# 1AC

## 1AC CHP v1.0

### Framework

#### Meta-ethics should start from reflective equilibrium—our convictions are better justified by rule util than act util

Hooker 17

Brad Hooker (Professor of Philosophy at the University of Reading). “Feldman, Rule-consequentialism, and Desert.” In The Good, the Right, Life and Death: Essays in Honor of Fred Feldman, by Jason R. Raibley and Michael J. Zimmerman. 2017. JDN. <https://www.taylorfrancis.com/books/e/9781315239323/chapters/10.4324/9781315239323-6>

In fact, I think it a mistake to think that how rule-consequentialism should be formulated is a consequentialist question. I am not suggesting Feldman ever made this mistake. A closely related mistake, which again I am not suggesting Feldman made, is to think that the best argument for rule-consequentialism is itself a consequentialist argument — for example, an argument starting from the consequentialist premise that the goal of morality is to produce the best consequences. The most important objection to that kind of argument for rule-consequentialism is that it stands in need of an argument for its initial consequentialist premise. (For discussion, see Hooker, 2000a, pp. 4–31, 100–101; Hooker, 2000b, pp. 222–223; Hooker, 2005a, sect. 2.) However, if one did make the mistake of thinking that the best argument for rule-consequentialism is a consequentialist argument, then one might naturally feel under pressure to formulate rule-consequentialism in whatever way would maximize good consequences. I think the best way of arguing for rule-consequentialism begins with the idea that, other things being at least roughly equal, a moral theory is justified to us if it identifies a fundamental moral principle that both explains why our more specific considered moral convictions are correct and provides some impartial justification for those convictions. We seek **reflective equilibrium** between abstract moral theory and more specific moral intuitions. Which moral theory can explain why our more specific considered moral convictions are correct and provide some impartial justification for them? **Rule-consequentialism proposes** itself as **the answer.** Now if rule-consequentialism is to be a plausible candidate, it will have to be formulated carefully. For example, it will have to eschew Brant’s reference to society, because of the problem of specifying which one. But if rule-consequentialism is not to be formulated so as to evaluate codes by the good that would result from their acceptance by the agent’s society, which group’s acceptance should be part of the rule-consequentialist criterion? I think that rule-consequentialism should be formulated so as to evaluate codes in terms of the expected value of their acceptance by the vast majority of everyone everywhere. One profound attraction of this answer is that **it** straightforwardly **reflects the intuition that the same** moral **principles apply to everyone.** Let us now see how Feldman’s other objections to rule-consequentialism fare. Remember that Brandt’s theory says an act of ours is wrong if forbidden by the particular code the acceptance of which would actually produce the best consequences (Code X). One of Feldman’s other objections was that Brandt’s claim that Code X determines which acts are wrong is very implausible when no one knows that the currency of Code X would maximize utility. I agree: that moral wrongness is determined by a moral code which agents and their societies are blamelessly unaware of is highly implausible. Here is an argument for that conclusion. Certainly, people are not blameworthy for failing to follow a code of which they are blamelessly unaware. Moral wrongness is normally thought to be closely tied to blameworthiness. If moral wrongness and moral blameworthiness are to retain this close tie, then since blameworthiness cannot be determined by a code of which people are blamelessly unaware, moral wrongness cannot be determined by a code of which people are blamelessly unaware. However, there is a way for rule-consequentialism not to get into the trouble Feldman highlights. Instead of determining wrongness by the code whose acceptance would actually produce the greatest value, rule-consequentialism should be formulated so as to determine wrongness by the code whose acceptance has the highest expected value. The expected value of a code is to be calculated by taking the value of each possible outcome of a code’s acceptance and multiplying that outcome’s value by the probability that the outcome will occur if the code is accepted. There are philosophical controversies about which probabilities come into play. But I gloss over those here. Even if probabilities were entirely unproblematic, the calculations of expected value would be inordinately complicated. This would be true even if there were not ineliminable imprecision and vagueness in the evaluative realm. But there is such imprecision and vagueness, and the calculations are anyway beyond any of us. Hence, really, at best we can but estimate very roughly and crudely how much good is likely to result from the acceptance of this or that moral code. Replace an established moral code with a completely different one and what would be the consequences? If we have seen how a code worked in one society, we might be able to estimate accurately how it would work in another society. At least sometimes, therefore, we can reasonably estimate the consequences of the establishment of a moral code with which we are already familiar. But what about codes with which we are not familiar? I have no confidence that a new moral code will have better consequences than the one it is replacing, except where the new code is in fact much like some code with which we are already familiar, though not necessarily much like the one being replaced. I fear the upshot of this is a kind of incrementalism (Brandt, 1979, p. 290). The right place for us to start is with the