# 1NC

### 1

Atimaskters

* Not virtue of curiosity bc not willing to test their convictions
* Also means they r selfish – only care about their own wb which has intention of viewing others as meaingless

#### Permissibility Negates –

#### [1] Semantics – Ought is defined as expressing obligation[[1]](#footnote-1) which means absent a proactive obligation you vote neg since there’s a trichotomy between prohibition, obligation, and permissibility and proving one disproves the other two. Semantics o/w – a) it’s key to predictability since we prep based on the wording of the res and b) it’s constitutive to the rules of debate since the judge is obligated to vote on the resolutional text.

#### [2] Logic – Propositions require positive justification before being accepted, otherwise one would be forced to accept the validity of logically contradictory propositions regarding subjects one knows nothing about, i.e if one knew nothing about P one would have to presume that both the “P” and “~P” are true.

#### Being is always a prior question – only an internalist analysis of what comprises our subjective nature can allow for ethics.

#### 1] Facticity – objects and entities only have meaning in the specific contexts they are presently confronted with. A rock can be used for analysis by a geologist or as a hammer by a survivalist – its meaning is contingently signified in the moment and not a metaphysical truth.

#### 2] Alienation – lack of universal truth means we’re thrown into the world and are free to define who we are as agents – that’s a prerequisite to not being alienated from following moral rules.

#### 3] Motivation – A) Externalist notions of ethics collapse to internal since the only reason agents follow external demands is those demands are consistent with their internal account of the good. B) Empirics – there is no factual account of the good since each agents’ motivations are unique and there has been no conversion of differing beliefs into a unified ethic.

**4] Open Question – A) Experience – Even the most objective description of another individuals’ experience cannot bridge the epistemic gap between my experience and theirs (for example, I cannot know what cilantro tastes like to a lemur), which means a universal understanding of experience is impossible**. **B) Goodness cannot be a property of an object because it would make moral claims tautological.** Pidgen 07, Pigden, Charles. “Russell’s Moral Philosophy.” SEP. 2007. //Scopa For any naturalistic or metaphysical ‘X’, if ‘good’ meant ‘X’, then (i) ‘X things are good’ would be a barren tautology, equivalent to (ii) ‘X things are X’ or (iii) ‘Good things are good’. (1.2) For any naturalistic or metaphysical ‘X’, if (i) ‘X things are good’ were a barren tautology, it would not provide a reason for action (i.e. a reason to promote X-ness). (1.3) So for any naturalistic or metaphysical ‘X’, either (i) ‘X things are good’ does not provide a reason for action (i.e. a reason to promote X-ness), or ‘good’ does not mean ‘X’.

#### Next, there is no metaphysical concept of agency. Rather, agents are simply constellations of contingent drives that form the impetus for the way in which they make sense of the world.

**Alfano 1** [Mark Alfano, no date, Assistant Professor of Philosophy at the University of Oregon. He specializes in moral psychology broadly construed, including virtue theory, decision making, ethics, and experimental philosophy. “Nietzsche’s virtues: Curiosity, courage, pathos of distance, sense of humor, and solitude.” *Handbook of Virtue and Virtue Ethics.* (Springer). <https://philpapers.org/rec/ALFNVC>] *bxnk* \*struck through and bracketed for gendered language and clarity. all other brackets in original\*

