# 1AC Palm Round 3

## Framing

**Permissibility and presumption affirm:**

1. **Epistemics – we wouldn’t be able to start a strand of reasoning since we’d have to question that reason – means that presuming neg is incoherent because it relies on some presumptive truths about justice and the world in general**
2. [**Unjust**](https://www.dictionary.com/browse/unjust) **is defined as “not just; lacking in justice or fairness:” so if something is neither good or bad, then it is not just which proves it is unjust**
3. **Probability - Logically safer since it’s better to be supererogatory than fail to meet an obligation**
4. **Logic - If everything is permissible so is the aff since nothing prevents us from doing it**
5. **Intuition - we naturally believe statements true e.g. if I told you my name is Shrey, you’d believe me**

**Perspectivism is true–**

1. **Opacity – we can never access another person’s perspective because we can never fully understand who someone else is or what they think. Every truth I create cannot be universalized because I can’t guarantee that they will create the same truth because they do what they want**
2. **Linguistics – Truth is constructed by language, which is completely arbitrary. Nothing tells me that a chair is a chair; I only assign it that name arbitrarily because I want to. Meaning can’t be contained within language if we make it up ourselves, and truth doesn’t exist absent language**

**Truth is not foundational and morality can only gain coherence through intersubjective social norms. Deliberation must be constitutive of normative reasoning since it’s necessary to validate the acceptance of any syllogism–other theories rely on communication to properly interpret and follow them and communicate an obligation**

**Habermas** (Jurgen, Moral Consciousness and Communicative Action, **1983**)

This "fact of reason" cannot be deductively grounded} but 11:can be clarified if we take the further step of conceiving argumentative speech as a special case-in, fact, a pnvlleg~d derivative of action oriented toward reaching understanding. Only when we return to the level of action theory and conceivediscourse as a continuation of communicative action by other means can we understand the true thrust of discourse ethics. The reason we can locate the content of (U) in the communicative presuppositions of argu~en.tation .is that argumentation is a reflective form of communicative action and the structuresof action oriented toward reaching understanding always alreadypresuppose those very relationships of, reciprocity and mutual recognition around which all moral ideas revolve In everyday life no less than in philosophical ethi:s. Like Ka~t'sappeal to the "fact of reason," this thrust of discourse ethics has a naturalistic ring to it, but it is by no means a naturalistic fallacy. Both Kant and the proponents of discourse ethics rely on a type of argument that draws attention to the inescapability of the general presuppositions that always already under the the communicative practice of everyday life and that cannot be picked or chosen like makes of cars or value postulates. This type of argument is made from the reflective point of view, not from the empiricist attitude of an objectivating observer.The transcendental mode of justification reflects the fact that practical discourse is embedded in contexts of communicative action. To that extent discourse ethICS pOInts to, and ltselfdepends upon, a theory of con:municative act~on. We can expecta contribution to the vertICal reconstructIo~ o~ stage~ of moral consciousness from the theory of communIcatlve actIOn, for the latter focuses on structures of linguistically mediated, norm-governed Interaction, structures that integrate what psychology analytically separates; to wit, perspective taking, moral Judgment, and action.

**Thus, the standard is consistency with pragmatic constraints–a method of pluralism that a] hijacks every other framework since only we can situate ideas into habit through practice and b] is self correcting and can build upon itself to infinitely improve and be better than any other framework, which also mean responses don’t link since prag can fix them in the future**

**Serra 09** Juan Pablo Serra. What Is and What Should Pragmatic Ethics Be? Some Remarks on Recent Scholarship*.* EUROPEAN JOURNAL OF PRAGMATISM AND AMERICAN PHILOSOPHY. 2009. Francisco de Vitoria College, Humanities Department, Faculty member. https://journals.openedition.org/ejpap/905

This separation of theory and practice runs parallel to another split, namely, that of ethics and morals or, better put, of ethical theory and moral practice. Peirce denies that morality is subject to rationality and thinks that ethics is valuable as a science in a broad sense. But he also regards ethics as a science which bears on human conduct only indirectly, through the examination of past actions and the self-correction of the self in view of future action. In addition, ethics would be a normative knowledge only in so far as it analyzes the adjustment of actions to ends and in so far as it studies the general way in which a good life can be lived. In morals Peirce appeals to instinct and sentiment, and in ethics he recommends the use of logical thinking —just as scientists do. However, even within the framework of his system, it’s not obvious that scientists may so easily set aside their instincts —in fact, instinct (or ‘rational instinct’ as he called it in 1908) plays a significant role in the economy of re- search. Moreover, the statement that in moral issues there may be no possibility of carrying out an inquiry that is truth-oriented is not an uncontroversial one. After all, moral inquiry is performed in a deliberative way, weighing up argumentations, beliefs and principles, and comparing them either with their probable or conceivable consequences or with lived as well as possible experiences that can be forceful or impinge upon the deliberative subject in such a way as to acquire the compulsory resistance due to reality. As Misak puts it succint- ly, “the practice of moral deliberation is responsive to experience, reason, argument, and thought experiments... Such responsiveness is part of what it is to make a moral decision and part of what it is to try to live a moral life” (2000: 52)3. Likewise, this same deliberative activity implies an effort to acquire habits, beliefs and principles that contribute to a truly free deliberation which, in turn, can result in creative conclusions. For Peirce, as you get more habit-governed, you become more creative and free, and your selfhood acquires plas- ticity and receptiveness to experience4. Vincent Colapietro has referred to Peirce’s description of human reason in terms of a deliberative rationality (1999: 24). Also, in another place he has explained that deliberation for Peirce is a process of preparation for future action which has to do with the checking of previous acts, the rehearsal in imagination of different roads to be followed by possible conduct and the nurturing of ideals (Colapietro 1997: 270, 281). It is precisely this experi- ment carried out within imagination that generates habits, because, as Peirce says in “A Survey of Pragmaticism”, “it is not the muscular action but the accompanying inward ef- forts, the acts of imagination, that produce the habit” (CP 5.479, 1907). Habits are regular ways of thinking, perceiving and interpreting that generate actions. As such, habits have a huge influence on human behavior, manifest themselves in the con- crete things we do and, at the same time, are formed within those same activities. Even more, according to Peirce, the activity takes the form of experimentation in the inner world; and the conclusion (if it comes to a definite conclusion), is that under given conditions, the interpreter will have formed the habit of acting in a given way whenever he may desire a given kind of result. The real and living logical conclusion is that habit (CP 5.491, 1907). Much more evidence could be given to support the view that habits are virtually decided (CP 2.435, c.1893) and also that intelligence comprises inward or potential actions that in- fluence the formation of habits (CP 6.286, 1893). Suffice it to say that, according to Peirce, deliberation is a function of the imagination, and that imagination is in itself an experiment which may have unexpected consequences that impose themselves upon the deliberative subject.

