## 1

#### Interpretation: If there are offensive theory or paradoxical arguments in the AC, then they must explicitly outline in the text of the AC a strategy that the 1N could employ that doesn’t violate any theory or paradox constraints in the aff. To clarify, you can still read your spikes, you just need to also specify a strat.

#### Violation:

#### Standards:

#### Substantive Education: They need to specify in the text of the aff what type of strategies would be permissible because otherwise it is inevitable that I will slip up and that the round will turn into a theory debate. This denies any sort of substantive education since there are always more constraints on what sort of substantive education is good under the aff underview. Theory debate worse because the UV is unclear

#### They can’t specify the arguments in CX because

#### a) there is no reason I should waste time on clarifying your advocacy

#### b) I need all the prep time to make a strategy

#### c) inneficienct

#### d) they need to specify before I begin forming a strategy because they need to clarify what ground is entailed by the shells

#### Key to education because in order to know the truth of the claim we need to be able to contest it.

#### B. Strat Skew: If they don’t specify what sort of strategy wouldn’t violate any of the shells then they can defend contradictory spikes that makes it impossible for the neg to win because there is always a violation. This outweighs any aff arguments for why the 1AR is hard because contradictory spikes are functionally NIBs, since you have to respond to the spikes but you don’t win if you do. If the strategy that they said wouldn’t violate any spikes is absurd and offers the neg no ground then you should err voting neg off of the independent unfairness of their specific combination of spikes. This is outweighs on fairness because it is a matter of comparing 0 possible neg ground to a slightly harder time in the 1AR.

#### And, paragraph theory is uniquely hard to flow- it’s all short, blippy arguments that are not well structured, uniquely disadvantaging disabled individuals, which excludes them from the activity. THOMPSON:

Marshall Thompson – Former Debater and Current Coach. http://vbriefly.com/2015/04/21/marshall-thoughts/

First, I think that evaluating who is the better debater via who dropped spikes excludes lots of specific individuals, especially those with learning disabilities. I have both moderate dyslexia and extreme dysgraphia.  Despite debating for four years with a lot of success I was never able to deal with spikes. I could not ‘mind-sweep’ because my flow was not clear enough to find the arguments I needed, and I was simply too slow a reader to be able to reread through the relevant parts of a case during prep-time. **ab**I was very lucky, my junior year (which was the first year I really competed on the national circuit) spikes were remarkably uncommon. Looking back it was in many ways the low-point for spike. They started to be used some my senior year but not anything like the extent they are used today. I am entirely confident, however, in saying that if spikes had had anywhere near the sameprevalence when I started doing ‘circuit’ debate as they do now, I—with the specific ways that dyslexia/dysgraphia has affected me—would never have bothered to try to debate national circuit LD (I don’t intend to imply this is the same for anyone who has dyslexia or dysgraphia, the particular ways that learning disabilities manifest is often difficult to track). Now, the mere fact that I would have been prevented from succeeding in the activity and possibly from being able to enjoyably compete is not an argument. I never would have been able to succeed at calligraphy, but I would hardly claim we should therefore not make the calligraphy club about handwriting. Instead, what I am suggesting is that the values that debate cares about and should be assessing are not questions of handwriting or notation. We expect notation instrumentally to avoid intervention, but it is not one of the ends of debate in itself. Thus, if there is a viable principle upon which we can decrease this strategic dimension of spikes but maintain non-intervention I think we should do so. I was ‘good’ at philosophy, ‘good’ at argument generation, ‘good’ at research, ‘good’ at casing, ‘great’ at framework comparison etc. It seems to me that as long as I can flow well enough to easily follow a non-tricky aff it was proper that my learning disabilities not be an obstacle to my success. (One other thing to note, while I was a ‘framework debater’ who could never have been good at spikes because of my learning disability I have never met a ‘tricky debater’ who could not have succeeded in debate without tricks simply in virtue of their intelligence and technical proficiency; that is perhaps another reason to favor my account.) Second, spikes add in a greater dimension of randomnessto the round. If they are seen then they are ‘caught’ then they don’t really help you win, if they are not they do. Against most debaters one can ‘reliably’ beat them or will ‘reliably’ lose to them. With cases with lots of spike however, one might generally beat them and then once just miss a spike and it is all over. If the round were to have happened at a different time then the spike might have been caught. This ‘luck’ dimension strikes me as at least giving reason to think it does not track with what we want when assessing who did the better debating.

#### Accessibility is an independent voter that outweighs: if people can’t participate in debate then what happens inside of rounds isn’t relevant. Also turns the aff because proves the aff isn’t open to everyone and procedural deliberation are uniquely hurting people.

**[3] No RVI’s –**

**(a) creates a chilling effect – aff is dangerous on theory because they get to prep a long counterinterp in the 1ar and then get the 2ar to collapse, weigh, and contextualize - negs would always be disincentived from reading theory against good theory debaters which leads to infinite abuse so it outweighs time skew and**

**(b) they’re illogical - “I’m fair vote for me” doesn’t make any sense - you dont win for meeting ur burden of being fair - logic comes first on theory since all args need to make sense in order to be evaluable.**

**[4] Drop the debater - [a] Epistemic Skew - I was structurally precluded from engaging in substance given the time spent reading the shell and the abuse itself, means you can’t truly evaluate substance because they are always ahead [b] Deters Future Abuse - empirically confirmed with things like A Prioris [**

**O/W On specificity - we have made an infinite abuse claim not a marginal abuse argument**

**[5] Prefer Competing Interps -**

**[a] reasonability’s arbitrary & forces judge intervention especially with 2ar recontextualizations to always sound like the more reasonable debater**