Nietzsche starts with a naturalistic conception of drives, instincts, and types of people. He then moves in a normative direction by identifying some drives and instincts as virtues — at least for certain types of people in particular social and cultural contexts. Much of Nietzsche’s understanding of virtue must therefore be understood relative to a type of person and the context in which they find themselves. For instance, in The Gay Science 120, Nietzsche revises the dictum “virtue is the health of the soul” to “your virtue is the health of your soul.” And in Antichrist 11, he uses derisive scare quotes to distinguish between type-appropriate and type-inappropriate dispositions: A virtue needs to be our own invention, our own most personal need and self-defense: in any other sense, a virtue is just dangerous. Whatever is not a condition for life harms it: a virtue that comes exclusively from a feeling of respect for the concept of ‘virtue’, as Kant would have it, is harmful. Nietzsche pays special attention to his own type in his own context, emphasizing the virtues of curiosity, courage, the pathos of distance, the sense of humor, and solitude. These instincts-become-virtues are held together by conscience and integrity, as I explain in more detail below. For Nietzsche, drives are act-directed motivational and evaluative dispositions (Katsafanas 2016). An agent’s drives move her to engage in and positively evaluate a range of characteristic actions regardless of the consequences that may eventuate from those actions. Drives thus differ from preferences and desires in being associated primarily with the processes of agency rather than with teleologically-specified states of affairs. Passages about aggressive drives in Beyond Good and Evil and the Genealogy illustrate this idea. He claims that these drives do not disappear during the political shift into the “straitjacket” of norms and rules; instead, the drives remain but end up expressing themselves differently (Genealogy II.2). “After the structure of society is fixed on the whole and seems secure against external dangers,” he claims, “strong and dangerous drives, like an enterprising spirit, foolhardiness, vengefulness, craftiness, rapacity, and the lust to rule, which had so far not merely been honored insofar as they were socially useful […] but had to be trained and cultivated […] are now experienced as dangers” (BGE 201). Indeed, they are “doubly dangerous, since the channels to divert them are lacking.” The supposition here is that aggressive drives, lacking an opportunity for discharge in action against an external enemy, will be “diverted” from their usual “channels” onto members of the society. Here we see a drive finding expression in alternative ways (same action-type, different goal and consequence) when the most natural manner of expression is no longer available. Nietzsche makes a similar claim about aggressive drives in Genealogy II.16: with the establishment of a strictly-regulated society, he says, suddenly all [people’s] instincts were disvalued and ‘suspended.’ […] in this new world they no longer possessed their former guides, their regulating, unconscious and infallible drives: […] at the same time the old instincts had not suddenly ceased to make their usual demands! Only it was hardly or rarely possible to humor them: as a rule they had to seek new and, as it were, subterranean gratifications. This susceptibility to displacement from usual “channels” is one of the main reasons why drive-motivated actions sometime seem irrational. This feature of drives explains and unites a range of seemingly irrational behaviors in which an agent performs an action that is drive-expressive despite the fact that she knows or could easily come to know that the action will not produce a desired state of affairs. In addition, Nietzsche thinks that instincts are innate drives, though other drives can be acquired. In Beyond Good and Evil 3, he claims that “by far the greater part of conscious thinking must still be included among instinctive activities, and that goes even for philosophical thinking. We have to relearn here, as one has had to relearn about heredity and what is ‘innate.’” And in Beyond Good and Evil 199, Nietzsche argues that “The strange limits of human development, the way it hesitates, takes so long, often turns back, and moves in circles, is due to the fact that the herd instinct of obedience is inherited best, and at the expense of the art of commanding.” In two additional passages, he refers to the process of breeding (‘züchten’ or a cognates) when talking about instincts. In Beyond Good and Evil 207, he contrasts the “ideal scholar in whom the scientific instinct, after thousands of total and semi-failures, for once blossoms and blooms to the end” with the “philosopher,” whom he characterizes as a “Caesarian breeder and brutal man of culture” who uses the scholar as a tool. And in Genealogy of Morals II.3, Nietzsche argues that “one has only to look at [Germans’] former codes of punishments to understand what effort it cost on this earth to breed a ‘nation of thinkers’ [….] These Germans have employed fearful means to acquire a memory, so as to master their basic mob-instinct.” These passages stand in opposition to passages such as Uses and Disadvantages of History For Life 4, Daybreak 38, and Daybreak 455, in which Nietzsche talks about drives and other dispositions in terms of an acquired second nature (‘zweite Natur’). Moreover, instincts and other drives are mutable on several dimensions, including their intensity, their objects, and the structural interrelations (Daybreak 109). And an agent’s instincts and other drives constitute ~~her~~ psychological type. Daybreak 199 is especially instructive on this point: However far a man may go in self-knowledge, nothing however can be more incomplete than his image of the totality of drives which constitute his being. He can scarcely name even the cruder ones: their number and strength, their ebb and flood, their play and counterplay among one another, and above all the laws of their nutriment remain wholly unknown to him. This nutriment is therefore a work of chance. This passage establishes what Nietzsche thinks is determinative of a person’s type: your type is the “totality of drives” that “constitute” your “being.” Your type is not dependent on your beliefs, your culture, or any of a variety of other candidates. What makes you who you are is the constellation of your drives.

#### This culminates in a epistemic process of self-overcoming, wherein an agent overcomes the static labels affixed to them to truly embrace their identity. Thus, the standard is consistency with existential virtue.