**Impact calc -**

1. **Deliberation plays a procedural, not substantive role in pragmatic tradition. It doesn’t say which impacts matter the most nor is it an impact to weigh, but tells us *what* questions to ask and how we determine the answers to them. This is a sequencing question - we are first concerned with the decisionmaking procedure to evaluate whether other metrics such as consequences even matter**
2. **Consequentialism fails - a] Induction fails – the logic of looking to the past to predict the future is all premised in the past, so it’s circular b] Aggregation fails – there’s no way to weigh between different forms of pain and pleasure e.g. 5 headaches vs a migraine c] Butterfly effect – each consequence has a future consequence and so on so we never know if it really did net good d] Subjectivity - everyone takes pleasure and pain in different things so we can’t know what maximizes it e] Infinite universe has infinite pleasure and pain - to add a finite amount does nothing because infinity + finity is still infinity f] Culpability -- can’t be held responsible for consequences because we can’t know all of them and it’s out of our control, intents are the only verifiable basis**
3. **Because we cannot know whether moral judgements are infinitely true, we need to solve problems in our specific context. Therefore, if I prove the res affirms in the context of my framework, any reason to negate functions in a different context and isn’t a reason not to affirm**

**Prefer additionally:**

1. **Performativity–responding to my framework concedes it because you are deliberating against it – outweighs because morality must prevent opting out which only constitutivism solves**
2. **Probability - disagreement is rife in the squo so most theories are wrong - prefer relative reliability. The law of large numbers proves when we test more it gets closer to true probability so when we test theories under this fw we’ll get the best calculus. This means a] even if my framework is wrong, its non-unique since it also encompasses their framework so if ours is wrong, then every framework is wrong and b] we take the premises of many theories’ claims into practice and use them in the best instances which non-uniques any net benefits to other theories**
3. **Rule Following Paradox - There is nothing inherent to a rule that tells us how we ought to follow it, which proves no internal motivation or direction to follow a particular rule, regardless of how correct the rule is. Since only our interpretation can tell us how to follow the rule, there can be no incorrect application. Only deliberation accounts for the diversity of interpretations of our norms - any other theory is illegitimate since it hasn’t been socially accepted by the people yet**
4. **Limits–ethics are limited to how we conceptualize them–the way we cohere and understand ethics changes as we learn more about the world–only a theory that can account for new unforeseen circumstances create the most ethically rigorous solution**

**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. 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 practice is primary in philosophy rules out the 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. Criteria are not discovered by pure reason, and they are not fixed. As ends of action, they are always revisable. As we obtain new evidence about ourselves and our world, and as our worlds changes, we find that what was appropriate for the old environment may not be conducive to survival in the new 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. The moral world is complex and changeable. No set of criteria could give us univocal answers about how we 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 as our environments change. 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) . Pragmatic criteria are not external rules we apply, but are tools we use in making informed judgements. They embody learning from previous action, they express our tentative efforts to isolate morally relevant features of those actions. These emergent criteria can become integrated into our habits, thereby informing the ways that we react to, think about, and imagine our worlds and 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. Other moral theories can help us isolate (and habitually focus on) morally relevant features of 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. The pragmatist absorbs these insights into her habits, and thereby shapes how she habitually responds, 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

1. **Actor Spec - Only a radical democracy that constantly questions its own foundations can ever be open to radical revision – other systems insist on their own foundation even when that’s exclusionary or illegitimate. The aff is a better model for constructing a political institution that must secure its own legitimacy over time and to changing groups of citizens.**
2. **Ethical Uncertainty - If you’re unsure what the good is, allow for deliberation because it allows people to pursue their conception of the good and discuss it.**
3. **Our framework moves away from abstraction and understands knowledge as changing in order to base social change and revision of ideas.**

**Glaude 7’** Eddie S. (Eddie S. Glaude Jr. is the chair of the Center for African-American Studies and the William S. Tod Professor of Religion and African-American Studies at Princeton University.) In a Shade of Blue : Pragmatism and the Politics of Black America. University of Chicago Press, 2007. EBSCOhost. (5-7). Dulles AS

In a Shade of Blue is my contribution to the tradition I have just sketched. My aim is to think through some of the more pressing conceptual problems confronting African American political life, and I do so as a Deweyan prag-matist. I should say a bit about what I mean by this self-description. John Dewey thought of philosophy as a form of cultural and social criticism. He held the view that philosophy, properly understood as a mode of wis-dom, ought to aid us in our efforts to overcome problematic situations and worrisome circumstances. The principal charge of the philosopher, then, is to deal with the problems of human beings, not simply with the problems of philosophers. For Dewey, over the course of his long career, this involved bridging the divide between science, broadly understood, and morals—a divide he traced to a conception of experience that has led philosophers over the centuries to tilt after windmills. Dewey declared, “The problem of restoring integration and co-operation between man’s beliefs about the world in which he lives and his beliefs about values and purposes that should direct his conduct is the deepest problem of any philosophy that is not isolated from life.”9Dewey bases this conclusion on several features of his philosophy: (1) anti foundationalism, (2) experimentalism, (3) contextualism, and (4) soli-darity.10 Antifoundationalism, of course, is the rejection of foundations of knowledge that are beyond question. Dewey, by contrast, understands knowledge to be the fruit of our undertakings as we seek “the enrichment of our immediate experience through the control over action it exercises.”11He insists that we turn our attention from supposed givens to actual consequences, pursuing a future fundamentally grounded in values shaped by experience and realized in our actions. This view makes clear the experimental function of knowledge. Dewey emphasized that knowledge entails efforts to control and select future experience and that we are always con-fronted with the possibility of error when we act. We experiment or tinker, with the understanding that all facts are fallible and, as such, occasionally afford us the opportunity for revision.12Contextualism refers to an understanding of beliefs, choices, and actions as historically conditioned. Dewey held the view that inquiry, or the pursuit of knowledge, is value-laden, in the sense that we come to problems with interests and habits that orient us one way or another, and that such pursuits are also situational, in the sense that “knowledge is pursued and produced somewhere, some when, and by someone.”13Finally, solidarity captures the associational and cooperative dimensions of Dewey’s thinking. Dewey conceives of his pragmatism as “an instrument of social improvement” aimed principally at expanding democratic life and broadening the ground of individual self-development.14Democracy, for him, constitutes more than a body of formal procedures; it is a form of life that requires constant attention if we are to secure the ideals that purportedly animate it. Individuality is understood as developing one’s unique capacities within the context of one’s social relations and one’s community. The formation of the democratic character so important to our form of associated living involves, then, a caring disposition toward the plight of our fellows and a watchful concern for the well-being of our democratic life.