**[b] norm setting - we find the best possible norms through robust theory debates**

**[6] No Cross Apps or Metatheory on the combo shell - [a] even if my practice was abusive, yours was infinitely abusive, allowing them to use their aff to take our shell just proves the abuse**

## 2

#### 1. Use scenario analysis to evaluate offense. Scenario analysis hijacks fixed notions of truth – by imagining alternative worlds and possibilities, boundaries of ‘reality’ and knowledge are continuously reshaped. This has concrete effects on our relationship to the present. Kenter 98

#### [blue highlighting]

“The Art of the Possible The scenario method and the ‘Third Debate’ in international relations theory” By Renate Kenter 1998

“It is important to emphasise that **scenarios are *not* predictions about the future.** Rather, **scenarios help to perceive different futures in the present.** Schwartz defines ‘scenario’ as: **“a tool for ordering one’s perceptions about alternative future environments, in which one’s decisions might be played out.”** Or, in other words: “a set of organised ways for us to dream effectively about our own future.” (P. Schwartz, 1991, p. 4) **The scenario method is based on the assumption that the future is unpredictable. Therefore, it is necessary to accept uncertainty**, to understand it and make it part of reasoning. **Through the creation of a few consistent pathways into the future, which take the form of** stories **(scenarios), the complexity of uncertainty is reduced to manageable proportions and it is structurally incorporated in thinking.** (P. Wack in GBN, 1996, p. 96) Kees van der Heijden16 and Pierre Wack relate that in the beginning, scenarios were only an extension of the traditional ‘predict-andcontrol’ approach to planning used by corporations. The only difference with singleline forecasting was that scenarios provided a ‘most likely’ projection through the assessment of different futures. (K. van der Heijden, 1996, p.15) Single line forecasts work reasonably well during relatively stable periods. **What makes forecasts so dangerous is that they are constructed on the assumption that tomorrow’s world will be much the same as today’s. Consequently, forecasts fail when they are needed most, namely as major changes suddenly occur. Instead of trying to perfect forecasting techniques, which aims at getting ‘the right’ forecast, a new assumption was adopted that led to the use of scenarios. This assumption is that the future is no longer stable; it is a moving target for which no single ‘right’ projection can be deduced from past behaviour.** (P. Wack in GBN, 1996, p. 28) Therefore, **the scenario method - as it is used by corporations today - is no longer based on probability, but on qualitative causal thinking. It provides a method with which decision makers can work out their intuitive needs and enhance their understanding of current changes in society.** (K. van der Heijden, 1996, p. 15) Wack distinguishes two kinds of scenarios: first generation scenarios, also known as learning scenarios, and decision scenarios. **The purpose of learning scenarios is not action, but gaining understanding and insight. They are exploratory and map out the future context. They aim at perceiving more clearly the connections between various forces and events driving the system.** But good learning scenarios are not enough: Scenarios can be successful in structuring uncertainty only when (1) they are based on a sound analysis of reality, and (2) they change the decision maker’s assumptions about how the world works and compel him to change his image of reality. (P. Wack, 1996, p. 32) The realisation that changing the ‘mental models’ of decision makers was necessary for the scenario method to be effective led to the development of decision scenarios. Mental models are based on past experiences and information which have been internalised. Wack calls this mental model or internal map the decision maker’s ‘microcosm’. Where learning scenarios just deal with the ‘outside world’, decision scenarios deal with two worlds: they explore the world of facts and they aim at the world of perceptions, existing in the microcosm of decision makers and companies. (P. Wack in GBN, 1996, p. 94) **Wack’s concern from then on was not so much predicting the future, but enhancing people’s ability to gain new insights through reperception.** I believe, that Wack’s approach towards and development of the scenario method paved the way for its usage in other fields than the military and corporate world. Not only corporate executives perceive the world through their own ‘mental models’, but so do scientists and as a matter of fact, all individuals. Especially scientists and perhaps all individuals have an interest in gaining new insights through reperception.” **<continued>** “**I believe, the scenario method qualifies as a post-positivist method**. It meets most of the above made requirements. It is a discursive method, which involves storytelling**. It moves beyond modernist ‘prediction and control’, because scenarios do not try to predict the future. If they did, the future would be presented as a certainty over which there is total control. Instead they try to structure our perceptions and interpretations of it, therewith aiming at a broader understanding of the present, but leaving it open at the same time. The future remains uncertain and one can only try to think through possibilities, without having total control. There is an element of control, though. By using scenarios you try to get prepared for and to get some grip on uncertainties. So, while the future unfolds you will be able to respond adequately. Especially focused and decision scenario’s provide ways to determine a concrete course of action.**” **<continued>** “**The scenario method is set up to structure uncertainties and make them an integral part of thinking.** Again stories provide the perfect framework to do this in. **Multiple options can be assessed, interpreted and intersected. The perceived certainties and uncertainties involved can be combined in multiple ways, which enables people to structurally explore and think them through. Scenarios leave plenty of room for imagination, personal experience etc. They also leave room for the incorporation of empirical data or results acquired with other (scientific) methods. All can be addressed in the stories. Thus, the scenario method can easily be combined with other research. Added to this is the scenario method’s adaptability to scale. You can make scenarios on your own or with a small/large group of people.** You can use them for all sorts of topics ranging from very broad to very specific. Depending on the combination of the above mentioned variables you can determine in what part(s) of a larger (research) process scenarios are useful or what kind of conclusions/actions can be drawn from them. Pierre Wack tried to do so by distinguishing learning and decision scenarios. (see p. 29)” **<continued>** “Despite the elements of Critical Theory which, as I maintained, can be found in the scenario method, I would classify scenarios as a postmodern method. The main reasons to do so is because **the scenario method is not based on a metanarrative or foundationalist theory - it does not involve a theory of truth** – and because it is a pragmatic method in which change or emancipation are not a primary goal in themselves. In scenarios ‘change’ is a given. It will always occur, no matter what we do or not do. **Ultimately, nothing is fixed. Scenarios explore and evaluate practical and/or theoretical boundaries. At a certain point in space in time constraints imposed by current ‘reality’ are accepted, but the continuous exploration/evaluation of boundaries goes on. You can imagine them changing, which might contribute to their actual change. At the same time boundaries will change anyway because of a continuous complex of developments. At a certain point in space and time it will always remain partly uncertain what changes will occur and, perhaps more importantly, how they will be perceived. From this perspective what *is* true or possible, is not what matters so much, but what is *perceived* to be true or possible.** Language and the creation of language play a vital role in the scenario method. **The creation of language is equated with learning and with the production of knowledge. Through the usage of language and the creation of new language the boundaries of ‘reality’ are continuously (re)perceived and simultaneously ‘reality’ is (re)shaped.** The above reflects a postmodern attitude.”