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Nietzsche also pays special attention to the role of community in fostering virtues. For him, one’s community and the language used by that community play a constitutive role in the cultivation of virtue. This is because part of what it means for a person to be of a certain type is that ~~she~~ [they] ~~is~~ [are] susceptible to social determination of her character (Alfano 2015b). Some types are *meta-types*. They’re not dispositions to *act* in certain ways, but dispositions to become the sort of person who acts in particular to-be-specified ways. Unlike Aristotle, who thinks that one becomes virtuous through practice and habituation, realizing all the while that one is not yet virtuous but aiming to become so, Nietzsche thinks that the temporal relation sometimes runs in the other direction. First, one supposes, imagines, hopes, or fantasizes oneself to be a certain way. In so doing, one becomes committed to a standard of conduct that includes not only one’s actions but also one’s thoughts, feelings, emotions, and deliberative strategies. Commitment to this standard in turn induces congruent behavior. Thus, thinking of oneself as having certain traits is temporally and conceptually prior to actually having those traits. This is a theme that crops up especially in the *Genealogy*, where Nietzsche describes the nobles not so much as being psychologically higher but as imagining themselves to be higher psychologically (because they are already politically higher), as enchanted by the pathos of distance (*Genealogy* I.3, III.14). This pathos induces (enough of) them to behave as if they were higher, which has knock-on social effects that lead to self-confirmatory conduct. This theme also crops up, in a less uplifting way, in his description of psychological slavishness — a disposition to simulate, mimic, or acquire whatever character traits are attributed to one. Instead of or in addition to feeling committed to a certain code of conduct, the slavish person feels that other people, especially others with the power to impose sanctions and punishments, expect him to behave in accordance with a certain code of conduct. Thus, while both psychological masters and psychological slaves become what they are taken to be, the masters do so by becoming what they take themselves to be (and what fellow masters take them to be), whereas the psychologically slavish become what others take them to be. Thus, there are two Nietzschean styles of becoming what one is called: the social and the reflexive. Someone whose character is built according to the social plan becomes what others consider and call him — good, bad, or mixed. By contrast, someone whose personality is built according to the reflexive plan becomes what ~~she~~ [they] consider~~s~~ and calls herself [themself]. Nietzsche associates this method of personality construction with masterliness. One of Nietzsche’s great innovations is the idea that there is a looping effect between the psychological disposition named by a character trait-term and the practice of using that term (Hacking 2006). While he affirms that people are differentially disposed to certain patterns of behavior, he conceives of these dispositions as fluid both in their objects and, to a lesser degree, in their strength and aim. The valence and content of the labels applied to an agent, together with the power-relation between the labeler and labeled, interact with her preexisting psychological dispositions to produce the kind of person ~~she~~ [they] eventually become[s]. Because Nietzsche held a type-relative unity of virtue thesis, if we want to discern his virtue theory, we need to look at his self-attributions. This allows us to pick out the set of traits he considers virtues for his type. Thus, there is no universal specification of “the virtues” in Nietzsche’s philosophy. Nevertheless, we can say quite a bit about the virtues he celebrates in his own type. Most of these are more closely connected to epistemic than traditionally moral or prudential flourishing. The first distinctively Nietzschean virtue is curiosity (Alfano 2013, Bamford forthcoming, Christy forthcoming, Reginster 2013). It is notably epistemic and therefore better contextualized by contemporary virtue epistemology (especially responsibilist epistemology — on which see Roberts & Wood 2007) than contemporary virtue ethics. Curiosity is deeply embedded in Nietzsche’s perspectivism. He thinks that perspectives support inquiry in essential ways. For him, a perspective is emotional and evaluative. The perspective someone inhabits leads them to see some things as good, right, noble, admirable, desirable, or enviable, while also leading them to see other things as bad, wrong, base, contemptible, disgusting, aversive, or pitiable. One’s perspective reveals and emphasizes (sometimes overemphasizes) some of the evaluative properties of the things in one’s ambit. For example, Nietzsche argues that we can never give a rational ground for our synthetic a priori judgments, but that we hold onto them nevertheless because they belong to “the perspectival optics of life” (Beyond Good and Evil 11). Then, in Beyond Good and Evil 32, he characterizes the shift from basing evaluations of actions on their consequences to basing evaluations on origins (motives) as a “reversal of perspective.” A couple sections later, he declares that “life could not exist except on the basis of perspectival valuations and appearances” (Beyond Good and Evil 34). And in Beyond Good and Evil 201, he says that, when “the structure of society seems on the whole to be established and secured against external dangers, it is this fear of the neighbor that again creates new perspectives of moral valuation.” In the transition from war to