1. **Only pragmatism’s understanding of interactive knowledge production can mitigate entrenched violence.**

**Kadlec 8**, Alison. "Critical pragmatism and deliberative democracy." Theoria 55.117 (2008): 54-80. (doctorate in political science from the University of Minnesota and bachelor's degrees from Michigan State University in political theory, constitutional democracy and English literature.)//Dulles AS

Social Intelligence: The Critical Potential Lived Experience Though human nature is intersubjectively generated on an ongoing basis, we are not merely the products of Platonic conceptions of ourselves. Individuals are cultivated in and by society through experiential processes in which we are acted upon, and act back upon a dynamic environment. For Dewey, 'experience' connotes a very specific process that stands in stark contrast to the traditional conception of experience as a matter of private consciousness. Because Dewey's notion of experience is social, active, and educative, what he calls the 'experiential continuum' is the process by which we are best able to develop social intelligence. The 'experiential continuum' is characterised by our enduring and undergoing the consequences of our actions, and intelligence is to be understood as the self-conscious and ongoing process of adjusting our attitudes in light of these consequences.25 In The Public and Its Problems , Dewey gives this view of intelligence a decidedly deliberative spin when he says, 'we lie, as Emerson said, in the lap of an immense intelligence. But that intelligence is dormant and its communications are broken, inarticulate and faint until it possesses the local community as its medium'.26 In 'Ethical Principles Underlying Education', Dewey is more explicit in explaining his view of the relationship between social intelligence and the normative commitment to democracy in his declaration that 'ultimate moral motives and forces are nothing more nor less than social intelligence the power of observing and comprehending social situations and social power trained capacities of control at work in the service of social interest and aims'.27 Dewey's unflagging faith in the transformative potential of social intelligence intrinsic to democracy as a way of life is not Utopian, nor is it based on a belief that all problems are finally solvable. Rather, it expresses a moral commitment that suggests that a working faith in social intelligence is our best shot at crafting habits and institutions that will further encourage us to identify new opportunities for the expansion of our capacities moving forward. The upshot here is that democracy as a way of life means, above all, that we stop thinking of democracy as a thing and start thinking about it as a way. Democracy is belief in the ability of human experience to generate the aims and methods by which further experience will grow in ordered richness. . . . Democracy is the faith that the process of experience is more important than any special result attained, so that the special results achieved are of ultimate value only as they are used to enrich and order the ongoing process. Since the process of experience is capable of being educative, faith in democracy is all one with faith in experience and education. All ends and values that are cut off from the ongoing process become arrests and fixations. They strive to fixate what has been gained instead of using it to open the road and point the way to new and better experiences.28 On this account, social intelligence is not a possession, it is a de-centred and educative process of ordering our experiences through manifold communication. The guiding principles, then, of social intelligence are 1) the protection and expansion of our capacity for free and communicative inquiry and 2) the protection and expansion of our capacity to perceive the shared consequences of our habits and policies. We judge the goodness or badness of these consequences by evaluating the way they act back on and impact our individual capacities for free inquiry that inform the ongoing development of social intelligence In turn, the 'proper conditions' for social intelligence then are those that increase our ability to perceive the complex shared consequences of our choices and practices. Intelligence is social in pragmatism because it requires the development of both firstand second-order attitudes that can only take place in an ongoing process of communication. Free inquiry is not just a matter of having the opportunity to seek information that will allow for the generation of thoughtful attitudes about issues, it is also a matter of appreciating and harnessing the democratic potential of second-order attitudes (attitudes about our attitudes). We are not passive receivers of information, but dynamic interactors, and therefore intelligence is intrinsically communicative. Free inquiry is the engine of social intelligence, which is in turn based on our willingness to have our firstorder attitudes adjusted in light of our second-order attitudes.29 The ongoing mutual adjustment of our first-order and second-order attitudes through a back and forth process between the two emerges only to the extent that we have the opportunities to communicate freely with others, and this is none other than the 'method' of social intelligence. The goal of communicative inquiry then is to build an ever richer context for the ongoing development of our ability to perceive the relationship between our beliefs, practices, and institutions. By taking a principal focus on increasing our ability for evermore sophisticated perception of the consequences of our habits of thought and action, we will be better equipped to distinguish between those habits that improve and those that impede our capacities for free inquiry. This is the material of problem-solving, as it is just this capacity for free inquiry that makes it possible to identify common problems in a way that they may be productively addressed. Turning back to the challenges leveled by radical democratic theorists, we can begin to see the opportunities made possible by critical pragmatism. Tapping into the critical potential of lived experience under conditions of unalterable changefulness begins with the therapeutic recognition that there is no such thing as a unified field of power directed entirely by stable and fixed interests. The first implication here is that there are always new opportunities to exploit cracks and fissures in various structurally entrenched forms of power. Second, the essentially complexity and flux of our world is always producing new opportunities for transformative resistance and for the development of more creative approaches to meaningful deliberation. Critical pragmatism pivots on the notion that under such conditions what we most need are not fixed and static foundations, we need the flexible habits of inquiry and communication that make it possible to both identify pernicious obstacles to deliberation and to challenge, circumvent, or neutralise their impact.

## Offense

**I defend the resolution as a general principle, which means specific instances that the aff is wrong don’t disprove our general thesis, just as penguins don’t disprove birds fly. Cx and before round check all interps to deter frivolous theory and maximize substance. Affirm:**

**[1] 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.

**[2] Appropriation is intrinsically exclusive and denies experimentation and guts deliberative procedures by creating permanent, unchanging bounds that exclude communal deliberations over certain regions through exclusivity**

Timothy Justin **Trapp**, JD Candidate @ UIUC Law, **’13**, TAKING UP SPACE BY ANY OTHER MEANS: COMING TO TERMS WITH THE NONAPPROPRIATION ARTICLE OF THE OUTER SPACE TREATY UNIVERSITY OF ILLINOIS LAW REVIEW [Vol. 2013 No. 4]

The issues presented in relation to the nonappropriation article of the Outer Space Treaty should be clear.214 The ITU has, quite blatantly, created something akin to “property interests in outer space.”215 It allows nations to exclude others from their orbital slots, even when the nation is not currently using that slot.216 This is directly in line with at least one definition of outer-space appropriation.217 [\*\*Start Footnote 217\*\*Id. at 236 (“Appropriation of outer space, therefore, is ‘the exercise of exclusive control or exclusive use’ with a sense of permanence, which limits other nations’ access to it.”) (quoting Milton L. Smith, The Role of the ITU in the Development of Space Law, 17 ANNALS AIR & SPACE L. 157, 165 (1992)). \*\*End Footnote 217\*\*]The ITU even allows nations with unused slots to devise them to other entities, creating a market for the property rights set up by this regulation.218 In some aspects, this seems to effect exactly what those signatory nations of the Bogotá Declaration were trying to accomplish, albeit through different means.219