#### 2. Use reasonability to evaluate offense under truth testing – this means you should not spend time considering blips under truth testing that you know are false even if you don’t know why or haven’t figured out the error in their syllogism. Net Benefit:

#### Link turns truth testing—the rational activity that is motivated by a desire for truth seeking is not to consider or rigorously engage with every conceivable argument because there are indefinitely false arguments. There is only one true argument, but you can be wrong in infinite ways. Given this, if your task is to give a rigorous treatment to every conceivable proposition, you would just waste infinite time without even have made a single advancement to truth. The rational procedure motivated towards truth seeking is just to eliminate or dismiss a vast number of arguments that a person could make, but you just know are instinctively false and rather turn your attention to things that are maybe true

#### 3. Dictionary.com defines “affirm” as “to express agreement with or commitment to uphold; support”. Prefer aff definitions – there are bidirectional definitions of every word and the aff has to choose one. Additionally, 12 dictionaries[[1]](#footnote-1) define “to affirm” as some variation of “to show support for” or “to state positively” – i.e. not truth testing.

#### 4. If the negative reads truth testing, they may only prove the resolution false by contesting one truth condition of the aff. To clarify, they can have multiple arguments that disproving one truth condition, but they cannot contest multiple truth conditions i.e they can read multiple arguments for skep, but they cannot read skep, the aff has no moral agent, and standardized test are good for example. Net Benefit:

## 3

#### Thus, the standard is maximizing expected well-being (Act Util). Prefer additionally:

#### [1] Lexical pre-req. Threats to bodily security and life preclude the ability for moral actors to effectively act upon other moral theories since they are in a constant state of crisis. This means my offense OW under their fwk.

#### Extinction hijacks and side constrains the framework – it o/w and comes first

Pummer 15 [Theron, Junior Research Fellow in Philosophy at St. Anne's College, University of Oxford. “Moral Agreement on Saving the World” Practical Ethics, University of Oxford. May 18, 2015] AT