peace, society shifts from valuing courage and cunning, which are useful during periods of insecurity and inter-group conflict, to condemning them as dangerous to internal cohesion. Likewise, in Beyond Good and Evil 211, Nietzsche argues that a proper philosopher must have already inhabited a huge number of perspectives: “the philosopher has had to be a critic and a skeptic and a dogmatist and a historian and, moreover, a poet and a collector and traveler and guesser of riddles and moralist and ‘free spirit’ and practically everything” if he wants to be able to “run through the range of human values and value feelings and be able to gaze with many eyes and consciences from the heights into every distance, from the depths up to every height, from the corner onto every expanse.” But the world is a complex place. Inhabiting only one perspective is liable to make complex evaluative phenomena difficult to appreciate. Since perspective-free inquiry is impossible, Nietzsche recommends combatting these unavoidable distortions by taking up different perspectives over time. This is why Nietzsche repeatedly enjoins his readers to get control over their emotions; this control or capacity is, for him an epistemic methodology. Nietzsche first articulated the method of getting control over one’s pro and con in 1886, when he published Beyond Good and Evil and republished Human, All-too-human with new prefaces both for the main body of the book and for the Assorted Opinions and Maxims. In Human, All-too-human P6, we read: You shall get control over your For and Against and learn to display first one and then the other in accordance with your higher goal. You shall learn to grasp the sense of perspective in every value judgment — the displacement, distortion and merely apparent teleology of horizons and whatever else pertains to perspectivism; also the quantum of stupidity that resides in antitheses of values and the whole intellectual loss which every For, every Against costs us. You shall learn to grasp the necessary injustice in every For and Against, injustice as inseparable from life, life itself as conditioned by the sense of perspective and its injustice. In this neglected passage, Nietzsche argues that evaluative perspectives are unavoidable, and that each one brings with it “displacement, distortion, and merely apparent teleology.” He responds to these distortions neither by trying to eliminate perspective altogether nor by seeking a perspective evacuated of value and emotion, but by getting control one’s emotions and learning “to display first one and then the other.” Perspectivism is meant to reveal, through the controlled cycling-through of various emotional and evaluative points of view, properties that would otherwise be invisible and to rectify inquiry by pitting biases of perspectives against each other. Nietzsche developed this methodology to express the virtue of curiosity. Nietzschean curiosity is a drive to engage in inquiry, especially when that inquiry is into interesting subjects and is both intellectually and morally challenging. In addition, Nietzschean curiosity does not stop when it arrives at an answer; it always finds a new question, a new investigation, a new inquiry. The curious person is concerned with the product of investigation; she would not be satisfied with false beliefs, unsupported beliefs, or the withholding of judgment. But she is even more concerned with the process of investigation; she can’t stop thinking, inferring, refuting, synthesizing, and so on. For Nietzsche, doxastic change through investigation is essential. He says that the will to truth “still tempt[s]” to “many a venture” (Beyond Good and Evil 1) and that “travelers and adventurers” like him discover a “world of insight” (Beyond Good and Evil 23). Nietzschean curiosity is opposed to both ataraxia and faith because faith, as he understands it, is the disposition to stop investigating. It’s an expression of the need for something firm “that one does not wish to be shaken because one clings to it” (Gay Science 347). Faith is “a veto on science” because it involves “not wanting to know the truth” (Antichrist 52). This makes sense if the virtue of curiosity is a drive, since drives impel their bearers to act. Nietzschean curiosity is a matter of struggling with difficult, interesting questions. The next characteristically Nietzschean virtue is courage, which, like all Nietzschean virtues, is a disposition to engage in characteristic patterns of activity and evaluation. His version of courage is more a matter of intellectual confrontation than of martial or physical contest. It’s a matter of managing one’s fears in the midst of inquiry and of approaching epistemic phenomena with aplomb and self-assurance. It’s also a matter of doubting where others are certain, of exercising one’s conscience about questions, and of laughing contemptuously at the sacred values and sacred cows of one’s community. While it may be uncontroversial to say that courage is the virtue most relevant to responding to threats, Nietzsche has an idiosyncratic take on which threats are most worth finding and facing. Nietzsche sees curiosity and thinking well of people (both others and oneself) as implacable enemies. If one seeks the truth only to do the good, he says, one “finds nothing” (Beyond Good and Evil 35). If Nietzschean curiosity is a matter of investigating difficult problems, of overcoming great intellectual resistances, then one of its purest expressions is in the investigation precisely of the most nauseating facts about ourselves. The soul of the intellectually courageous investigator is the battleground on which curiosity contends with “life-preserving errors,” where the question “To what extent can truth endure incorporation?” is put to the torture (Gay Science 110).

