# 1AC

### 1AC – Framing

**Presumption and permissibility affirm –**

**A] Statements are true before false since if I told you my name, you’d believe me.B] Epistemics – we wouldn’t be able to start a strand of reasoning since we’d have to question that reason. C] Illogical – presuming statements false is illogical since you can’t say things like P and ~P are both wrong. D] Presuming obligations is logically safer since it’s better to be supererogatory than fail to meet an obligation.**

**Conflicting ethical viewpoints does not require the inevitable exclusion of one over another but rather the acceptance that both could be relevant and valuable ethical tool. Thus, the meta ethic should be moral pluralism. Prefer-**

#### 1] Empirics- Best studies prove pluralistic tendencies are inevitable

Polzler and Wright 19[Thomas Pölzler and Jennifer Cole Wright- “Empirical research on folk moral objectivism” <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6686698/> NCBI. Published July 5th 2019] Dulles AS

Examining these studies' results more closely, however, makes it less clear whether this interpretation is appropriate (Pölzler, 2018b). Take again Goodwin and Darley's study. In this study, almost 30% of subjects' responses to the disagreement measure and almost 50% of their responses to the truth‐aptness measure fell on the option that the researchers took to be indicative of subjectivism (Goodwin & Darley, 2008, pp. 1347, 1351). Moreover, while some moral statements were dominantly classified as objective (e.g., the above statement about robbery), many others were dominantly classified as nonobjective (e.g., the stem cell research statement). This suggests that subjects in Goodwin and Darley's study may have actually favored what Wright, Grandjean, and McWhite (2013) called “metaethical pluralism,” i.e., they sometimes sided with objectivism and other times with nonobjectivism. More recent studies have by and large confirmed this hypothesis of folk metaethical pluralism. Wright et al. (2013) and Wright, McWhite, and Grandjean (2014), for example, replicated Goodwin and Darley's results, using the exact same measures, but letting subjects classify the presented statements as moral and nonmoral themselves. Objectivity ratings for statements that were dominantly self‐classified as moral varied between as little as 5% and as much as 85%. Research based on different measures yielded high proportions of intrapersonal variation as well (e.g., Beebe, 2014; Beebe, Qiaoan, Wysocki, & Endara, 2015; Beebe & Sackris, 2016; Fisher, Knobe, Strickland, & Keil, 2017; Goodwin & Darley, 2012; Heiphetz & Young, 2017; Wright, 2018; Zijlstra, forthcoming.

#### 2] Resolvability- Thousands of years of metaethical debates have concluded in indecisiveness so a 45-minute debate would be unable to correctly resolve nebulous ethical disputes and identify the correct theory. Resolvability outweighs on jurisdiction since it’s a meta-constraint on the judge’s final jurisdiction.

#### Thus, the standard is promoting pragmatic deliberation. Prefer-

#### 1] Value Pluralism- Other ethical theories rely on minimalistic criteria as their foundation, our framework resolves this by using these criteria to better inform our judgments LaFollete 2K "Pragmatic Ethics" [Hugh LaFollette](http://www.hughlafollette.com/index.htm) In [Blackwell Guide to Ethical Theory](http://www.hughlafollette.com/papers/b-guide.htm) 2000. Hugh LaFollette is Marie E. and Leslie Cole Professor in Ethics at the University of South Florida St. Petersburg. He is editor-in-chief of The International Encyclopedia of Ethics. <https://www.hughlafollette.com/papers/b-guide.htm> Dulles AS