There appears to be lot of disagreement in moral philosophy. Whether these many apparent disagreements are deep and irresolvable, I believe there is at least one thing it is reasonable to agree on right now, whatever general moral view we adopt: that it is very important to reduce the risk that all intelligent beings on this planet are eliminated by an enormous catastrophe, such as a nuclear war. How we might in fact try to reduce such existential risks is discussed elsewhere. My claim here is only that we – whether we’re consequentialists, deontologists, or virtue ethicists – should all agree that we should try to save the world. According to consequentialism, we should maximize the good, where this is taken to be the goodness, from an impartial perspective, of outcomes. Clearly one thing that makes an outcome good is that the people in it are doing well. There is little disagreement here. If the happiness or well-being of possible future people is just as important as that of people who already exist, and if they would have good lives, it is not hard to see how reducing existential risk is easily the most important thing in the whole world. This is for the familiar reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. There are so many possible future people that reducing existential risk is arguably the most important thing in the world, even if the well-being of these possible people were given only 0.001% as much weight as that of existing people. Even on a wholly person-affecting view – according to which there’s nothing (apart from effects on existing people) to be said in favor of creating happy people – the case for reducing existential risk is very strong. As noted in this seminal paper, this case is strengthened by the fact that there’s a good chance that many existing people will, with the aid of life-extension technology, live very long and very high quality lives. You might think what I have just argued applies to consequentialists only. There is a tendency to assume that, if an argument appeals to consequentialist considerations (the goodness of outcomes), it is irrelevant to non-consequentialists. But that is a huge mistake. Non-consequentialism is the view that there’s more that determines rightness than the goodness of consequences or outcomes; it is not the view that the latter don’t matter. Even John Rawls wrote, “All ethical doctrines worth our attention take consequences into account in judging rightness. One which did not would simply be irrational, crazy.” Minimally plausible versions of deontology and virtue ethics must be concerned in part with promoting the good, from an impartial point of view. They’d thus imply very strong reasons to reduce existential risk, at least when this doesn’t significantly involve doing harm to others or damaging one’s character. What’s even more surprising, perhaps, is that even if our own good (or that of those near and dear to us) has much greater weight than goodness from the impartial “point of view of the universe,” indeed even if the latter is entirely morally irrelevant, we may nonetheless have very strong reasons to reduce existential risk. Even egoism, the view that each agent should maximize her own good, might imply strong reasons to reduce existential risk. It will depend, among other things, on what one’s own good consists in. If well-being consisted in pleasure only, it is somewhat harder to argue that egoism would imply strong reasons to reduce existential risk – perhaps we could argue that one would maximize her expected hedonic well-being by funding life extension technology or by having herself cryogenically frozen at the time of her bodily death as well as giving money to reduce existential risk (so that there is a world for her to live in!). I am not sure, however, how strong the reasons to do this would be. But views which imply that, if I don’t care about other people, I have no or very little reason to help them are not even minimally plausible views (in addition to hedonistic egoism, I here have in mind views that imply that one has no reason to perform an act unless one actually desires to do that act). To be minimally plausible, egoism will need to be paired with a more sophisticated account of well-being. To see this, it is enough to consider, as Plato did, the possibility of a ring of invisibility – suppose that, while wearing it, Ayn could derive some pleasure by helping the poor, but instead could derive just a bit more by severely harming them. Hedonistic egoism would absurdly imply she should do the latter. To avoid this implication, egoists would need to build something like the meaningfulness of a life into well-being, in some robust way, where this would to a significant extent be a function of other-regarding concerns (see chapter 12 of this classic intro to ethics). But once these elements are included, we can (roughly, as above) argue that this sort of egoism will imply strong reasons to reduce existential risk. Add to all of this Samuel Scheffler’s recent intriguing arguments (quick podcast version available here) that most of what makes our lives go well would be undermined if there were no future generations of intelligent persons. On his view, my life would contain vastly less well-being if (say) a year after my death the world came to an end. So obviously if Scheffler were right I’d have very strong reason to reduce existential risk. We should also take into account moral uncertainty.What is it reasonable for one to do, when one is uncertain not (only) about the empirical facts, but also about the moral facts? I’ve just argued that there’s agreement among minimally plausible ethical views that we have strong reason to reduce existential risk – not only consequentialists, but also deontologists, virtue ethicists, and sophisticated egoists should agree. But even those (hedonistic egoists) who disagree should have a significant level of confidence that they are mistaken, and that one of the above views is correct. Even if they were 90% sure that their view is the correct one (and 10% sure that one of these other ones is correct), they would have pretty strong reason, from the standpoint of moral uncertainty, to reduce existential risk. Perhaps most disturbingly still, even if we are only 1% sure that the well-being of possible future people matters**, it** is at least arguable that, from the standpoint of moral uncertainty, reducing existential risk is the most important thing in the world. Again, this is largely for the reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. (For more on this and other related issues, see this excellent dissertation). Of course, it is uncertain whether these untold trillions would, in general, have good lives. It’s possible they’ll be miserable. It is enough for my claim that there is moral agreement in the relevant sense if, at least given certain empirical claims about what future lives would most likely be like, all minimally plausible moral views would converge on the conclusion that we should try to save the world. While there are some non-crazy views that place significantly greater moral weight on avoiding suffering than on promoting happiness, for reasons others have offered (and for independent reasons I won’t get into here unless requested to), they nonetheless seem to be fairly implausible views. And even if things did not go well for our ancestors, I am optimistic that they will overall go fantastically well for our descendants, if we allow them to. I suspect that most of us alive today – at least those of us not suffering from extreme illness or poverty – have lives that are well worth living, and that things will continue to improve. Derek Parfit, whose work has emphasized future generations as well as agreement in ethics, described our situation clearly and accurately: “We live during the hinge of history. Given the scientific and technological discoveries of the last two centuries, the world has never changed as fast. We shall soon have even greater powers to transform, not only our surroundings, but ourselves and our successors. If we act wisely in the next few centuries, humanity will survive its most dangerous and decisive period. Our descendants could, if necessary, go elsewhere, spreading through this galaxy…. Our descendants might, I believe, make the further future very good. But that good future may also depend in part on us. If our selfish recklessness ends human history, we would be acting very wrongly.**”** (From chapter 36 of On What Matters)

## 4

#### Space-Based Solar Power (SBSP) is a megaconstellation, and it’s going to happen within 10 years in the squo. Aff banning private megaconstellations kills the necessary tech – David 21:

David, Leonard. 11/03/21 Space Solar Power’s Time May Finally Be Coming.”https://www.space.com/space-solar-power-research-advances // LHP BT + LHP PS