**[3] The process of taking control over space is a form of claiming ownership over things like extra-terrestrial life rather than deliberating over methods of shared ownership**

Benjamin **Segobaetso** [Project Officer at United Nations Association in Canada]. “Ethical Implications of the Colonization, Privatization and Commercialization of Outer Space” uOttawa. May **2018**. <https://ruor.uottawa.ca/bitstream/10393/38318/1/Benjamin\_Segobaetso\_2018.pdf> [AD]

It can be argued through Kantian ethics that our record here on Earth paints a picture of neoliberal and capitalist policies with tendencies to favour the highest bidder at the exclusion of the under privileged and puts profit first at the expense of the environment. For Kantians, there are two questions that we must ask ourselves whenever we decide to act: (i) Can I rationally will that everyone act as I propose to act? If the answer is no, then we must not perform the action. (ii) Does my action respect the goals of human beings? Again, if the answer is no, then we must not perform the action. Kantian ethicists would argue that extending to space neoliberal and capitalist policies is immoral because these systems create economic disparities and life threatening environmental injustices; therefore, they are set up in a way that we could not rationally will everyone to act the way they act either here on Earth or in space. Also, Kantian ethicists would ask whether the action of extending neoliberal and capitalist policies to space would respect the goals of extra-terrestrial intelligent life if any rather than merely using them for humans’ own purposes? If the answer is no, then the participating agent must not perform the action. Kant wrote on the possible existence of extra-terrestrial intelligent species in the final pages of the last book that he published, Anthropology from a Pragmatic Point of View [Anthropologie in pragmatischer Hinsicht] (1978). In this publication, Kant hinted that the highest concept of the Alien species may be that of a terrestrial rational being [eines irdischen vernünftigen ]; however, he argued that it will be difficult to describe its characteristics because there is no knowledge available of a non-terrestrial rational being [nicht irdischen Wesen] which could be used as a reference in regards to its properties and ultimately classify that terrestrial being as rational. This dilemma will continue until extraterrestrial intelligent life is discovered because comparing two species of rational beings has to be on the basis of experience, but that experience has not been possible yet (Kant, 237-238). In applying Kant’s deontological moral theory, it must first be recognized that Kant visualized a kind of respect in which we all can recognize every rational being exists as an end in itself (1) as being not fully comprehensible by any human understanding, (2) as being an end in him- or herself, and (3) as being a potential source of moral law (Kant, 2012). In this regard, since Kant insinuated that the highest concept of the extraterrestrial intelligent species may be that of a terrestrial rational being [eines irdischen vernünftigen ]; that implies any encounter with extra-terrestrial intelligent life will compel us under the deontological moral theory to recognize that life as being not fully comprehensible by any human understanding, as being an end in itself, and as being a potential source of moral law (Kant, 2012). . In this regard, since Kant insinuated that the highest concept of the extraterrestrial intelligent species may be that of a terrestrial rational being [eines irdischen vernünftigen ]; that implies any encounter with extra-terrestrial intelligent life will compel us under the deontological moral theory to recognize that life as being not fully comprehensible by any human understanding, as being an end in itself, and as being a potential source of moral law (Kant, 2012). It must be realized that Kant’s deontology theory does not go without criticism by critical theorists who believe in dismantling all systems of oppression.

## Advantage

**Space race coming now and escalates conflict**

**Delgado-Perez 20** [Veronica Delgado-Perez, staff contributor to International Scholar with a Master’s degree in Public International Law from Utrecht University and a Bachelor of Laws at the Universidad Externado de Colombia, with a focus on soviergnty and outer space law, 4-6-2020, "Commercialization of Space Risks Launching a Militarized Space Race," International Scholar, <https://www.theintlscholar.com/periodical/12/14/2020/analysis-commercialization-space-risk-international-law-military-space-race>]/Kankee