Pragmatic ethics takes a more aggressive approach, insisting that mankind is responsible for determining the best ethical system possible, which will be refined as new discoveries are made. Put simply; truth does not exist in some abstract realm of thought independent of social relationship or actions; instead, the truth is a function of an active … Pragmatism, according to William James, is derived from the Greek word pragma, which means action and serves as the basis of our English words practical and practice. Pragmatism originated in the United States around 1870, and now presents a growing third alternative to both analytic and Continental philosophical traditions worldwide. 1 - Acceptance . Ethics is a branch of philosophy that is responsible for studying the principles that govern the conduct of an individual. Employs criteria, but is not criterial The previous discussions enable us to say more precisely why pragmatists reject a criterial view of morality. Pragmatism's core contention that practiceis primary in philosophy rulesoutthe hope of logically prior criteria. Any meaningful criteria evolve from our attempt to live morally – in deciding what is the best action in the circumstances. Criteriaare not discovered by pure reason, and they arenotfixed. As ends of action, they are always revisable. Asweobtainnewevidenceabout ourselves and our world, and as our worlds changes, wefindthat whatwasappropriatefor the old environment maynotbeconduciveto survival in thenew one. A style of teaching that might have been ideal for one kind institution (a progressive liberal arts college) at one time (the 60s) may be wholly ineffective in another institution (a regional state university) at another time (the 80s). But that is exactly what we would expect of an evolutionary ethic. Neither could criteria be complete. Themoralworldiscomplexandchangeable**.** No set of criteriacouldgiveusunivocalanswersabouthowwe should behave in all circumstances**.** If we cannot develop an algorithm for winning at chess, where there are only eighteen first moves, there is no way to develop an algorithm for living, which has a finitely large number of "first moves." Moreover, while the chess environment (the rules) stays constant, our natural and moral environments do not. We must adapt or fail. While there is always one end of chess -- the game ends when one player wins – the ends of life change as we grow, and asour environmentschange. Finally, we cannot resolve practical moral questions simply by applying criteria. We do not make personal or profession decisions by applying fixed, complete criteria. Why should we assume we should make moral decisions that way? Appropriates insights from other ethical theories Nonetheless, there is a perfectly good sense in which a pragmatic ethic employs what we might call criteria, but their nature and role dramatically differ from that in a criterial morality (Dewey 1985/1932) . Pragmaticcriteriaare not external rules we apply, but aretoolsweuseinmakinginformedjudgements. They embody learning from previous action, they express our tentative efforts to isolate morally relevant features of those actions. These emergentcriteriacanbecomeintegratedinto our habits**,** thereby informingthe waysthat wereactto, think about, and imagine ourworldsand our relations to others. This explains why pragmatists think other theories can provide guidance on how to live morally. Standard moral theories err not because they offer silly moral advice, but because they misunderstand that advice. Othermoral theoriescan help us isolate(and habitually focus on) morallyrelevantfeaturesof action. And pragmatists take help wherever they can get it. Utilitarianism does not provide an algorithm for deciding how to act, but it shapes habits to help us "naturally" attend to the ways that our actions impact others. Deontology does not provide a list of general rules to follow, but it sensitizes us to ways our actions might promote or undermine respect for others. Contractarianism does not resolve all moral issues, but it sensitizes us to the need for broad consensus. That is why it is mistaken to suppose that the pragmatist makes specific moral judgements oblivious to rules, principles, virtues, and the collective wisdom of human experience. Thepragmatistabsorbstheseinsightsinto her habits, andthereby shapeshowshehabituallyresponds**,** and how she habitually deliberates when deliberation is required. This also explains why criterial moralities tend to be minimalistic. They specify minimal sets of rules to follow in order to be moral. Pragmatism, on the other hand, like virtue theories, is more concerned to emphasize exemplary behavior – to use morally relevant features of action to determine the best way to behave, not the minimally tolerable way

#### 2] Performativity- Responding to our framework concedes the validity of agonism since that in and of itself is a process of contestation that agonism would say is valuable and necessary for spaces like debate to function.

**3] Hume’s Guillotine – experience only tells us what is since we can only perceive what is, not what ought to be. But it’s impossible to derive an ought from descriptive premises since there’s an is/ought gap.**

#### 4] TJFS- Frameworks should be fair/educational like any other argument. A] Inclusion – Deliberation definitionally is a procedural for allowing almost any argumentation in the debate space which controls the internal link to inclusion which is an impact multiplier B] Resource Disparities- Discursive frameworks ensure big squads don’t have a comparative advantage since debates become about quality of arguments rather than quantity and require a higher level of analytic thinking that small schools have. C] Evaluate the debate after the 1ac and before the 1nc – prevents anxiety caused by giving speeches.

#### 5] Accept aff interps and definitions A] causes regress since we can infinitely debate what something means but the aff speaks first which means they should define it However, let me recontextualize their arguments since they can collapse for 6 minutes on something I misunderstood in the 1ar to end the round since the 2ar can’t answer.

#### 6] Deliberation is procedural not substantive, which means that we are first concerned with the decision-making procedure of deliberation and then evaluation of what impacts matter most. To clarify, consequences are a sequencing question. Serra 2

BY WAY OF CONCLUSION: As LaFollette presents it, the key to understanding pragmatist ethics is that it is not an ethical theory per se, but rather it is an anthropology, a way of understanding the human being and his moral action. Therefore, pragmatist ethics in reality does not propose a new ethical theory, but rather “reconstructs” through a new prism the basic intuitions of the best ethical theories. The fundamental element on which the attention of pragmatist ethics centers is deliberation. Deliberationisnotdirectlyresponsible for directing action,butonly doessoindirectly**,** bymeans of a critique of past actions, theefforttocorrect or reinforce certain habits and mental experiments that each actor performs in order to determine his own future conduct, and even to determine in a general manner the way in which one wishes to live one’s life (or, what amounts to the same thing, the type of person one wishes to be). Thetaskofapragmatistethics, therefore**,** isnottoprovidefinalsolutions**,** butrather to indicate that it is onlyvia thetestingandcommunicationofexperiencesthatthe superiorityof onemoral ideaover another can be demonstrated. In this sense, one of the principal missions of any given version of pragmatist ethics is to indicate some general manner in which habits can be acquired which, later, will facilitate personal deliberation – both internal and external – in the broad variety of circumstances which make up the moral life.