The sun never sets in space. **The idea of** harvesting solar energyvia power-beaming satelliteshas therefore long intrigued researchers looking for ways to feed an energy-ravenous [Earth](https://www.space.com/54-earth-history-composition-and-atmosphere.html). That reflection has fomented for decades but is now garnering new looks all over the world: Technologists in the U.S. and China, experts in Japan and researchers within the European Space Agency and the United Kingdom Space Agency are all working to make space-based solar power a reality. Related: [Solar power stations in space could be the answer to our energy needs](https://www.space.com/solar-power-stations-in-space-could-be-the-answer-to-our-energy-needs.html) History machine Peter Glaser, the father of the solar power satellite concept. (Image credit: Arthur D. Little Inc.) The idea of wireless power transmission dates back to [Nikola Tesla](https://www.livescience.com/45950-nikola-tesla-biography.html) near the end of the 19th century. Fast-forwarding to 1968, the notion of a solar power satellite was detailed and patented by U.S. space pioneer Peter Glaser. He blueprinted a novel way to collect energy from sunlight using solar cells and beam down an energetic muscle of microwaves to receiving antennas ("rectennas") on Earth. Those microwaves could then be converted to electrical energy and supplied to the power grid. Then, in the mid-1970s, microwave power transmission experiments in the tens of kilowatts were successfully conducted at the Goldstone Deep Space Communications Complex in California, a facility of NASA's [Jet Propulsion Laboratory](https://www.space.com/16952-nasa-jet-propulsion-laboratory.html). And this "power trip" doesn't stop there.The Space Solar Power Incremental and Demonstrations Research (SSPIDR) project is designed to beam power from space to Earth. SSPIDR consists of several small-scale flight experiments that will mature technology needed to build a prototype solar power distribution system. (Image credit: Air Force Research Laboratory (AFRL)) Impressive **advances Over the past decade,** researchers have made impressive advances **that** increase **the** likelihood **that space solar power (**SSP**)** will be realized during the next decade, said John Mankins, president of Artemis Innovation Management Solutions of Santa Maria, California. His view: the longstanding vision for SSP as a sustainable energy alternative should be revisited in light of such recent advances.Bolstering that outlook is a set of key perspectives, Mankins told Space.com. "Climate change is really going to be a disaster. Nations are committed to go [carbon net-zero](https://www.livescience.com/climate-report-net-zero.html) … and they have no idea how to do it."**The** rapidly unfolding value of "NewSpace**" is also** reshaping the landscape of 21st century space activities**, he added. "Two of the biggest hurdles to the realization of SSP have always been the cost of launch and the cost of hardware**," said Mankins. "Add flight rate, and all of a sudden you're looking at numbers always talked about for solar power satellites."Related: [What is climate change?](https://www.livescience.com/climate-change.html) Megaconstellations **Another** recent change isthedawn of the megaconstellations, Mankins added. **That's** exemplified by SpaceX's [Starlink](https://www.space.com/spacex-starlink-satellites.html) broadband network**, a** mass-production effort that now cranks out 30 tons of satellites a month**. SpaceX is on course to potentially manufacture 40,000 satellites within five years, and launch all of them. "The path to low-cost hardware has been shown," Mankins said. "It's modular and mass-produced. The hurdles of less-expensive launch and lowering hardware costs have been overcome.**"Mankins said that the economics of SSP concepts in the near term, within the next decade, have never been more viable. He flagged advances in space launch capabilities; progress in robotics for space assembly, maintenance and servicing systems; and the growth in various component technologies, such as high-efficiency solid state power amplifiers. **As a result, SSP is ready to see the light of day,** Mankins said.Astroelectricity An early entrant in focusing on understanding the energy policy needed and establishment of SSP is James Michael Snead, president of the Spacefaring Institute. He's adopted the use of the term "astroelectricity" to describe the transmitted electrical power produced by SSP systems.In looking at what he terms the "[coming age of astroelectricity](https://www.youtube.com/watch?v=5E-0NYnAaUA)," he sees a world needing a replacement for oil and natural gas, the two primary sources of energy currently maintaining an industrial standard of living. Snead envisions a world in the year 2100 where about 20% of electrical power comes from terrestrial nuclear and renewables, with 80% supplied by astroelectricity."Just as the military, economic and diplomatic control of Middle East oil has substantially influenced world events for the past 80 years, the control of space solar power platforms will come to dominate outer space activities this century," Snead told Space.com. Wanted: high-priority leadershipIf SSP becomes a reality later this century, Snead said, the U.S. military will be required to protect and defend these new sources of national energy security just as it guards oil infrastructure in the Persian Gulf today."While some people are developing SSP concepts that would be launched from the Earth and autonomously