International law must immediately and proactively address questions surrounding extraterrestrial commercial activity — or risk the unraveling of the international legal neutrality of space and the launch of a new militarized space race fueled by resurgent great power competition. On April 6, 2020, U.S. former President Donald Trump announced an executive order encouraging the use and recovery of space resources, which includes hard rock minerals, helium, and regolith, among others. The order argued that outer space was not a "global commons," as is established in international law, but rather that space is considered as public and private property within the limits of applicable law. The private commercialization of resources in outer space was long a goal of the Trump administration. However, President Biden’s space policies are much more speculative given the lack of information about his views on outer space. There is only one document from the Democratic Party, titled “Building a Stronger, Fairer Economy,” which hints at a Biden administration approach to space interests. According to the platform, the Democratic Party remains committed to continuing space exploration and supporting NASA’s programs.Following Trump’s decision, SpaceX launched the Crew Dragon with NASA astronauts to the International Space Station (ISS) on May 30, 2020. Though in years past, NASA chose state-owned Russian rockets to send astronauts to outer space, the Crew Dragon is a rocket built, operated, and launched by a private American company. In the same month, NASA announced the Artemis Accords, which establish a new set of principles including the extraction and use of resources on the Moon, Mars, and asteroids. The commercial crew program appears to remain in operation, launching its first operational flight of the Crew Dragon by Space X on November 16th of this year. While nonetheless a remarkable technical achievement, the Crew Dragon’s mission, and the policies that enabled it, will inevitably lead to a drawn-out geopolitical and legal conflict. The U.S.’ commercial activities could violate several international instruments and ignore U.N.’s resolutions, compromise a vital foundation of international law, weaken the U.S.’ standing and respectability around the world, and undermine the principle of maintaining international peace and security and promoting international cooperation and understanding, all while fueling a new space race between the world’s great powers. For all of these reasons, every effort should be made to foster an international response to the U.S. policy and to shore up international legal mechanisms to prevent the commercialization of space. Fundamentals of the Final Frontier It is a geopolitical imperative to determine what, if any, commercial activities and use of extraterrestrial resources are permitted within the confines of international law. Without clear-cut agreements on what activity is recognized by international law, the world will undoubtedly see states push the boundaries ever further in an attempt to gain the edge over geopolitical competitors — even more-so in an era of renewed great power competition. Yet to date, there exists no comprehensive treaty or legal reference to commercial activity in space. However, this should come as no surprise. It has only been since the turn of the century that technology and markets have progressed to the point where commercial space exploration and exploitation has become possible. Only recently have experts and analysts of geopolitics and international law begun to seriously examine questions surrounding the legal framework that would govern extraterrestrial resource-mining and other commercial activities. In the last decade, the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) dealt with commercial aspects in outer space. In one of their last reports, the Committee expressed that the era of the commercial utilization of outer space’s resources is intrinsically linked to the escalation of international competition over resources, which could threaten international peace and security. By encouraging the international community to engage in outer space’s activities for the benefit of humankind as a whole, “some delegations” have expressed that states should avoid the promotion of laws and regulations related to the commercialization of outer space, arguing that it should be considered the heritage of all humanity. In that regard, states must then ensure that domestic law on the use of outer space complies with international space law, which means that states should respect the principles outlined in the Outer Space Treaty and ensure that national regulations do not contravene international provisions. Even though the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies (which entered into force in 1967), refers to the exploration and use of outer space, it does not address questions of a commercial nature, which compromises the ability of states and international actors to address new challenges to extraterrestrial activities. In several provisions, the treaty highlights that these activities may be carried out for peaceful purposes and the benefit of all people, reaffirming that outer space is not subject to national appropriation. Were outer space not considered a global commons, that would imply that the resources and results of commercial exploration may fall within the jurisdiction of a country. It is thus incumbent upon Washington — and its commercial enterprises — to demonstrate how American commercial exploration of space benefits other countries and complies with international space law, or otherwise to adhere to the spirit of past treaties which emphasize the impartiality of outer space until such time as the law is clarified. International Law is Adrift in Space The potential benefits of commercial space exploration cannot be ignored. From an economic standpoint, the space industry would generate a significant economic boon for both states and private companies, due to the abundance and variety of resources — particularly scarce minerals that are difficult to extract on Earth. As one example of the vastness of resources held in outer space, one asteroid has the potential to contain more than the total supply of platinum extracted throughout the history of mankind. It may very well open the door to an advanced era of space navigation, building extraterrestrial infrastructure that facilitates the exploration and use of space’s resources, and extra-planetary human habitation. Inevitably, there are significant drawbacks to the commercialization of space exploration. These can vary, for instance, from the commercial dominance of space’s natural resources only by those states with the technical and financial capital to support space missions, to geopolitical competition over extraterrestrial resources that threatens world peace and security, to the potential for the monopolization of extraterrestrial resources by states and private companies. As was the case during the Cold War, the Soviet Union and the United States began a Space Race in which they struggled to achieve supremacy in space exploration and domination of science. Today, the number of space powers has increased thanks to continual advancements in flight, combustion, and fueling technologies. In the three decades since the end of the Cold War, technologically advanced countries like China, Japan, and France which previously had no space program have successfully navigated to the top tier of space-faring agencies and programs. In 2018, the U.S. allocated $41 billion to space programs, followed by China at $5.8 billion, and Russia at $3.1 billion. Collectively, the three major space powers control almost 65% of the global industry, showing space powers are monopolizing space and reinforcing the inequality gap between states that do not have sufficient economic and technological capacity to invest. With new actors on the game stage, conflicts of interest may arise. There is a risk that each actor adopts a kind of short-term Realist approach to space policy — one which is driven by self-interest in reaping the greatest benefits of extraterrestrial exploration and commercialization while controlling access to others. If unmitigated, states may choose to militarize outer space to gain a strategic edge over competitors and adversaries. This process has already begun. Under the Trump administration, the Pentagon established the U.S. Space Force as a new branch of the Armed Forces to protect the country and allied interests in space. Already, Delta 4 — one of the U.S. Space Force’s missions — conducts strategic and theater missile warnings, manages weapon systems, and provides information to missile defense forces. The measure shows that for the U.S., outer space is not only a domain of scientific exploration but has the potential to become increasingly securitized. With the impending expiration of the Strategic Arms Reduction Treaty (START) between the U.S. and Russia on February 5, 2021, a number of security dilemmas could arise. If the world’s two largest nuclear powers do not edge toward extending the treaty, Washington and Moscow risk returning to the era of unrestricted expansion of launch platforms and strategically-deployed nuclear warheads — potentially with the aid of military infrastructure in space. Although President-elect Biden has expressed his interest in negotiating an extension of New START, how Moscow and Washington might proceed remains an open question. Bilateral progress towards a new arms-control regime would require establishing limits on the number and range of long- and mid-range missiles, establishing measures to limit the expansion of traditional missile deployment to space, and banning the deployment of nuclear weapons and weapons of mass destruction in outer space. More than the risk of the securitization of space, state, and private actors could begin to claim exclusive legal rights over the resources they discover. Indeed, the U.S. Commercial Space Launch Competitiveness Act, which came into force in 2015, expressly recognizes the right of U.S. Citizens to possess, own, transport, use, and sell space resources. By this means, domestic law already acknowledges the legal claim to property by individuals, which is prohibited by international law. Under the Outer Space Treaty, states renounced any traditional form of acquisition of territories and agreed not to foray unilaterally into space to extend their national policies on Earth or to exercise any kind of sovereignty over celestial bodies or resources. The absence of a modern international treaty that addresses these issues should be received with grave concern, as there is significant potential for risk to become reality. Existing UN treaties lack the technological context and foresight to address legal questions regarding the potential for commercial exploration and exploitation of outer space or its resources. During the sixties and seventies, when international instruments like the Outer Space treaty were conceived, the principal aim of states was to support and expand the scale of the state’s national capacity for operation in space and the development of legal instruments to guide state’s international cooperation in the peaceful exploration of outer space. These instruments were never designed to respond to commercial questions over mining or tourism in space, private investment in space activities, or the emergence of non-state private enterprises operating in space. As a result, private enterprises operating in the vacuum of space also float in an unstable legal vacuum which threatens to implode in geopolitical competition. Beyond Stars and States In an increasingly commercial outer space in which there are no set limits to the exploitation of resources or claim to property, states and private companies will inevitably pursue the development of new extraterrestrial industries to suit their geoeconomic interests. If unchecked, the legal protection of outer space as a domain of exploration for the benefit of all humanity would functionally fail. To protect investments and profit from national space industries, states would likely resort to military force to protect and secure private assets. Over time, space would ultimately become a fourth border domain over which states claim, exercise, and defend sovereignty — including through the use of force. The challenge is thus to prevent the circumstances that could lead to space-borne conflict before it is made possible. Notwithstanding, commercial exploration and the use of natural resources need not lead to predation among actors involved in space. The potential rewards — both technological and environmental — that could come from investment in the harvesting of resources in space are immense. International law cannot afford to wait for the security dilemma posed by commercial activity in space to manifest before addressing it but must anticipate and proactively adopt measures to address future issues that govern extraterrestrial human activity. The only remedy for the lack of legal governance over commercial activity in space is the creation of new international laws through a comprehensive international treaty on commercial operations in space. The new treaty must expressly regulate commercial activities by states and private companies, enshrine an international liability and compensation regime covering damages caused with workable sanction provisions, and reinforce norms that restrict any militarization of outer space. The international community should focus its efforts on establishing a legal regime, with mandatory provisions (rather than non-binding resolutions, observations, commentaries, and conclusions) which generate both international responsibility and provide enforceable sanctions in the event of violations. The effort should be borne out by expanding the scope and strengthening the oversight powers of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), rather than creating a new organ with redundant bureaucracy. Beyond the tasks of encouraging space research programs, studying space activities, and addressing legal questions, COPUOS should be granted the necessary powers to perform control and oversight monitoring functions. Experience has taught the international community that cooperative arrangements between states and international organizations can prevent competition for resources from escalating to kinetic conflict. Through cooperation, there is a chance to preserve extraterrestrial resources for future generations, secure an equitable allocation of resources and benefits with a mind to each country’s specific needs, and prevent the expansion of geopolitical conflict to the domain of space. Space powers must recognize the value in partnering with other states to advance the development of space programs more efficiently. It should be clear now that all nations could reap the benefits of collective action, exploration, and commercialization of resources from beyond Earth’s atmosphere while preventing a drawn-out international conflict to the final frontier. The will of states not to jeopardize the fundamental basis of international law must be reflected in coordination and surveillance efforts to ensure that the advantages derived from space exploration allow humanity to continue evolving.