#### 7] Quantum superposition proves different ethics can exist simultaneously – prag is the only metric to reconcile them

MIT ’19 (Emerging Technology from the arXiv archive page; Covers latest ideas from blog post about arXiv; 03/12/2019; “Emerging Technology from the arXiv archive page”; <https://www.technologyreview.com/2019/03/12/136684/a-quantum-experiment-suggests-theres-no-such-thing-as-objective-reality/>; *MIT Technology Review*; accessed: 11/19/2020; MohulA)

Back in 1961, the Nobel Prize–winning physicist Eugene Wigner outlined a thought experiment that demonstrated one of the lesser-known paradoxes of quantum mechanics. The experiment shows how the strange nature of the universe allows two observers—say, Wigner and Wigner’s friend—to experience different realities. Since then, physicists have used the “Wigner’s Friend” thought experiment to explore the nature of measurement and to argue over whether objective facts can exist. That’s important because scientists carry out experiments to establish objective facts. But if they experience different realities, the argument goes, how can they agree on what these facts might be? That’s provided some entertaining fodder for after-dinner conversation, but Wigner’s thought experiment has never been more than that—just a thought experiment. Last year, however, physicists noticed that recent advances in quantum technologies have made it possible to reproduce the Wigner’s Friend test in a real experiment. In other words, it ought to be possible to create different realities and compare them in the lab to find out whether they can be reconciled. And today, Massimiliano Proietti at Heriot-Watt University in Edinburgh and a few colleagues say they have performed this experiment for the first time: they have created different realities and compared them. Their conclusion is that Wigner was correct—these realities can be made irreconcilable so that it is impossible to agree on objective facts about an experiment. Wigner’s original thought experiment is straightforward in principle. It begins with a single polarized photon that, when measured, can have either a horizontal polarization or a vertical polarization. But before the measurement, according to the laws of quantum mechanics, the photon exists in both polarization states at the same time—a so-called superposition. Wigner imagined a friend in a different lab measuring the state of this photon and storing the result, while Wigner observed from afar. Wigner has no information about his friend’s measurement and so is forced to assume that the photon and the measurement of it are in a superposition of all possible outcomes of the experiment. Wigner can even perform an experiment to determine whether this superposition exists or not. This is a kind of interference experiment showing that the photon and the measurement are indeed in a superposition. From Wigner’s point of view, this is a “fact”—the superposition exists. And this fact suggests that a measurement cannot have taken place. But this is in stark contrast to the point of view of the friend, who has indeed measured the photon’s polarization and recorded it. The friend can even call Wigner and say the measurement has been done (provided the outcome is not revealed). So the two realities are at odds with each other. “This calls into question the objective status of the facts established by the two observers,” say Proietti and co. That’s the theory, but last year Caslav Brukner, at the University of Vienna in Austria, came up with a way to re-create the Wigner’s Friend experiment in the lab by means of techniques involving the entanglement of many particles at the same time. The breakthrough that Proietti and co have made is to carry this out. “In a state-of-the-art 6-photon experiment, we realize this extended Wigner’s friend scenario,” they say. They use these six entangled photons to create two alternate realities—one representing Wigner and one representing Wigner’s friend. Wigner’s friend measures the polarization of a photon and stores the result. Wigner then performs an interference measurement to determine if the measurement and the photon are in a superposition. The experiment produces an unambiguous result. It turns out that both realities can coexist even though they produce irreconcilable outcomes, just as Wigner predicted. That raises some fascinating questions that are forcing physicists to reconsider the nature of reality. The idea that observers can ultimately reconcile their measurements of some kind of fundamental reality is based on several assumptions. The first is that universal facts actually exist and that observers can agree on them. But there are other assumptions too. One is that observers have the freedom to make whatever observations they want. And another is that the choices one observer makes do not influence the choices other observers make—an assumption that physicists call locality. If there is an objective reality that everyone can agree on, then these assumptions all hold. But Proietti and co’s result suggests that objective reality does not exist. In other words, the experiment suggests that one or more of the assumptions—the idea that there is a reality we can agree on, the idea that we have freedom of choice, or the idea of locality—must be wrong. Of course, there is another way out for those hanging on to the conventional view of reality. This is that there is some other loophole that the experimenters have overlooked. Indeed, physicists have tried to close loopholes in similar experiments for years, although they concede that it may never be possible to close them all. Nevertheless, the work has important implications for the work of scientists. “The scientific method relies on facts, established through repeated measurements and agreed upon universally, independently of who observed them,” say Proietti and co. And yet in the same paper, they undermine this idea, perhaps fatally. The next step is to go further: to construct experiments creating increasingly bizarre alternate realities that cannot be reconciled. Where this will take us is anybody’s guess. But Wigner, and his friend, would surely not be surprised.