assembled in geostationary Earth orbit, I do not see this as a successful proposition," said Snead. He believes that building the thousands of SSP platforms needed requires a substantial [space industrialization effort](https://www.space.com/nasa-low-earth-orbit-iss-commercialization.html) involving more than a million people in space by the end of the century. The starting point, Snead said, will be establishing the enabling "astrologistics" infrastructure operating throughout the Earth-moon system. He stressed that those astrologistics require high-priority U.S. Air Force — not [Space Force](https://www.space.com/42089-space-force.html) — leadership to draw upon nearly a century of human flight/operational logistics experience and expertise.That is necessary to manage industry's efforts to design and build the required new human spaceflight systems, with a clearly needed emphasis on safety and effectiveness, Snead said. As these new military astrologistics capabilities begin, Snead contends, commercialization of these capabilities will extend these safety and operational benefits to support the coming space industrial revolution needed to undertake SSP. "This is exactly what happened to enable U.S. airline manufacturers to dominate the airline and air cargo industry for decades. It is a successful model to now replicate in space — a model that neither NASA nor the U.S. Space Force can effectively execute," Snead said. The U.S. Naval Research Laboratory’s Paul Jaffe holds a module designed for space solar power investigations in front of a customized vacuum chamber used to test the device. (Image credit: NRL/Jamie Hartman) 'Performing like a champ' While new artwork, economic plots and conceptual SPS thinking and visions flow, there's an in-space technology experiment already underway. On its latest mission, which launched in May 2020, the Space Force's robotic [X-37B space plane](https://www.space.com/25275-x37b-space-plane.html) is toting the Photovoltaic Radio-frequency Antenna Module Flight Experiment (PRAM-FX), a Naval Research Laboratory (NRL) investigation into transforming solar power into radio-frequency microwave energy. The focus of that X-37B investigation is not establishing an actual power-beaming link, but more on appraising the performance of sunlight-to-microwave conversion. "It is performing like a champ," said Paul Jaffe, an NRL electronics engineer working on power beaming and solar power satellites. "We are getting data regularly, and that data is exceeding our expectations," he told Space.com. [PRAM-FX](https://www.space.com/x-37b-space-plane-solar-power-beaming) is principally made out of commercial parts, not "space-grade" hardware. "The fact that it is continuing to operate and give us positive results is quite encouraging," Jaffe said. Commercial parts are mass-produced, while many space-grade parts are one-offs. Solar power satellites, like those envisioned in high Earth orbit, would have thousands of elements made out of similar components being tested onboard the X-37B, Jaffe said. [The US Space Force's secretive X-37B space plane: 10 surprising facts](https://www.space.com/x-37b-military-space-plane-surprising-facts) Space-based solar power could help the UK achieve net-zero emissions by 2050, according to a leading British systems, engineering and technology company. (Image credit: Frazer-Nash Consultancy) Making the economics work There's much more work ahead, of course. "The big strike against space solar power has always been making the economics work. People who have looked at the idea seriously do understand that, from a physics standpoint, there is no reason you couldn't do it," Jaffe said. "With mass production of space hardware, and with the cost reduction of space access, it is more plausible that it could work," he added. "I would caution against excessive optimism … but also point out that things are changing. There are a lot of encouraging developments." SPS will assuredly be compared to a "levelized cost of energy" metric, Jaffe concluded. "There's just not enough data to come up with a levelized cost of energy basis for space solar power. It's premature. What you are seeing now is laying the foundation for that sort of evaluation." Clear, affordable path To that end, Mankins of Artemis Innovation Management Solutions has rolled out SPS-ALPHA ("Solar Power Satellite by means of Arbitrarily Large Phased Array"), a design he showcased at the 72nd International Astronautical Congress, which was held from Oct. 25 to Oct. 29 in Dubai, United Arab Emirates. Detailing a business model and step-by-step SSP roadmap, he feels the concept promises a clear, affordable path to deploying a critically needed new energy option. "**I believe you could have operational solar power satellites to scale within a decade,"** Mankins said. That possibility, combined with the fact that multiple nations are eying SSP as a promising power generation system of the future, begs a question: Is there a solar power satellite race afoot? It is close to that, Mankins said. "I think it has to be cooperation among friends and allies. But I think it's very likely to end up being competition with China. The longer we wait with regard to the urgency of policies on [climate change](https://www.space.com/climate-change-dimming-earth), the more likely it is we're going to miss the boat." Mankins is a 26-year veteran of assessing SSP and the technologies required. "The moment has come," he said. "I think the right answer is really clear: We need to just go do it."