#### Prefer additionally:

#### [1] Inescapable – The human condition is one that necessitates the exercise of radical freedom given the metaphysical understanding of the conscious subject. It is impossible to escape the conception of the self, as it is the only essential feature of existence.

#### I contend that the appropriation of outer space is not unjust -

#### [1] Space is an open canvas – A] Appropriation is the meaningful expression of the will to power. Mixing our will with the cosmos is what allows us to ground ourselves as subjects. B] Fixation – Preventing space exploration artificially limits the possibilities of human experience, which alienates us from our potential and from the world that exists beyond the arbitrary limits of Earth.

#### [2] The aff is the will to will – A] It homogenizes all instances of outer space appropriation as bad when there is no universal metaphysical truth. B] Private property is key to recognizing agents through the personality in their work. Recognition is necessary for agents to be non-alienated bc we need to establish relations with the world.

**Hughes 98 -** "The Philosophy of Intellectual Property," 77 Georgetown L.J. 287, 330-350 (1988) by Justin Hughes [https://cyber.harvard.edu/IPCoop/88hugh2.html] // ahs emi

At first blush, this economic rationale seems far removed from the concerns of personality theory, [n244](https://cyber.harvard.edu/IPCoop/88hugh2.html#n244) yet it can be recast into the framework of the personality theory. From the Hegelian perspective, payments from intellectual property users to the property creator are acts of recognition. These payments acknowledge the individual's claim over the property, and it is through such acknowledgement that an individual is recognized by others as a person. [n245](https://cyber.harvard.edu/IPCoop/88hugh2.html#n245) "Recognition" involves more than lip service. If I say "this forest is your property" and then proceed to flagrantly trespass, cut your timber, and hunt your deer, I have not recognized your property rights. Similarly, verbal recognition of an intellectual property claim is not equal to the recognition implicit in a payment. Purchasers of a copyrighted work or licensees of a patent form a circle of people recognizing the creator as a person. Furthermore, this generation of income complements the personality theory in as much as income facilitates further expression. When royalties from an invention allow the inventor to buy a grand piano he has always wanted, the transaction helps maximize personality. But this argument tends to be too broad. First, much income is used for basic necessities, leading to the vacuous position that life-sustenance is "personally maximizing" because it allows the personality to continue. Second, this approach could justify property rights for after-the-fact development of personality interests without requiring [\*350] such interests in the property at the time the property rights are granted. The personality theory provides a better, more direct justification for the alienation of intellectual property, especially copies. The alienation of copies is perhaps the most rational way to gain exposure for one's ideas. This is a non-economic, and perhaps higher, form of the idea of recognition: respect, honor, and admiration. Even for starving artists recognition of this sort may be far more valuable than economic rewards. Two conditions appear essential, however, to this justification of alienation: first, the creator of the work must receive public identification, and, second, the work must receive protection against any changes unintended or unapproved by the creator.VARA Hegel's prohibition of "complete" alienation of intellectual property appears to result from his recognition of the necessity for these two conditions. While he would permit alienation of copies, and even the rights to further reproduction, [n246](https://cyber.harvard.edu/IPCoop/88hugh2.html#n246) he disapproves alienation of "those goods, or rather substantive characteristics, which constitute . . . private personality and the universal essence of . . . self-consciousness." [n247](https://cyber.harvard.edu/IPCoop/88hugh2.html#n247) Such alienation necessarily occurs if the recognition of the connection between a creator and his expression is destroyed or distorted. When the first condition is violated, this recognition is destroyed; when the second condition is violated, it is distorted.

# Case

### Framing

#### [1] Util triggers permissibility:

#### [A] Aggregation

#### [B] Butterfly Effect

#### [C] Open question arg

#### [D] Cross apply open question – don’t have reason why pp intrinsic so reject their fw on face; no 1ar reatriculation

AT lexical prereq

[1] Just proves life is instrumentally valuable, not intrinsically valuable which proves my fwk o/w.

[2] Self-defeating: You justify always trying to stop the smallest risks of harms which trades off with actual ethical calculus.

[3] Doesn’t prove value – we have to breath to do anything else but that doesn’t mean we max oxygen.