**9] All negative arguments presuppose the aff being true since they begin with an descriptive premise about the affirmative, and then justify why X is bad. However, if the aff does not have truth value, that entails the descriptive premise would also not have truth value, which makes the argument a contradiction**

#### 10] a sentence p asserts p is false. if p is true or false, it is what it says so it is true. Denying truth claims collapses to all statements being true.

#### 11] lemons are purple or Santa exists proves the second part true cuz lemons aren’t purple and means any statement is true when swapped with santa exists including the rez

#### 12] The rules of logic claim that the only time a statement is invalid is if the antecedent is true, but the consequent is false.

SEP [Stanford Encyclopedia of Philosophy.] “An Introduction to Philosophy.” Stanford University. <https://web.stanford.edu/~bobonich/dictionary/dictionary.html> TG Massa

Conditional statement: an “if p, then q” compound statement (ex. If I throw this ball into the air, it will come down); p is called the antecedent, and q is the consequent. A conditional asserts that if its antecedent is true, its consequent is also true; any conditional with a true antecedent and a false consequent must be false.  For any other combination of true and false antecedents and consequents, the conditional statement is true.

#### If the aff is winning, they get the ballot is a tacit ballot conditional which means denying the premise proves the conclusion that I should get the ballot.

#### 13] Resolved is defined as[[1]](#footnote-1) firm in purpose or intent; determined and I’m determined,

#### 14] affirm means to express agreement[[2]](#footnote-2) and I did.

#### 15] Resolved is past tense which means the rez is already decided to affirm

#### 16] The role of the ballot is to determine whether the resolution is a true or false statement – answers collapse because you presume urs is true

#### A] The ballot says vote aff or neg based on a topic – five dictionaries[[3]](#footnote-3) define to negate as to deny the truth of and affirm[[4]](#footnote-4) as to prove true so it's constitutive and jurisdictional

#### B] it’s the most logical since you don’t say vote for the player who shoots the most 3 points, the better player wins since debate is a game with rules given by how there’s a winner and loser.

### 1AC – Offense

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

#### The appropriation of space by private entities isn’t value neutral but is sutured in a discourse of the cosmic elite and unequal IR.

Stockwell 20 [Samuel Stockwell (Research Project Manager, the Annenberg Institute at Brown University). “Legal ‘Black Holes’ in Outer Space: The Regulation of Private Space Companies”. E-International Relations. Jul 20 2020. Accessed 12/7/21. <https://www.e-ir.info/2020/07/20/legal-black-holes-in-outer-space-the-regulation-of-private-space-companies/> //Xu]

The US government’s support for private space companies is also likely to lead to the reinforcement of Earth-bound wealth inequalities in space. Many NewSpace actors frame their long-term ambitions in space with strong anthropogenic undertones, by offering the salvation of the human race from impending extinction through off-world colonial developments (Kearnes & Dooren: 2017: 182). Yet, this type of discourse disguises the highly exclusive nature of these missions. Whilst they seem to suggest that there is a stake for ordinary citizens in the vast space frontier, the reality is that these self-described space pioneers are a member of a narrow ‘cosmic elite’ – “founders of Amazon.com, Microsoft, Pay Pal… and a smattering of games designers and hotel magnates” (Parker, 2009: 91). Indeed, private space enterprises have themselves suggested that they have no obligation to share mineral resources extracted in space with the global community (Klinger, 2017: 208). This is reflected in the speeches of individuals such as Nathan Ingraham, a senior editor at the tech site EngadAsteroid mining, who claimed that asteroid mining was “how [America is] going to move into space and develop the next Vegas Strip” (Shaer, 2016: 50). Such comments highlight a form of what Beery (2016) defines as ‘scalar politics’. In similar ways to the ‘scaling’ of unequal international relations that has constituted our relationship with outer space under the guise of the ‘global commons’ (Beery, 2016: 99), private companies – through their anthropogenic discourse – are scaling existing Earth-bound wealth inequalities and social relations into space by siphoning off extra-terrestrial resources. By constructing their endeavours in ways that appeal to the common good, NewSpace actors are therefore concealing the reality of how commercial resource extraction serves the exclusive interests of their private shareholders at the expense of the vast majority of the global population.