moral code already established in our society. We look for ways in which it could be improved. In rule-consequentialist terms, we look for changes to the established moral code that have higher expected value than sticking with the established code has. Where a change from the status quo does not have higher expected value, why change? Where a change from the status quo does have higher expected value, why not change? Rule-consequentialism formulated in terms of expected value has considerably more plausibility than rule-consequentialism formulated in terms of actual value. And if rule-consequentialism is formulated in terms of expected value, then rule-consequentialism sidesteps Feldman’s objection that the theory can require us to follow a code that no one can know. So let us turn to Feldman’s remaining objections. One of these was that rule-consequentialism says an act of ours is wrong if forbidden by the ideal code even though no one is our society currently accepts that code. I take it that Feldman meant to be alluding to the objection, made famous by David Lyons (1975, p. 141), that where the ideal code contains rules that are burdensome to follow, and where others in your society do not accept that code and are not following those burdensome rules, requiring you nonetheless to comply with those rules is seriously unfair. Here we have the old examples where everyone around you is taking the shortcut across the grass and yet the ideal code requires you not to do so, because it would be best if everyone refrained from walking across the grass. What resources does rule-consequentialism have to deal with this objection? Remember that rule-consequentialism was not formulated in terms of acceptance by absolutely everyone; it was formulated in terms of acceptance by the vast majority of everyone. The reason for this was to allow into the ideal code rules for dealing with people who do not accept the ideal code. To be sure, rule-consequentialism prescribes acceptance and compliance with the ideal code by everyone. Nevertheless, it evaluates codes by the expected consequences of acceptance by less than everyone. How much less? Brandt (1967, sect. 8) proposed 90 per cent of the agent’s society. I argued for 90 per cent of everyone everywhere (Hooker, 2000a, pp. 83, 173–174). There are difficulties about the figure of 90 per cent (Ridge, forthcoming). But the important point here is that, if rule-consequentialism evaluates codes in terms of the consequences of their acceptance by less than 100 per cent of everyone, then rule-consequentialism might endorse rules for dealing with people who do not accept the ideal code. For example, rule-consequentialism can endorse a rule for dealing with free-riders, by which I mean those who are not doing their fair share, or who refuse to reciprocate kindness or restraint shown towards them. The best way of encouraging people inclined to free-ride on the kindness or restraint of others is to make kindness and restraint towards them contingent on their doing their part. So the ideal code will contain within it a proviso that one is not required to restrain oneself, or make sacrifices, for the benefit of free-riders. We come now to the final objection to rule-consequentialism in Feldman’s introductory book. This is the objection that complying with the ideal code when others are not doing so can be useless or even harmful. Well, where it is useless and burdensome, then the answer may lie in the previous paragraph: burdensome requirements disappear when others refuse to reciprocate. Where complying with the ideal code seems useless but not burdensome, I cannot see that being required to follow the ideal code is objectionable. Perhaps this is because of the temptation to think that following the ideal code is hardly ever completely useless, since following it sets a good example. And what about cases where complying with a rule whose acceptance by the vast majority would maximize expected value would have very harmful consequences? If the vast majority accepted a rule requiring them to keep their promises, expected value would be very high. But suppose the only way to warn the region of the approaching tsunami is to break my promise to meet you for lunch. In such a case, breaking my promise is obviously the thing to do. Rule-consequentialism is implausible unless it can somehow agree. This objection has since been decisively rebutted by rule-consequentialists (Brandt, 1989 [1992], pp. 87, 88, 91; Hooker, 2000a, pp. 98–99). Our answer consists of pointing out that the ideal code — the code whose internalization would maximize expected value — would contain a rule for dealing with potential disasters. The rule would be ‘prevent disasters’. And this rule would override other rules within the idea code (with the exception of some rule about the maximum self-sacrifice that can be required of the agent). Section 3: Feldman’s Brand of Consequentialism Feldman is certainly a consequentialist: ‘I steadfastly insist that we should make the world as good as we can make it’ (Feldman, 1997, p. 14). His ‘world utilitarianism’ holds that what an agent should do is have the motives and do the acts contained in the best possible futures then accessible to the agent (Feldman, 1997, pp. 72–75). He first defended this view as far back as 1975 (see the first paper reprinted in Feldman 1997). It does seem to me the most attractive member of the broadly act-consequentialist family. Feldman accepts that hedonistic utilitarianism has been hammered by objections concerning promises, rights, and desert (Feldman, 1978, pp. 52–60; 1997, pp. 14, 158–174, 202–208). In order to get his consequentialism to come out with plausible implications, Feldman adjusts his axiology. In other words, he holds on to the consequentialist principle that each person should maximize intrinsic value, but he abandons a purely hedonistic theory of intrinsic value. In particular, Feldman includes