AT extinction first

[1] Assumes intent foresight but gov bad at predictions

[2] Self defeating

[3] Life instrumental not intrisic

[4] impact justified – NC proves there is no such thing as unviersal moral valie so no obligation for future genrations – only NC provides exlanation for why life is valuabke w/o assuming uiv value.

[5] we hijack – determie why things r nroamtively releativt or not encompasses ur framework

Use epistemic confidence – A) Resolvability – Modesty is incoherent in debate because we can’t determine the probability of a framework being true B) It’s impossible to guide action when we have to consider every possibly correct ethical framework 2. We’re not morally uncertain if I win my framework 3. No warrant for why we’re uncertain – don’t allow a new one because that’s the internal warrant for this argument.

Yes calc indcits: [1] Util being hard is still a disad, it maximizes the risk of wrong ethical decisions. [2] Policy makers make wrong predictions all the time, means it is real-world. [3] Proves your theory is wrong and indptly normative frameworks are good b/c they provide explanatory power for why we should act on your impacts.

### Advantage

#### SPACE Act proves states will reinterpret the law however they want if they’re left to implement domestically.

Durrani 19 [Haris A. \*J.D. candidate, Columbia Law School; Ph.D. candidate, Princeton University, Department of History (Program in History of Science). “Interpreting Space Resources Obtained: Historical and Postcolonial Interventions in the Law of Commercial Space Mining” <https://www.jtl.columbia.edu/volume57-3/interpreting-space-resources-obtained-historical-and-postcolonial-interventions-in-the-law-of-commercial-space-mining>] brett

This Note addresses a fundamental ambiguity in the U.S. Commercial Space Launch Competitiveness Act of 2015 (“CSLCA”). It is unclear whether the statute authorizes U.S. citizens to extract natural resources from asteroids and other celestial bodies, as is commonly assumed. Alternatively, the statute can be read to merely entitle citizens to resources that have already been obtained, where the regime for actually obtaining such resources remains undetermined. The Note resolves this issue in favor of the interpretation that best aligns with international law and policy. It first shows that the relevant elements of international law—the Outer Space Treaty of 1967 (“OST”) and customary international law (“CIL”)—do not resolve the issue. The Note then adopts a broader approach by considering the OST’s anti-imperial policy. By engaging scholarship on law, colonialism, and empire, this approach centers Global South States in space law discourse. This approach reveals two ways in which the more commonly accepted interpretation of the CSLCA cuts against the anti-imperial policy of the OST, related to the distinction between private and State extraction and to State conferral of property rights. To avoid contradicting these policy concerns, the CSLCA should be read narrowly, such that it leaves open future determination of the space resources regime. Finally, the Note offers guidance for such a regime. It argues that CIL development based on subsequent legislation or mining would let Global North States asymmetrically shape international law, which would contradict the OST’s anti-imperial policy. Instead, the Note recommends multilateral agreements that employ organizationally diverse models, which mix collective and private ownership. The Note ends by reflecting on lingering questions in the context of development and the Global South.

#### Mining---colonizing space resources solves bioD loss and resource shortages

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Ram S. Jahku, “The Importance of Natural Resources from Space and Key Challenges,” *Space Mining and Its Regulation*, Published by Springer International Publishing, pp. 11-21. 2017

Coping with the Scale and Complexity Problem

The land area of the entire world is 148.94 million sq. km (or 57.506 million sq. miles), and its water area is 361.132 million sq. km (or 139.434 million sq. miles). About half of that land area is truly viable for year- round habitation when one eliminates most parts of Antarctica, the Arctic north, Siberia, the most dangerous mountain ranges and the most arid desert regions. Rising sea levels will further decrease available land areas. When one divides about 75 million sq. km by 10 billion people (or about 133 people people/sq. km) it becomes clear that rising global population and shrinking land areas and exhaustion of many types of natural resources—especially potable water— will be a growing problem.7 Figure 2.2 shows the volume of water in the world in comparison to the total volume of Earth. This graphic helps us to realize just how small the amount of potable water that is truly accessible today in comparison to a rising global population actually is.

