paradoxically, what was extraordinarily precious may become extraordinarily cheap. While that may lead to new ingenious and more economical uses of PGMs on earth, it would probably make a space-mining operation’s balance sheet insolvent.

If the PGM price per troy ounce is driven down on earth due to this new cornucopia of asteroid metals, says Kargel, prices for space metals would be driven down to such an extent that launch and space operational costs would again make space-mining untenable.

#### Indian ASATs are an alt cause to debris.

Space Daily 19. "Debris of Satellite Destroyed by India May Threaten ISS". 4-23-2019. http://www.spacedaily.com/reports/Debris\_of\_Satellite\_Destroyed\_by\_India\_May\_Threaten\_ISS\_\_\_Russian\_MoD\_999.html

When India tested its anti-satellite weapons, more than 100 fragments of destroyed spacecraft were created; in the future, these fragments could pose a threat to the ISS, the Russian Defence Ministry said. "On 27 March, India successfully tested anti-satellite weapons, as a result of the destruction of the spacecraft, more than 100 fragments were formed in the altitude range from 100 to 1,000 kilometres, orbiting very close to the ISS, which may create threats in the near future," senior assistant to the head of the department of the Main Space Intelligence Centre of the Russian Defence Ministry Roman Fatakhov said in a speech at a conference on space debris.

#### MAD checks space escalation – nuclear response and debris

Bowen 18 [Bleddyn Bowen, Lecturer in International Relations at the University of Leicester. The Art of Space Deterrence. February 20, 2018. https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/]

Fourth, the ubiquity of space infrastructure and the fragility of the space environment may create a degree of existential deterrence. As space is so useful to modern economies and military forces, a large-scale disruption of space infrastructure may be so intuitively escalatory to decision-makers that there may be a natural caution against a wholesale assault on a state’s entire space capabilities because the consequences of doing so approach the mentalities of total war, or nuclear responses if a society begins tearing itself apart because of the collapse of optimised energy grids and just-in-time supply chains. In addition, the problem of space debris and the political-legal hurdles to conducting debris clean-up operations mean that even a handful of explosive events in space can render a region of Earth orbit unusable for everyone. This could caution a country like China from excessive kinetic intercept missions because its own military and economy is increasingly reliant on outer space, but perhaps not a country like North Korea which does not rely on space. The usefulness, sensitivity, and fragility of space may have some existential deterrent effect. China’s catastrophic anti-satellite weapons test in 2007 is a valuable lesson for all on the potentially devastating effect of kinetic warfare in orbit.

#### No one’s going to war over a downed satellite

Bowen 18 [Bleddyn Bowen, Lecturer in International Relations at the University of Leicester. The Art of Space Deterrence. February 20, 2018. https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/]

Space is often an afterthought or a miscellaneous ancillary in the grand strategic views of top-level decision-makers. A president may not care that one satellite may be lost or go dark; it may cause panic and Twitter-based hysteria for the space community, of course. But the terrestrial context and consequences, as well as the political stakes and symbolism of any exchange of hostilities in space matters more. The political and media dimension can magnify or minimise the perceived consequences of losing specific satellites out of all proportion to their actual strategic effect.