considerations of justice into his theory of intrinsic value. Actually, his theory of justice reduces justice to giving people what they deserve. So his ‘justice-adjusted hedonism’ would be more revealing titled ‘desert-adjusted hedonism’. Whatever it is called, this theory adjusts the intrinsic value of a pleasure or pain in light of whether it is deserved. So the theory maintains: Positive desert increases the intrinsic value of pleasure. Negative desert decreases the intrinsic value of pleasure. Positive desert increases the intrinsic disvalue of pain. Negative desert decreases the intrinsic disvalue of pain. These factors operate to the point where some pleasures have no intrinsic value, because they are undeserved, and some pains are not bad, because they are deserved (Feldman, 1992, pp. 182–185; 1997, pp. 164–169). Now what does Feldman think grounds desert? One thing he mentions is excessive or deficient past receipt’ (Feldman, 1992, p. 183; 1997, pp. 158, 161–162, 170, 203). ‘Suppose the potential recipients are alike in all relevant respects except that one of them has already received far more of that good than the other. Then, since other things are equal, the one who has so far been short-changed has greater desert.’ (Feldman, 1997, p. 162) I guess that in effect this is the idea that, if two people are initially equally deserving or undeserving of some good but then one of them gets more of the good than the other, then, unless there is some other relevant change, the one who has gotten more so far is less deserving than the other person when the good is next distributed. Perhaps we could express this as a right to be treated the same as other equally deserving people. Someone who has had that right infringed thereby becomes more deserving, other things being equal, than those who had been equally deserving but treated better. More generally, Feldman explicitly mentions rights and claims as desert bases. Presumably, he means moral rights, not mere legal rights. Likewise, presumably he means legitimate moral claims. What moral rights and legitimate moral claims are there? Obviously, this is an immense topic. And Feldman says little about it. We might fill in the blanks as follows. A person’s genuine need is often thought to generate a moral claim on others. And promises give promisees moral claims on the promisors. Feldman also mentions conscientious effort as a possible source of desert (1997, p. 203; cf. 1992, pp. 201–4). Presumably, if conscientious effort is a basis or source of desert, it operates via moral claims, just as needs and promises do. That is, just as promises generate claims, which then are the source of desert, conscientious effort generates claims, which then are the source of desert. My suspicion is that, because Feldman takes moral claims to generate desert, he does not actually need refer to moral claims as a group. He could simply point to whatever generates the moral claims as directly generating desert. Feldman’s view is that desert can be based on rights, needs, promises, and conscientious effort. In addition, Feldman thinks people’s moral worthiness affects their deservingness (Feldman, 1992, p. 184; 1997, pp. 158–159, 162, 170, 203). So now we have rights, needs, promises, conscientious effort, and moral worthiness as sources of desert. And Feldman leaves open that there might be other sources of desert. Section 4: Feldman’s Desert-adjusted Hedonism versus Rule-consequentialism Note how varied Feldman’s desert bases are. Even more importantly, note how much moral background some of them presuppose. Many of the features that determine desert are explicitly moral features. This is clearest in the case of moral rights and moral worthiness. And other items on Feldman’s list of desert bases are things that his consequentialism has to postulate are morally relevant. Now one major traditional attraction of traditional utilitarianism was that it started with a conception of non-moral value, and then claimed that right and wrong are a function of that non-moral value. Traditional utilitarianism started with a non-moralized notion of pleasure minus pain. Because pleasure and pain were not moralized, evil (e.g. sadistic) pleasures counted as positive pleasures in the calculus, and even deserved pains counted as negatives. Traditional utilitarianism then claimed that moral requirements and prohibitions are some function of this non-moralized pleasure minus pain. Traditional act-utilitarianism of course claimed that an act is wrong unless it maximizes net pleasure. Traditional rule-utilitarianism used maximizing net pleasure as the test of whole codes of rules, rather than as a test of individual acts. Feldman’s theory is a very long way from traditional utilitarianism. Feldman’s theory still holds that things are to be evaluated in terms of resulting intrinsic value, and pleasure and pain figure centrally in his conception of intrinsic value. But he also takes intrinsic value to be heavily influenced by desert. And desert imports a variety of moral notions. So Feldman’s theory contains an axiology that relies partly on a number of moral concepts. In other words, Feldman’s theory begins with a number of moral postulates. I do not mean to suggest that that is a fatal objection to his theory, but it is a weakness. If some other theory can come out with just as plausible implications as Feldman’s theory does, but this other theory relies on fewer moral postulates, then this other theory will be able to explain just as much as Feldman’s but on the basis of less. Whereas Feldman’s theory needs to postulate moral rights, moral worthiness, and the moral relevance of needs, agreements, etc., **rule-consequentialism will explain why moral rights are needed, why agreements should be honoured,** needs prioritised, **and** conscientious **effort rewarded.** In all these ways, rule-consequentialism explains what Feldman’s theory instead postulates.