### 1AC – Underview

#### 1] No neg arguments – skews me to answer those. Answering this triggers a contradiction since it relies on an analytic argument and those affirm since I spoke first and they were your fault for creating.

#### 2] No 2NR “I meet” arguments- they’re each a NIB for me to winning theory which kills my ability to check abuse.

#### 3] Treat each theoretical argument as drop the debater – they have the ability to meet them but chose not to and its key to normset

#### 4] No new 2n arguments, weighing, and paradigm issues. a) it becomes impossible to check NC abuse if you can dump on reasons the shell doesn't matter in the 2NR – b) neg has access to bidirectional shells which makes neg shells impossible to meet and impact turns your reading of the shells since I’ll always lose on an interpretation

#### 5] 1AR theory is legit – anything else means infinite abuse – drop the debater, competing interps, no rvis– 1AR is too short to make up for the time trade-off – no RVIs and no 2NR theory and paradigm issues– 6 min 2NR means they can brute force me every time. Aff theory first – it’s a much larger strategic loss because 1min is ¼ of the 1AR vs 1/7 of the 1NC which means there’s more abuse if I’m devoting a larger fraction of time.

#### 6] No neg analytics - I don’t have time to cover 100 blippy arguments in the NC since you can read 7 min of analytics and extend any of them to win.

#### 7] The neg may not read meta-theory – I only have time to check abuse 1 time but you can do it in the NC and 2N, up-layering my attempt means we never get to the best norm. This means reject any reason why an aff spike is bad since they claim aff theory is unfair.

#### 8] The neg may not read overview answers to aff arguments – they can up-layer all aff arguments for 7 minutes and the 1ar has to shift through it all. I have a computer virus that prevents changing font size and everything’s in an overview.

#### 9] All neg interps are counter interps since the aff takes an implicit stance on every issue which means you need an rvi to become offensive. You should accept all aff interps and assume I meet neg theory since the aff speaks in the dark and I have to take a stance on something, you can at least react and adapt.

#### 10] The neg may not read nibs or OCIs (offensive counterinterps) a) you can up-layer for 7 minutes that I have to answer before I even have access to offense b) inf neg abuse since you would just read 7 mins of auto-negate arguments c) OCIs are just shorter theory args they can blow up. This means they must only line by line aff arguments, since otherwise they function as nibs before I access warrants.

#### 11] Check all neg interps and K/DA links in CX – 1) avoids infinite regress due to links and interps 2) otherwise reevlaute under the neg’s K 3) norms – you’d do the same with TFW

#### 12] Theory or K indicts on spikes is drop the arg a] my theory paradigms are simply presented models for debate b] its key to reciprocity since one line shouldn’t warrant the death penalty

#### 13] Reject 1NC shells – you have 13 minutes in the NC and 2NR to beat back 7 minutes of the 1AR and 2AR

#### 14] If I win one layer vote aff- The NC has the ability to uplayer for 7 minutes and moot 6 minutes of case

#### 15] The neg can only gain offense from one unconditional route to the ballot- Forces the neg to engage in the AC rather than just uplayering

#### 16] Interpretation: The negative must concede the affirmative framework if it is not morally repugnant and the advocacy is topical and disclosed

#### Violation: they didn’t

#### Prefer-

#### A] Time skew- Winning the negative framework moots 6 minutes of 1AC offense – that outweighs on quantifiability and reversibility – I can’t get back time lost and it’s the only way to measure abuse

#### B] Topic Ed- Every debate would just be a framework debate which means we never get access to core topic lit – that outweighs on time frame – we only have 2 months

#### C] Drop the debater to deter future abuse, No RVIs – they chill and bait theory and they get 7 minutes of answers. Competing Interps to deter judge intervention.

### 1AC – Advantage

#### Space mining coming now – lack of regulations makes conflicts likely.

Zeisl 19 [Yasemin Zeisl, MSc in International Relations and Affairs from the London School of Economics and Political Science (LSE), “Three Salient Risks of Mining in Space,” 05/03/19, *GlobalRiskIntel*, https://www.globalriskintel.com/insights/three-salient-risks-mining-space, EA]

The harvesting of natural resources from space objects is the goal of numerous companies such as Planetary Resources or Deep Space Industries in the United States, Asteroid Mining Corporation in Scotland, or iSpace in Japan. While some companies such as iSpace are focusing on resources inside the Moon, others are developing strategies to identify and extract resources from asteroids and extinct comets. Given that calculations evaluate space mining as a highly lucrative business with potential profits amounting to trillions in U.S.-dollars, it is unsurprising that investment into space mining rose from 534 million USD in 2014 to 3.1 billion USD in 2018.