#### SBSP key to solve climate change – Katete 21 – the evidence is from today:

Katete, Esthere. (December 17 2021) “Space-Based Solar Power: The Future Source of Energy?”https://www.greenmatch.co.uk/blog/2020/02/space-based-solar-power // LHP BT + LHP PS

Space-based solar power (SBSP) involves collecting the sun’s energy in space, and then wirelessly transmitting it to Earth. There are several [advantages to solar energy](https://www.greenmatch.co.uk/blog/2014/08/5-advantages-and-5-disadvantages-of-solar-energy). Although expensive, it **is** **a** great source of [clean energy](https://www.greenmatch.co.uk/blog/clean-energy) that has the capacity to provide more energythan the world consumes **or is predicted to consume in the future**. A space-based solar power technological process includes using [solar panels](https://www.greenmatch.co.uk/solar-energy/solar-panels) to collect solar energy in space with reflectors or inflatable mirrors that direct solar radiation onto solar panels, and then beaming it on Earth through a microwave or laser. The energy is then received on Earth via a microwave antenna (a rectenna). **According to the** [**National Space Society**](https://space.nss.org/space-solar-power/)**,** space-based solar power **has the** potential to dwarf all the other sources of energy combined**. They argue that space-based solar power can provide large quantities of energy** with very little negative environmental impact**. It can also** solve our current energy and greenhouse gas emissions problems**.** The infographic below highlights information about space-based solar power, current related trends, and what different countries are doing in terms of research and funding. Current Global Energy Consumption and Trends **The** world’s energy consumption is only growing. According to a report by the University of Oxford’s Our World in Data, on the global primary energy consumption, the current world consumption is over 160,000 TWh annually. Solar energy contributes only 585 TWh. Although there is an increase in renewable energy solutions, investments, and usage, oil, coal, and gas still generate more than 80% of the global energy that is consumed - with solar energy generating less than 1%. Between 2004 and 2015, investments in renewable energy increased by 600% from £36.2 billion (US$46.7 billion) to £220.6 billion (US$284.8 billion). Current predictions indicate that the world population will reach [9.7 billion by 2050](https://www.un.org/development/desa/en/news/population/world-population-prospects-2019.html). With the increase in population, the world energy consumption is also predicted to grow by 50% by 2050. In addition, climate change impacts are accelerating. Although we generate a big percentage of the world energy from fossil fuels, fossil fuels contribute significantly to the increase of climate change. **Comparatively,** solar energy is the [safest source of energy](https://ourworldindata.org/uploads/2020/02/Safest-source-of-energy.png) today - though it still only contributes a small percentage of the global energy production. The death rates from solar production are 1,230 times lower than coal, and it has one of the lowest CO2 emissions, at 5g CO2 eq per kWh. Why Space-Based Solar Power? Space-based solar power has several benefits; unlike solar panels on our roofs that can only generate electricity during the day, space-based solar power can generate continuous electricity, 24 hours a day, 99% of the year. This is because, unlike Earth, the space environment does not have night and day, and the satellites are in the Earth's shadow for only a maximum of 72 minutes per night. **Space-based solar panels can generate** 2,000 gigawatts of power constantly. This is **40 times more energy than a solar panel would generate on Earth annually**. This is also several folds higher than the [efficiency of solar panels](https://www.greenmatch.co.uk/blog/2014/11/how-efficient-are-solar-panels) today. **What’s more, is that space-based** solar power would generate [0% greenhouse gas emissions](https://space.nss.org/space-solar-power/) unlike other alternatives **energy like nuclear, coal, oil, gas, and ethanol**. The current source of energy that generates the lowest CO2 is nuclear power, which generates CO2 of 5g CO2 eq per kWh. **Space-based solar power** generates almost 0% hazardous waste to our environment **compared to nuclear power**. Why Are We Not There Yet? While space-based solar power is an innovative concept, we are not able to fully launch a system into space yet. Launching a space-based solar system is very expensive. In fact, the cost is estimated to be about 100 times too high to compete with current utility costs. One of the causes of the high costs is the high cost of launching the panels to space, which is mostly due to the high mass per watt generated by the current solar panels. In other words, the solar panels are currently too heavy per watt generated to make it feasible. Currently, the cost of launching in space is estimated to be £7,716 per kilogram - approximately £154 per watt. In comparison to the cost that homeowners pay today, which is approximately £2 per watt peak, the cost in space is extremely high to be competitive. In UK homes, the [installation cost of solar panels](https://www.greenmatch.co.uk/blog/2014/08/what-is-the-installation-cost-for-solar-panels) can be as low as £1.5 per watt. Other reasons for high costs include the overall high transport costs to space. This is because transporting all other materials that are needed to space would require many space shuttle launches, and these space shuttles are currently not reusable. So, not only is the launch of solar panels themselves expensive, but the additional materials needing to be transported is also expensive. A lot of research and engineering is still ongoing to find the most feasible way to launch space-based solar panels and launch systems, at a lower cost. The environment out in space also has several hazards that could cause damage to the solar panels. These include space debris and extreme solar radiation, which could degrade the solar panels up to 8 times faster than panels installed on Earth. Finally, there is a potential of wasting large amounts of energy when transporting or during transmission from space to Earth. Therefore, scientists and engineers must continue their R&D efforts to ensure little to no energy is lost during the process. Current SBSP Projects and Progress The key players in SBSP include China, the US, and Japan, who have shown progress in terms of technology advancements, partnerships, and launch plans. China is already progressing to launch into space. The China Aerospace Science and Technology Corporation plans to launch small to medium solar satellites in the stratosphere that can harness energy in space between 2021 and 2025. China also plans to generate one megawatt of energy from space-based solar panels by 2030, and to be operating a commercially viable solar space station by 2050. In the US, there are ongoing partnerships and investments. For example, a $100 million partnership between Northrop Grumman and U.S. Air Force Research Laboratory has been established to provide advanced technology for SBSP. Also in the US, a $17.5 million collaboration between Northrop Grumman Corporation and Caltech was set up to develop the space solar power project called ‘The Space Solar Power Initiative’. The initiative’s goal was to develop scientific and technological innovations that would enable a space-based solar power system generate electricity at a cost comparable to current sources of electricity. There has been ongoing research and technological advancements. In the US, the development of the SPS-ALPHA Mark-II concept is underway. This, if successful, would enable construction of huge platforms in space that can remotely deliver tens of thousands of megawatts of electricity to Earth, using wireless power transmissions. This will also enable delivery of affordable power to Earth and on space missions. In addition, progress is being made to build reusable launch systems. Success in this will lower the cost of transport to space and overall cost of space-based solar power. An example is SpaceX, that is currently working on reusable launch vehicles that can be used for transport to space. In Japan, researchers successfully transmitted electric power wirelessly using microwaves. Researchers transformed 1.8 kW of electric power into microwaves and accurately transmitted it into a receiver that was 55 metres away. This was a technological advancement towards bringing SBSP closer to reality. Japan also made space-based solar systems part of its future space exploration vision. Future Outlook for SBSP Fossil fuels are finite and can eventually run out. According to predictions, oil and natural gas could run out in 50 years and coal production in 115 years. With ongoing research and investments, there is a high possibility that space-based solar power is the viable [future of solar power](https://www.greenmatch.co.uk/blog/2015/01/the-future-for-solar-power-in-the-uk). If the cost of space-based solar power can be lowered, it is likely to be a major source of sustainable energy that cannot diminish. Major players like China, who already have timelines of implementing the technology in space, may be able to provide some key learnings for future improvements in the technology.

#### Warming causes extinction - Xu 17:

Yangyang Xu 17, Assistant Professor of Atmospheric Sciences at Texas A&M University; and Veerabhadran Ramanathan, Distinguished Professor of Atmospheric and Climate Sciences at the Scripps Institution of Oceanography, University of California, San Diego, 9/26/17, “Well below 2 °C: Mitigation strategies for avoiding dangerous to catastrophic climate changes,” Proceedings of the National Academy of Sciences of the United States of America, Vol. 114, No. 39, p. 10315-10323