Figure 2.2 underscores the issue of just how difficult it will be to continue to provide key resources especially to major urban centers as global population continues to grow. And this is not just a question of sustaining human needs for water and natural resources. It is also a matter of sustaining endangered species of flora and fauna. The United Nations had done an analysis that shows the loss of species since 1800 and projections for the future show a very disturbing trend.8

The graphs in Fig. 2.3 that come from the U. S. Geological Survey seem to show a relationship between the rapid growth of the global human population in recent times and the increasing rate of extinction on species. The future availability of petroleum products and water is most often mentioned in studies of future resource scarcity, but broader studies have shown that the world by the mid twenty-first century will have many shortages. The following results from a detailed Global Nonrenewal Natural Resources (NNR) study came up with the following results, as shown in Fig. 2.1. 9 Although these results might vary somewhat from year to year based on economic downturns or upturns, the overall trend toward increasing shortages is clear. The upward mobility of the populations in China, India, Indonesia, and other newly industrialized companies suggest that up to three times more consumer demand for products and energy will be present by the middle of the twenty-first century. Only recycling and new energy sources can meet the great bulk of this burgeoning demand. Meeting the demand for natural resources has been identified as a problem by many that have researched this problem. The projections of shortages in the future are presented in Fig. 2.4 and in even greater detail in Fig. 2.5 are certainly of concern. As Chris Clugston’s detailed analysis of this subject has concluded: “Global Non Renewable Natural Resource (NNR) scarcity will intensify going forward, as global economic activity levels, economic growth rates, and corresponding NNR demand return to their pre-recession levels; and global NNR supply levels continue to approach and reach their geological limits.”

Yet the prospect of space mining can provide new options. A modest nearEarth asteroid rich in platinum, approximately spherical in shape and 30 m in diameter would constitute a volume of 4500 cu. m and represent a mass of perhaps 5000 metric tons. If one assumed that this asteroid was 50% platinum, then its value at current world market prices would be on the order of $90 billion. Even if the asteroid recovery mission and refinement costs ran to $5 billion and even if some of the proceeds were to go into some sort of global commons development or ecological fund, just a single such mission would produce many billions of dollars in profits. This may represent an extreme example, but there are over a million PHAs that are on the order of 30 m. The key in the early days of space mining would be to identify high-value targets.

A 50-m PHA would be over 4.6 times more massive in volume and content and would be incredibly valuable if it contained precious metals or rare earth materials such as iridium, rhodium, ruthenium, palladium, or osmium. In contrast, the economics would be much more difficult in the case of PHAs with less valuable natural resource contents. An asteroid with 70% nickel and molybdenum content and 50 m in diameter would have something like a market value of only about $200 million based on current market prices of $13,000 a metric ton for molybdenum and $10,000 a metric ton for nickel. This much lower valuation would call for space mining transport equipment of the longer term future that could be used over and over again. It would also likely mean systems that ran off of solar and electric propulsion systems.

#### That averts resource wars.

#### No space war

**Hall 15** [Luke Penn-Hall, Analyst at The Cipher Brief, M.A. from the Johns Hopkins School for Advanced International Studies, B.A. in International Relations and Religious Studies from Claremont McKenna College, “5 Reasons “Space War” Isn’t As Scary As It Sounds”, The Cipher Brief, Aug 18, 2015, <https://www.thecipherbrief.com/article/5-reasons-%E2%80%9Cspace-war%E2%80%9D-isn%E2%80%99t-scary-it-sounds>]

The U.S. depends heavily on military and commercial satellites. If a less satellite-dependent opponent launched an anti-satellite (ASAT) attack, it would have far greater impact on the U.S. than the attacker. However, it’s not as simple as that – for the following reasons: 1. An ASAT attack would likely be **part of a larger, terrestrial attack**. An attack on space assets would be no different than an attack on territory or other assets on earth. This means that no space war would stay limited to space. An ASAT campaign would be part of a larger conventional military conflict that would play out on earth. 2. Every country with ASAT capabilities also needs **sat**ellite**s**. While the United States is the most dependent on military satellites, most other countries need satellites to participate in the global economy. All countries that have the technical ability to play in this space – the U.S., Russia, China and India - also have a **vested interest** in preventing the militarization of space and protecting their own satellites. If any of those countries were to attack U.S. satellites, it would likely **hurt them** far more than it would hurt the United States. 3. Destruction of satellites could create a damaging chain reaction. Scientists warn that the violent destruction of satellites could result in an effect called an ablation cascade. High-velocity debris from a destroyed satellite could crash into other satellites and create more high-velocity debris. If an ablation cascade were to occur, it could render certain orbital levels completely unusable for centuries. 4. Any country that threatened access to space would threaten the global economy. Even if a full-blown ablation cascade didn’t occur, an ASAT campaign would cause debris, making operating in space more hazardous. The global economy relies on satellites and any disruption of operations would be met with worldwide disapproval and severe economic ramifications. 5. International **Prohibits** the Use of ASAT Weapons. Several international treaties expressly **prohibit signatory nations** from attacking other countries’ space assets. It is generally accepted that space should be treated as a global common area, rather than a military domain. While it remains necessary for military planners to create contingency plans for a, space war it is a **highly unlikely** scenario. All involved parties are **incentivized against** attacking. However, if a space war did occur, it would be **part of** a larger conflict **on Earth**. Those concerned about the potential for war in space should be more concerned about the potential for war, period.