**Two impacts:**

**First, goes nuclear**

**Gallagher 15** “Antisatellite warfare without nuclear risk: A mirage”<http://thebulletin.org/space-weapons-and-risk-nuclear-exchanges8346> (interim director of the Center for International and Security Studies in Maryland, previous Executive Director of the Clinton Administration’s CTBT Treaty Committee, an arms control specialist at the State Dept., and a faculty member at Wesleyan)//Elmer

In recent decades, however, as space-based reconnaissance, communication, and targeting capabilities have become integral elements of modern military operations, strategists and policy makers have explored whether carrying out antisatellite attacks could confer major military advantages without increasing the risk of nuclear war. In theory, the answer might be yes. In practice, it is almost certainly no. Hyping threats. No country has ever deliberately and destructively attacked a satellite belonging to another country (though nations have sometimes interfered with satellites' radio transmissions). But the United States, Russia, and China have all tested advanced kinetic antisatellite weapons, and the United States has demonstrated that it can modify a missile-defense interceptor for use in antisatellite mode. Any nation that can launch nuclear weapons on medium-range ballistic missiles has the latent capability to attack satellites in low Earth orbit. Because the United States depends heavily on space for its terrestrial military superiority, some US strategists have predicted that potential adversaries will try to neutralize US advantages by attacking satellites. They have also recommended that the US military do everything it can to protect its own space assets while maintaining a capability to disable or destroy satellites that adversaries use for intelligence, communication, navigation, or targeting. Analysis of this sort often exaggerates both potential adversaries’ ability to destroy US space assets and the military advantages that either side would gain from antisatellite attacks. Nonetheless, some observers are once again advancing worst-case scenarios to support arguments for offensive counterspace capabilities. In some other countries, interest in space warfare may be increasing because of these arguments. If any nation, for whatever reason, launched an attack on a second nation's satellites, nuclear retaliation against terrestrial targets would be an irrational response. But powerful countries do sometimes respond irrationally when attacked. Moreover, disproportionate retaliation following a deliberate antisatellite attack is not the only way in which antisatellite weapons could contribute to nuclear war. It is not even the likeliest way. As was clearly understood by the countries that negotiated the Outer Space Treaty, crisis management would become more difficult, and the risk of inadvertent deterrence failure would increase, if satellites used for reconnaissance and communication were disabled or destroyed. But even if the norm against attacking another country’s satellites is never broken, developing and testing antisatellite weapons still increase the risk of nuclear war. If, for instance, US military leaders became seriously concerned that China or Russia were preparing an antisatellite attack, pressure could build for a pre-emptive attack against Chinese or Russian strategic forces. Should a satellite be struck by a piece of space debris during a crisis or a low-level terrestrial conflict, leaders might mistakenly assume that a space war had begun and retaliate before they knew what had actually happened. Such scenarios may seem improbable, but they are no more implausible than the scenarios that are used to justify the development and use of antisatellite weapons.

**Extinction**

**Starr 15** [Steven, Senior Scientist for Physicians for Social Responsibility (www.psr.org) and Director of the Clinical Laboratory Science Program at the University of Missouri. Starr has published in the Bulletin of the Atomic Scientists and the Strategic Arms Reduction (STAR) website of the Moscow Institute of Physics and Technology] “Nuclear War: An Unrecognized Mass Extinction Event Waiting To Happen.” Ratical. March 2015. https://ratical.org/radiation/NuclearExtinction/StevenStarr022815.html TG

A war fought with 21st century strategic nuclear weapons would be more than just a great catastrophe in human history. If we allow it to happen, such a war would be a mass extinction event that ends human history. There is a profound difference between extinction and “an unprecedented disaster,” or even “the end of civilization,” because even after such an immense catastrophe, human life would go on. But extinction, by definition, is an event of utter finality, and a nuclear war that could cause human extinction should really be considered as the ultimate criminal act. It certainly would be the crime to end all crimes. The world’s leading climatologists now tell us that nuclear war threatens our continued existence as a species. Their studies predict that a large nuclear war, especially one fought with strategic nuclear weapons, would create a post-war environment in which for many years it would be too cold and dark to even grow food. Their findings make it clear that not only humans, but most large animals and many other forms of complex life would likely vanish forever in a nuclear darkness of our own making. The environmental consequences of nuclear war would attack the ecological support systems of life at every level. Radioactive fallout produced not only by nuclear bombs, but also by the destruction of nuclear power plants and their spent fuel pools, would poison the biosphere. Millions of tons of smoke would act to destroy Earth’s protective ozone layer and block most sunlight from reaching Earth’s surface, creating Ice Age weather conditions that would last for decades. Yet the political and military leaders who control nuclear weapons strictly avoid any direct public discussion of the consequences of nuclear war. They do so by arguing that nuclear weapons are not intended to be used, but only to deter. Remarkably, the leaders of the Nuclear Weapon States have chosen to ignore the authoritative, long-standing scientific research done by the climatologists, research that predicts virtually any nuclear war, fought with even a fraction of the operational and deployed nuclear arsenals, will leave the Earth essentially uninhabitable.