We are proposing the following extension to the DAI risk categorization: warming greater than 1.5 °C as “dangerous”; warming greater than 3 °C as “catastrophic?”; and warming in excess of 5 °C as “unknown??,” with the understanding that changes of this magnitude, not experienced in the last 20+ million years, pose **existential threats** to a majority of the population. The question mark denotes the subjective nature of our deduction and the fact that catastrophe can strike at even lower warming levels. The justifications for the proposed extension to risk categorization are given below. From the IPCC burning embers diagram and from the language of the Paris Agreement, we infer that the DAI begins at warming greater than 1.5 °C. Our criteria for extending the risk category beyond DAI include the potential risks of climate change to the physical climate system, the ecosystem, human health, and **species extinction**. Let us first consider the category of catastrophic (3 to 5 °C warming). The first major concern is the issue of **tipping points**. Several studies (48, 49) have concluded that 3 to 5 °C global warming is likely to be the threshold for tipping points such as the collapse of the western Antarctic ice sheet, shutdown of deep water circulation in the North Atlantic, dieback of Amazon rainforests as well as boreal forests, and collapse of the West African monsoon, among others. While natural scientists refer to these as **abrupt and irreversible climate changes**, economists refer to them as catastrophic events (49). Warming of such magnitudes also has **catastrophic human health effects**. Many recent studies (50, 51) have focused on the direct influence of extreme events such as heat waves on public health by evaluating exposure to heat stress and hyperthermia. It has been estimated that the likelihood of extreme events (defined as 3-sigma events), including heat waves, has increased 10-fold in the recent decades (52). Human beings are extremely sensitive to heat stress. For example, the 2013 European heat wave led to about 70,000 premature mortalities (53). The major finding of a recent study (51) is that, currently, about 13.6% of land area with a population of 30.6% is exposed to deadly heat. The authors of that study defined deadly heat as exceeding a threshold of temperature as well as humidity. The thresholds were determined from numerous heat wave events and data for mortalities attributed to heat waves. According to this study, a 2 °C warming would double the land area subject to deadly heat and expose 48% of the population. A 4 °C warming by 2100 would subject 47% of the land area and almost 74% of the world population to deadly heat, which could pose **existential risks to humans** and mammals alike unless massive adaptation measures are implemented, such as providing air conditioning to the entire population or a massive relocation of most of the population to safer climates. Climate risks can vary markedly depending on the socioeconomic status and culture of the population, and so we must take up the question of “dangerous to whom?” (54). Our discussion in this study is focused more on people and not on the ecosystem, and even with this limited scope, there are multitudes of categories of people. We will focus on the poorest 3 billion people living mostly in tropical rural areas, who are still relying on 18th-century technologies for meeting basic needs such as cooking and heating. Their contribution to CO2 pollution is roughly 5% compared with the 50% contribution by the wealthiest 1 billion (55). This bottom 3 billion population comprises mostly subsistent farmers, whose livelihood will be severely impacted, if not destroyed, with a one- to five-year megadrought, heat waves, or heavy floods; for those among the bottom 3 billion of the world’s population who are living in coastal areas, a 1- to 2-m rise in sea level (likely with a warming in excess of 3 °C) poses **existential threat** if they do not relocate or migrate. It has been estimated that several hundred million people would be subject to famine with warming in excess of 4 °C (54). However, there has essentially been no discussion on warming beyond 5 °C. Climate change-induced species extinction is one major concern with warming of such large magnitudes (>5 °C). The current rate of loss of species is ∼1,000-fold the historical rate, due largely to habitat destruction. At this rate, about 25% of species are in danger of extinction in the coming decades (56). Global warming of 6 °C or more (accompanied by increase in ocean acidity due to increased CO2) can act as a major force multiplier and **expose** as much as **90% of species to** the dangers of **extinction** (57). The bodily harms combined with climate change-forced species destruction, biodiversity loss, and threats to water and food security, as summarized recently (58), motivated us to categorize warming beyond 5 °C as unknown??, implying the possibility of **existential threats**. Fig. 2 displays these three risk categorizations (vertical dashed lines).

## Case

#### A]

#### Permissibility Negates –

#### 1] Semantics - unjust is defined as morally prohibited or bad which means permissibility is definitionally negative ground as proving the affirmative would require proving a prohibition which permissibility denies

#### =

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

#### Paradox of Material implication – Negates and triggers permissibility i.e. any statement cant be true because any arguments have sinething wrong with it and permissibility negates [a] I have to prove its unjust which means it doesn’t have to be just

#### Vote Neg because its simple

#### Affirming could be fake news

#### Mit 199, ethics can exist seprately but its what ethics are true

#### GCD – I am also the greates so you have to respond to me

1. (1) **Macmillian dictionary** <http://www.macmillandictionary.com/us/dictionary/american/affirm> “to [support](http://www.macmillandictionary.com/us/dictionary/american/support_1) something or [make](http://www.macmillandictionary.com/us/dictionary/american/make_1) it [stronger](http://www.macmillandictionary.com/us/dictionary/american/strong)” (2) **vocabulary.com** https://www.vocabulary.com/dictionary/affirm "establish or strengthen as with new evidence or facts" (3) **The Oxford Dictionary** https://en.oxforddictionaries.com/definition/affirm "Declare one's support for; uphold; defend:" (4) **yourdictionary** <http://www.yourdictionary.com/affirm#dlKHXdoSAXRi0WHo.99> "The definition of affirm is to state something to be true." (5) **Collins Dictionary** <https://www.collinsdictionary.com/us/dictionary/english/affirm> "to make valid; confirm; uphold; ratify" (6) **Dictionary.com** <http://www.dictionary.com/browse/affirm> “to express agreement with or commitment to uphold; support” (7) **The Law Dictionary** thelawdictionary.org/affirm/ "To ratify, make firm, confirm, establish, reassert" (8) **Mnemonic dictionary** www.mnemonicdictionary.com/word/affirm "establish or strengthen as with new evidence or facts" (9) **the Free Dictionary** www.thefreedictionary.com/affirm “To declare support for or belief in:” (10) **Word Reference** www.wordreference.com/definition/affirm "to express agreement with; support; uphold:" (11) **the Fine Dictionary** www.finedictionary.com/affirm.html "To declare or assert positively." (12) **Word Game Dictionary** https://www.wordgamedictionary.com/dictionary/word/affirm/ "To state positively" [↑](#footnote-ref-1)