Research institutions such as the Center for Near-Earth Object Studies (CNEOS) — which cooperates with the National Aeronautics and Space Administration (NASA) — detects, traces, and assesses risks of objects moving close to the Earth. Such calculations are relevant for future ventures into space mining, which will focus on metals such as platinum, gold, iron, rhodium, zinc, cobalt, and nickel, as well as water and carbon found in asteroids and extinct comets. Celestial ice would be particularly useful for generating rocket fuel by splitting it into hydrogen and oxygen. This may facilitate long space travel to destinations such as Mars. The usage of extinct comets as gas stations may bring engineers and scientists one step closer to the goal of colonizing Mars. While rocket fuel extraction may be a relatively feasible project for the near future, it is expected that harvesting metals from space may require several more decades to realize.

Spotting the potential profitability of space mining, the United States passed the Commercial Space Launch Competitiveness Act in 2015 to grant U.S. citizens the right to harvest natural resources from celestial bodies. Similarly, Luxembourg established a space mining law and provided investment opportunities in August 2017. In January 2019, Russia started negotiating a bilateral cooperation arrangement with Luxembourg.

The fact that there is no clearly defined international treaty on space mining poses a major risk. Although the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies of 1984 may provide some detail on the issue by asserting that no state, organization, or natural person can lay claim to any object in space, the fact that only 18 countries have committed to this multilateral treaty leaves the majority of states unbound by this regulation. An inconsistent legal landscape in regard to resource extraction of celestial bodies could lead to legal clashes between different countries and potential disadvantages for companies or organizations from certain countries. Mining in space could turn into a fierce competition among various private businesses and states. Therefore, licensing regulations will also have to be clearly defined. Licenses will help to clarify both ownership of yields and the relationships among miners, investors, and governments in order to avoid conflict in the future.

#### Mining solves defo, erosion, chemicals, and resource wars.

Aziz 15 [John Aziz, Economics and Business correspondent at The Week, “How asteroid mining could add trillions to the world economy,” 01/11/15, *The Week*, https://theweek.com/articles/462830/how-asteroid-mining-could-add-trillions-world-economy, EA]

The potential benefits to asteroid mining reach far beyond just profit, economic growth, and expanding Earth's resource base. While mining on Earth can be highly destructive to natural habitats — resulting in deforestation, soil erosion, chemical contamination, and the pollution of groundwater — mining in space doesn't damage any natural habitats. Even more significantly, less resource bottlenecks means less potential for future resource wars between competing countries — a frightening scenario which the Pentagon has begun planning to address if need be.

#### Deforestation causes extinction.

Cross 20 [Daniel T Cross, citing Mauro Bologna, professor @ the University of Tarapacá, “Continued deforestation will doom us all, experts warn,” 07/30/20, *Sustainability Times*, https://www.sustainability-times.com/environmental-protection/continued-deforestation-will-doom-us-all-experts-warn/, Accessed: 04/20/21, EA]

Even as the planet’s population continues to grow apace, its forests are being cut down to make way for more grazing land, more farmland and more development. Forests are finite resources and once they are gone they are gone for good. That is why halting deforestation worldwide is a high priority.

Earth’s forest cover is at slightly over 4 billion hectares and continues to decrease, according to a new report by the Food and Agriculture Organization of the United Nations. Rampant deforestation has led to the loss of 420 million hectares in just four decades, mainly in Africa and South America.

“The top countries for average annual net losses of forest area over the last 10 years are Brazil, the Democratic Republic of the Congo, Indonesia, Angola, Tanzania, Paraguay, Myanmar, Cambodia, Bolivia and Mozambique,” FAO notes.

“However, there is good news as the rate of forest loss has declined substantially over the past three decades,” the UN agency adds. “The annual rate of deforestation was estimated at 10 million hectares between 2015-2020, compared with 12 million during 2010-2015. The area of forest under protection has also reached roughly 726 million hectares: nearly 200 million more than in 1990.”

Yet unless we stop cutting down forests at anything like current rates, our entire global civilization could well be doomed within just a few decades, warn other experts. In a new study two theoretical physicists who specialize in complex systems argue that with diminished forests the planet will not be able to support billions of people, which will be the death knell of human life as we have known it.