**Second, commercialization exponentially increases launches–pollution and warming**

**Gammon 21** Katharine Gammon 7-19-2021 "How the billionaire space race could be one giant leap for pollution"<https://www.theguardian.com/science/2021/jul/19/billionaires-space-tourism-environment-emissions> (I’m an award-winning independent science journalist based in Santa Monica, California. My interests range from culture and nature in public lands to the lives of scientists to the complexity of baby brains. Before I became a professional journalist, I served in the Peace Corps in Bulgaria, and attended MIT and Princeton University.)//Elmer

Last week Virgin Galactic took Richard Branson past the edge of space, roughly 86 km up – part of a new space race with the Amazon billionaire Jeff Bezos, who aims to make a similar journey on Tuesday. Both very wealthy businessmen hope to vastly expand the number of people in space. “We’re here to make space more accessible to all,” said Branson, shortly after his flight. “Welcome to the dawn of a new space age.” Already, people are buying tickets to space. Companies including SpaceX, Virgin Galactic and Space Adventures want to make space tourism more common. The Japanese billionaire Yusaku Maezawa spent an undisclosed sum of money with SpaceX in 2018 for a possible future private trip around the moon and back. And this June, an anonymous space lover paid $28m to fly on Blue Origin’s New Shepard with Bezos – though later backed out due to a “scheduling conflict”. But this launch of a new private space industry that is cultivating tourism and popular use could come with vast environmental costs, says Eloise Marais, an associate professor of physical geography at University College London. Marais studies the impact of fuels and industries on the atmosphere. When rockets launch into space, they require a huge amount of propellants to make it out of the Earth’s atmosphere. For SpaceX’s Falcon 9 rocket, it is kerosene, and for Nasa it is liquid hydrogen in their new Space Launch System. Those fuels emit a variety of substances into the atmosphere, including carbon dioxide, water, chlorine and other chemicals. The carbon emissions from rockets are small compared with the aircraft industry, she says. But they are increasing at nearly 5.6% a year, and Marais has been running a simulation for a decade, to figure out at what point will they compete with traditional sources we are familiar with. “For one long-haul plane flight it’s one to three tons of carbon dioxide [per passenger],” says Marais. For one rocket launch 200-300 tonnes of carbon dioxide are split between 4 or so passengers, according to Marais. “So it doesn’t need to grow that much more to compete with other sources.” Right now, the number of rocket flights is very small: in the whole of 2020, for instance, there were 114 attempted orbital launches in the world, according to Nasa. That compares with the airline industry’s more than 100,000 flights each day on average. But emissions from rockets are emitted right into the upper atmosphere, which means they stay there for a long time: two to three years. Even water injected into the upper atmosphere – where it can form clouds – can have warming impacts, says Marais. “Even something as seemingly innocuous as water can have an impact.” Closer to the ground, all fuels emit huge amounts of heat, which can add ozone to the troposphere, where it acts like a greenhouse gas and retains heat. In addition to carbon dioxide, fuels like kerosene and methane also produce soot. And in the upper atmosphere, the ozone layer can be destroyed by the combination of elements from burning fuels. “While there are a number of environmental impacts resulting from the launch of space vehicles, the depletion of stratospheric ozone is the most studied and most immediately concerning,” wrote Jessica Dallas, a senior policy adviser at the New Zealand Space Agency, in an analysis of research on space launch emissions published last year. Another report from 2019 penned by the Center for Space Policy and Strategy likened the space emissions problem to that of space debris, which the authors say creates an existential risk to the industry. “Today, launch vehicle emissions present a distinctive echo of the space debris problem. Rocket engine exhaust emitted into the stratosphere during ascent to orbit adversely impacts the global atmosphere,” they wrote. “We just don’t know how large the space tourism industry could become,” says Marais. A new market report estimates that the global suborbital transportation and space tourism market is estimated to reach $2.58bn in 2031, growing 17.15% each year of the next decade. “The major driving factor for the market’s robustness will be focused efforts to enable space transportation, emerging startups in suborbital transportation, and increasing developments in low-cost launching sites,” the report says. In the past, most space transportation has been focused on cargo supply missions to the International Space Station and satellite launch services, but currently, this focus has shifted to in-space transportation, planetary explorations, crewed missions, suborbital transportation and space tourism. Several companies, including SpaceX, Blue Origin and Virgin Galactic, have been focusing on developing platforms such as rocket-powered suborbital vehicles that will enable the industry to carry out suborbital transportation and space tourism. People have pointed out that the money these billionaires have poured into space technology could be invested in making life better on our planet, where wildfires, heatwaves and other climate disasters are becoming more frequent as the globe warms up in the climate crisis. “Is anyone else alarmed that billionaires are having their own private space race while record-breaking heatwaves are sparking a ‘fire-breathing dragon of clouds’ and cooking sea creatures to death in their shells?” the former US Labor Secretary Robert Reich tweeted last week. Marais says that there is always an element of excitement to new developments in space – but it’s still possible to be responsible while doing something exciting. She urges caution as the space tourism industry grows, and says there are currently no international rules around the kinds of fuels used and their impact on the environment. “We have no regulations currently around rocket emissions,” she says. “The time to act is now – while the billionaires are still buying their tickets.”

**Squo is goldilocks but commercialization decks ozone and overwhelms alt causes**

**Marais 21** Eloise Marais 7-19-2021 "Space tourism: rockets emit 100 times more CO₂ per passenger than flights – imagine a whole industry"<https://theconversation.com/space-tourism-rockets-emit-100-times-more-co-per-passenger-than-flights-imagine-a-whole-industry-164601> (Associate Professor in Physical Geography, UCL)//Elmer