#### No miscalc from satellite disruptions or space dust -- empirically denied. Also takes out the Russia scenario---their ev casually asserts escalation while we have examples from after their card was written that disprove it.

Mazur 12 (Jonathan Mazur, Manager Engineering at Northrop Grumman, writing in Space & Defense, from the Eisenhower Center for Space and Defense Studies. Past U.S. Actions: Redlines in Space. Space & Defense, Volume 6, Number 1, Fall 2012. https://inss.ndu.edu/Portals/97/Space\_and\_Defense\_6\_1.pdf?ver=2018-09-06-135424-147)

U.S. Reactions To Foreign Disruption Of U.S. Capabilities

In the 1970s, it was suspected that a U.S. maritime communications satellite was turned off by the Soviets when it was outside of the range of U.S. tracking stations.25 There does not appear to be any documented U.S. reaction, and I suspect there was none. In the mid-1990s, satellite hackers in Brazil began hijacking U.S. military communication satellite signals to broadcast their own information, though it took until 2009 for Brazil to crack down on the illegal activity with the support of the DoD.26 In 1998, a U.S.-German satellite known as ROSAT was rendered useless after it turned suddenly toward the sun. NASA investigators later determined the accident was possibly linked to a cyber-intrusion by Russia.

The fallout? Though there was an ongoing criminal investigation as of 2008; NASA security officials have seemed determined to publicly minimize the seriousness of the threat.27 In 2003, a signal originating from Cuba—later determined to be coming from Iranian embassy property— was jamming a U.S. communications satellite that was transmitting Voice of America programming over Iran, which was publicly referred to as an “act of war” by a U.S. official. 28 Press reporting indicates the U.S. administration was [frozen]“paralyzed” about how to cope with the jamming that continued for at least a month, even after U.S. diplomatic protests to Cuba.29 In 2005, U.S. diplomats protested to the Libyan government after two international satellites were illegally jammed disrupting American diplomatic, military, and FBI communications.30 In 2006, press reporting indicates that China hit a U.S. spy satellite with a ground-based laser. This action was acknowledged by the then director of the NRO, though the DoD remained tight lipped about the incident.31

“We’re at a point where the technology’s out there, and the capability for people to do things to our satellites is there. I’m focused on it beyond any single event.” – Air Force Space Command Commander, General Chilton, 2006 32

In 2009, a U.S. commercial Iridium communications satellite—extensively used by the DoD—was accidently destroyed by a collision with a dead Russian satellite.33 The U.S. company, Iridium, was able to minimize any loss of service by implementing a network solution within a few days.34 As of early 2011, no legal action had been taken by the company either because it is not clear who was at fault or because it might be politically problematic for the United States, which is trying to enter into bi-lateral transparency and confidence-building measures (TCBM) with Russia regarding space activities.35 Since August of 2010, North Korea has been intermittently using GPS jamming equipment, which reportedly has been interfering with U.S. and South Korean military operations and civilian use south of the North Korean border.36 Reportedly, only South Korea and the United Nations International Telecommunications Union—at the request of South Korea—have issued letters to Pyongyang demanding the cessation of disruptive communications signals in South Korea.37

It appears that the only time the U.S. military has responded with force to a disruption in U.S. space capabilities was in 2003, a few days after the start of the Iraq war.38 According to U.S. officials, Iraq was using multiple GPS jammers—which supposedly did not affect military GPS functionality. However, the U.S. military bombed the jammers anyway after a diplomatic complaint to Russia.39 The use of military force against the GPS jamming threat was possibly because the United States was already intervening in Iraq, and the bombing probably would not have occurred if the United States was not at war.

#### Congestion induces restraint, not aggression.

Bowen 18 [Bleddyn, Lecturer in International Relations at the University of Leicester; ELN; 20 Februrary 2018; “The Art of Space Deterrence,” <https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/>] brett

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.

### UV

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On b: not spec to topic

1. <https://www.merriam-webster.com/dictionary/ought> [↑](#footnote-ref-1)