“Based on the current resource consumption rates and best estimate of technological rate growth our study shows that we have very low probability, less than 10% in [the] most optimistic estimate, to survive without facing a catastrophic collapse,” explain the two experts, Dr. Gerardo Aquino and Prof. Mauro Bologna.

At current rates of deforestation almost all the planet’s forests will have been felled within one or two centuries, they point out. Before human civilizations came on the scene the planet was covered in 60 million square kilometers of forest, yet that rate has plummeted to 40 million square kilometers. And many of the remaining forests have been badly thinned and fragmented.

“Calculations show that, maintaining the actual rate of population growth and resource consumption, in particular forest consumption, we have a few decades left before an irreversible collapse of our civilization,” warn Aquino and Bologna.

Because forests play key roles in biodiversity, oxygen production, soil conservation, water cycle regulation and food systems, significant losses in them will trigger a cascade of environmental effects that will lead to civilizational collapse and the possible extinction of humanity, at least in its current form.

“[I]t is highly unlikely to imagine the survival of many species, including ours, on Earth without [forests],” the the physicists argue. “The progressive degradation of the environment due to deforestation would heavily affect human society and consequently the human collapse would start much earlier” than the final disappearance of forests.

#### So do chemical emissions.

Cribb 17 [Julian Cribb, Fellow of the Australian Academy of Technological Sciences and Engineering, “Surviving the 21st Century,” 2017, Springer, pp. 116-117, EA]

Chemical Extinction

Two billion years ago, excessive production of one particular poisonous chemical by the inhabitants of Earth caused a colossal die-off and threatened the extermination of all life. That chemical was oxygen and it was excreted by the blue-green algae which then dominated the planet, as part of their photosynthetic processes. After several hundred million of years, the planet’s physical ability to soak up the surplus O2 in iron formations, oceans and sediments had reached saturation and the gas began to poison the existing life. This event was known as the ‘oxygen holocaust’, and is probably the nearest life on Earth has ever come to complete disaster before the present (Margulis and Sagan 1986). Since it developed slowly, over tens of millions of years, the poisonous atmosphere permitted some of these primitive organisms to evolve a tolerance to O2—and this in time led to the rise of oxygen-dependent species such as fish, mammals and eventually, us. The takehome learning from this brush with total annihilation is that it is possible for living creatures to pollute themselves into oblivion, if they don’t take care to avoid it or rapidly adapt to the new, toxic environment. It’s a message that humans, with our colossal planetary chemical impact, would do well to ponder.

While it is unlikely that human chemical emissions alone could reach such a volume and toxic state as to directly threaten our entire species with extinction (other than through carbon emissions in a runaway global warming event) or even the collapse of civilization, it is likely they will emerge as a serious contributing factor during the twenty-first century in combination with other factors such as war, climate change, pandemic disease and ecosystem breakdown. Credible ways in which man-made chemicals might imperil the human future include:

• Undermining the immune systems, physical and mental health of the population through growing exposure to toxins

• Reducing the intelligence of current and future generations through the action of nerve poisons on the developing brains and central nervous systems of children, rendering humanity less able to solve its problems and adapt to major changes; and by increasing the level of violent crime and conflict in society, which is closely linked to lower IQ.

• Bringing down the economy through the massive healthcare costs of having to nurse, treat and maintain a growing proportion of the population disabled by lifelong chronic chemical exposure.

• By poisoning the ecosystem services—clean air, water, soil, plants, insects and wildlife—on which humanity depends for its own survival and thereby contributing to potential global ecosystem breakdown

#### And soil erosion.

Monbiot 15 [George Monbiot, Guardian columnist and the author of Feral, The Age of Consent and Out of the Wreckage: a New Politics for an Age of Crisis, “We’re treating soil like dirt. It’s a fatal mistake, because all human life depends on it,” 03/25/15, *The Guardian*, https://www.theguardian.com/commentisfree/2015/mar/25/treating-soil-like-dirt-fatal-mistake-human-life]