The commercial race to get tourists to space is heating up between Virgin Group founder Sir Richard Branson and former Amazon CEO Jeff Bezos. On Sunday 11 July, Branson ascended 80 km to reach the edge of space in his piloted Virgin Galactic VSS Unity spaceplane. Bezos’ autonomous Blue Origin rocket is due to launch on July 20, coinciding with the anniversary of the Apollo 11 Moon landing. Though Bezos loses to Branson in time, he is set to reach higher altitudes (about 120 km). The launch will demonstrate his offering to very wealthy tourists: the opportunity to truly reach outer space. Both tour packages will provide passengers with a brief ten-minute frolic in zero gravity and glimpses of Earth from space. Not to be outdone, Elon Musk’s SpaceX will provide four to five days of orbital travel with its Crew Dragon capsule later in 2021. What are the environmental consequences of a space tourism industry likely to be? Bezos boasts his Blue Origin rockets are greener than Branson’s VSS Unity. The Blue Engine 3 (BE-3) will launch Bezos, his brother and two guests into space using liquid hydrogen and liquid oxygen propellants. VSS Unity used a hybrid propellant comprised of a solid carbon-based fuel, hydroxyl-terminated polybutadiene (HTPB), and a liquid oxidant, nitrous oxide (laughing gas). The SpaceX Falcon series of reusable rockets will propel the Crew Dragon into orbit using liquid kerosene and liquid oxygen. Burning these propellants provides the energy needed to launch rockets into space while also generating greenhouse gases and air pollutants. Large quantities of water vapour are produced by burning the BE-3 propellant, while combustion of both the VSS Unity and Falcon fuels produces CO₂, soot and some water vapour. The nitrogen-based oxidant used by VSS Unity also generates nitrogen oxides, compounds that contribute to air pollution closer to Earth. Roughly two-thirds of the propellant exhaust is released into the stratosphere (12 km-50 km) and mesosphere (50 km-85 km), where it can persist for at least two to three years. The very high temperatures during launch and re-entry (when the protective heat shields of the returning crafts burn up) also convert stable nitrogen in the air into reactive nitrogen oxides. These gases and particles have many negative effects on the atmosphere. In the stratosphere, nitrogen oxides and chemicals formed from the breakdown of water vapour convert ozone into oxygen, depleting the ozone layer which guards life on Earth against harmful UV radiation. Water vapour also produces stratospheric clouds that provide a surface for this reaction to occur at a faster pace than it otherwise would. Space tourism and climate change Exhaust emissions of CO₂ and soot trap heat in the atmosphere, contributing to global warming. Cooling of the atmosphere can also occur, as clouds formed from the emitted water vapour reflect incoming sunlight back to space. A depleted ozone layer would also absorb less incoming sunlight, and so heat the stratosphere less. Figuring out the overall effect of rocket launches on the atmosphere will require detailed modelling, in order to account for these complex processes and the persistence of these pollutants in the upper atmosphere. Equally important is a clear understanding of how the space tourism industry will develop. Virgin Galactic anticipates it will offer 400 spaceflights each year to the privileged few who can afford them. Blue Origin and SpaceX have yet to announce their plans. But globally, rocket launches wouldn’t need to increase by much from the current 100 or so performed each year to induce harmful effects that are competitive with other sources, like ozone-depleting chlorofluorocarbons (CFCs), and CO₂ from aircraft. During launch, rockets can emit between four and ten times more nitrogen oxides than Drax, the largest thermal power plant in the UK, over the same period. CO₂ emissions for the four or so tourists on a space flight will be between 50 and 100 times more than the one to three tonnes per passenger on a long-haul flight. In order for international regulators to keep up with this nascent industry and control its pollution properly, scientists need a better understanding of the effect these billionaire astronauts will have on our planet’s atmosphere.

**Extinction**

**Oxford ‘18**– (University of Oxford Earth Sciences, “Ozone Depletion Drives Worlds Largest Mass Extinction,” 9/6/18, https://www.earth.ox.ac.uk/2018/09/ozone-depletion-drives-mass-extinction/ VL)

About 250 million years ago something occurred which led to the extinction of roughly 90% of all the species on Earth. This event also known as the Great Dying coincided with a massive volcanic eruption lasting almost 1 million years in what is now modern day Siberia, Russia. The so-called Siberian Flood Basalts have therefore been named the number one culprit for instigating the largest ever mass extinction on Earth. However there is still debate surrounding the exact link between volcanism and the almost complete disappearance of life on Earth. Now a team of researchers led by the Universities of Manchester and Oxford have shed a new light on one of the probable causes of the mass extinction. In a new study published in Nature Geoscience, the team suggest that a massive volume of halogens was released to atmosphere during the prolonged volcanic eruption. Halogens injected in to the atmosphere resulting in the widespread destruction of the ozone layer. Without the protective ozone layer the Earth was exposed to deadly levels of ultra-violet radiation resulting in mutations, infertility and species extinction. The team analysed sections of the lithosphere erupted to the surface both before and after the formation of the Siberian Flood Basalts. Dr Michael Broadley, the lead author from the University of Manchester, explains: “Before the massive eruption of the Siberian Flood Basalts we found that the lithosphere below Siberia was incredible enriched in halogens, chorine, bromine and iodine, but surprisingly, after the eruption the levels of halogens stored in the lithosphere were dramatically reduced.” Dr Peter Barry, co-author from Oxford University added “We concluded that the halogens must have been mobilised and transported to the surface by an upwelling mantle plume which was feeding Siberian volcanism, with devastating consequences to the Earth ozone layer and life on Earth.”

## Underview

**[1] 1AR Theory:**

**[a] AFF gets it to check infinite neg abuse**

**[b] Drop the debater – the short 1AR irreparably skewed from abuse on substance and time investment on theory.**

**[c] No RVI – 6 minute 2n can just dump on a 20 second 1ar shell and win on sheer brute force**

**[d] Competing Interps--6 minutes on a 20 second shell is more than enough to justify their interp**

**[e] Fairness and education are voters – debate’s a game that needs rules to evaluate it and it teaches portable skills that we use lifelong**

**[f] No 2nr theory, paradigm issues, weighing, or new responses to the 1ac--they have 6 mins to go for them while I only have a 3 min 2AR to respond so I get crushed on time skew which incentivizes them to save all of it for the end**

**[g] No rvi on 1ac spikes–the debate would end right there with 7 minutes on a 20 second shell - the whole AC can't be the shell cuz they can choose not to violate**

**[2] No neg meta theory –**

**[a] They have 2 speeches for non preemptive violations but I only have the 1ar, means 1nc uplayering ensures we can never set the 1ar’s norms**

**[b] Combo shells are uniquely bad - they’re so hyper specific that no one knows where the abuse comes from and improbable since each plank has to be true**

**[3] If I win one layer vote aff**

**[a] Time skew--neg has 7 minutes to uplayer and makes the round impossible to win**

**[b] It forces you to engage with the aff creating substantive discussion on something we both had time to prep for**

**[4] The neg may only make one response to each argument in the aff and must answer them all**

**[a] Makes sure we have an equal number of arguments for reciprocity**

**[b] Solves flooding the 1ar since you choose the best answers**

**[5] The neg must extend all arguments twice in either the 1nc or 2nr – aff has to waste time extending twice in the 1ar and 2ar so its reciprocal**

**[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] Neg interps are counterinterps since the AC takes a stance and came lexically prior - means you re-evaluate the AC under their interp and evaluate the debate after the 1ar so both of us get one rebuttal**

**[8] No 1NC contestation of paradigm issues because I would need to win 2 things, which is irreciprocal**

**[9] No 2NR “I meets” -- skews theory ground because they’re each a NIB for me to winning theory which kills my ability to check abuse**

**[10] Reject neg overview responses--they can read 7 minutes of an overview that the 4 minute 1ar can’t make strategic choices to concede certain parts and trades off with in depth specific line by line which is bad for clash**

**[11] Neg may not take prep time--they already have 30 minutes of pre round prep which should compensate--no prep is key to reciprocity**

**[12] 1NC reps voting issues are drop the arg to let us learn from our mistake instead of being forced to defend a violent practice**