Imagine a wonderful world, a planet on which there was no threat of climate breakdown, no loss of freshwater, no antibiotic resistance, no obesity crisis, no terrorism, no war. Surely, then, we would be out of major danger? Sorry. Even if everything else were miraculously fixed, we’re finished if we don’t address an issue considered so marginal and irrelevant that you can go for months without seeing it in a newspaper.¶ It’s literally and – it seems – metaphorically, beneath us. To judge by its absence from the media, most journalists consider it unworthy of consideration. But all human life depends on it. We knew this long ago, but somehow it has been forgotten. As a Sanskrit text written in about 1500BC noted: “Upon this handful of soil our survival depends. Husband it and it will grow our food, our fuel and our shelter and surround us with beauty. Abuse it and the soil will collapse and die, taking humanity with it.”¶ The issue hasn’t changed, but we have. Landowners around the world are now engaged in an orgy of soil destruction so intense that, according to the UN’s Food and Agriculture Organisation, the world on average has just 60 more years of growing crops. Even in Britain, which is spared the tropical downpours that so quickly strip exposed soil from the land, Farmers Weekly reports, we have “only 100 harvests left”.¶ To keep up with global food demand, the UN estimates, 6m hectares (14.8m acres) of new farmland will be needed every year. Instead, 12m hectares a year are lost through soil degradation. We wreck it, then move on, trashing rainforests and other precious habitats as we go. Soil is an almost magical substance, a living system that transforms the materials it encounters, making them available to plants. That handful the Vedic master showed his disciples contains more micro-organisms than all the people who have ever lived on Earth. Yet we treat it like, well, dirt.¶ The techniques that were supposed to feed the world threaten us with starvation. A paper just published in the journal Anthropocene analyses the undisturbed sediments in an 11th-century French lake. It reveals that the intensification of farming over the past century has increased the rate of soil erosion sixtyfold.¶ Another paper, by researchers in the UK, shows that soil in allotments – the small patches in towns and cities that people cultivate by hand – contains a third more organic carbon than agricultural soil and 25% more nitrogen. This is one of the reasons why allotment holders produce between four and 11 times more food per hectare than do farmers.¶ Whenever I mention this issue, people ask: “But surely farmers have an interest in looking after their soil?” They do, and there are many excellent cultivators who seek to keep their soil on the land. There are also some terrible farmers, often absentees, who allow contractors to rip their fields to shreds for the sake of a quick profit. Even the good ones are hampered by an economic and political system that could scarcely be better designed to frustrate them.¶ This is the International Year of Soils, but you wouldn’t know it. In January, the Westminster government published a new set of soil standards, marginally better than those they replaced, but wholly unmatched to the scale of the problem. There are no penalities for compromising our survival except a partial withholding of public subsidies. Yet even this pathetic guidance is considered intolerable by the National Farmers’ Union, which greeted them with bitter complaints. Sometimes the NFU seems to me to exist to champion bad practice and block any possibility of positive change.¶ Few sights are as gruesome as the glee with which the NFU celebrated the death last year of the European soil framework directive, the only measure with the potential to arrest our soil-erosion crisis. The NFU, supported by successive British governments, fought for eight years to destroy it, then crowed like a shedful of cockerels when it won. Looking back on this episode, we will see it as a parable of our times.¶ Soon after that, the business minister, Matthew Hancock, announced that he was putting “business in charge of driving reform”: trade associations would be able “to review enforcement of regulation in their sectors.” The NFU was one the first two bodies granted this privilege. Hancock explained that this “is all part of our unambiguously pro-business agenda to increase the financial security of the British people.” But it doesn’t increase our security, financial or otherwise. It undermines it.¶ The government’s deregulation bill, which has now almost completed its passage through parliament, will force regulators – including those charged with protecting the fabric of the land – to “have regard to the desirability of promoting economic growth”. But short-term growth at the expense of public protection compromises long-term survival. This “unambiguously pro-business agenda” is deregulating us to death.¶ There’s no longer even an appetite for studying the problem. Just one university – Aberdeen – now offers a degree in soil science. All the rest have been closed down.¶ This is what topples civilisations. War and pestilence might kill large numbers of people, but in most cases the population recovers. But lose the soil and everything goes with it.¶ Now, globalisation ensures that this disaster is reproduced everywhere. In its early stages, globalisation enhances resilience: people are no longer dependent on the vagaries of local production. But as it proceeds, spreading the same destructive processes to all corners of the Earth, it undermines resilience, as it threatens to bring down systems everywhere.¶ Almost all other issues are superficial by comparison. What appear to be great crises are slight and evanescent when held up against the steady trickling away of our subsistence.

1. http://www.dictionary.com/browse/resolved [↑](#footnote-ref-1)
2. http://www.dictionary.com/browse/affirm [↑](#footnote-ref-2)
3. <http://dictionary.reference.com/browse/negate>, <http://www.merriam-webster.com/dictionary/negate>, <http://www.thefreedictionary.com/negate>, <http://www.vocabulary.com/dictionary/negate>, <http://www.oxforddictionaries.com/definition/english/negate> [↑](#footnote-ref-3)
4. *Dictionary.com – maintain as true, Merriam Webster – to say that something is true, Vocabulary.com – to affirm something is to confirm that it is true, Oxford dictionaries – accept the validity of, Thefreedictionary – assert to be true* [↑](#footnote-ref-4)