#### It's most actor-specific—act util is too informationally demanding for ILaw questions

Green 20

Fergus Green (Department of Philosophy, Ethics Institute, Utrecht University). “Global goals as global norms: What goal-based governance can learn from political theory?” Global Goals. 2020. JDN. <https://globalgoalsproject.eu/globalgoals2020/wp-content/uploads/2020/06/GlobalGoals2020_Green.pdf>

\*SDGs = United Nations Sustainable Development Goals

Whereas liberal-egalitarians seek to ensure a minimum threshold of well-being for each individual person, utilitarians seek to maximize the aggregate sum of expected well-being (also known as “utility”) across all persons globally, or at least all members of a polity.5 Figuring out what would maximize utility is an **informationally demanding** task, which requires many empirical assumptions about the likely impacts of our actions. A less informationally demanding form of utilitarianism that is also **more in keeping with the rule-based nature of rule-of-law** societies is “**rule util**itarianism”. Rule utilitarians seek to specify rules that would tend to maximize aggregate well-being, at least within a given polity. The SDGs and the specific targets accompanying them can be evaluated in the light of various principles and theories of distributive justice and against utilitarian ideals. In particular, if we think of global goals as norms that the **international community** is seeking to instantiate at national and subnational level, then both justice-based and rule-utilitarian standards can be applied to evaluate such norms. We can ask: are these norms that, if instantiated, would advance the cause of justice or utility maximisation?

#### Therefore the standard is rule utilitarianism

#### Act util devolves to rule util—following principles maximizes utility better than case-by-case exceptions

Hooker 16

Brad Hooker (Professor at the University of Reading). "Rule Consequentialism", The Stanford Encyclopedia of Philosophy, Edward N. Zalta (ed.). Winter 2016. JDN. https://plato.stanford.edu/entries/consequentialism-rule/

Consequentialists have distinguished three components of their theory: (1) their thesis about what makes acts morally wrong, (2) their thesis about the procedure agents should use to make their moral decisions, and (3) their thesis about the conditions under which moral sanctions such as blame, guilt, and praise are appropriate. What we might call full rule-consequentialism consists of rule-consequentialist criteria for all three. Thus, full rule-consequentialism claims that an act is morally wrong if and only if it is forbidden by rules justified by their consequences. It also claims that agents should do their moral decision-making in terms of rules justified by their consequences. And it claims that the conditions under which moral sanctions should be applied are determined by rules justified by their consequences. Full rule-consequentialists may think that there is really only one set of rules about these three different subject matters. Or they may think that there are different sets that in some sense correspond to or complement one another. Much more important than the distinction between different kinds of full rule-consequentialism is the distinction between full rule-consequentialism and partial rule-consequentialism. Partial rule-consequentialism might take many forms. Let us focus on the most common form. The most common form of partial rule-consequentialism claims that agents should make their moral decisions about what to do by reference to rules justified by their consequences, but does not claim that moral wrongness is determined by rules justified by their consequences. Partial rule-consequentialists typically subscribe to the theory that moral wrongness is determined directly in terms of the consequences of the act. This theory of wrongness is called act-consequentialism. Distinguishing between full and partial rule-consequentialism clarifies the contrast between act-consequentialism and rule-consequentialism. Act-consequentialism is best conceived of as maintaining merely the following: Act-consequentialist criterion of wrongness: An act is wrong if and only if it results in less good than would have resulted from some available alternative act. When confronted with that criterion of moral wrongness, many people naturally assume that the way to decide what to do is to apply the criterion, i.e., Act-consequentialist moral decision procedure: On each occasion, an agent should decide what to do by calculating which act would produce the most good. However, **consequentialists nearly never defend** this **act-consequentialist decision procedure** as a general and typical way of making moral decisions (Mill 1861: ch 2; Sidgwick 1907: 405–6, 413, 489–90; Moore 1903: 162–4; Smart 1956: 346; 1973: 43, 71; Bales 1971: 257–65; Hare 1981; Parfit 1984: 24–9, 31–43; Railton 1984: 140–6, 152–3; Brink 1989: 216–7, 256–62, 274–6; Pettit and Brennan 1986; Pettit 1991, 1994, 1997: 156–61; de Lazari-Radek and Singer 2014: ch. 10). There are a number of compelling consequentialist reasons why the act-consequentialist decision procedure would be **counter-productive.** **First,** very often the agent does not have detailed information about what the consequences would be of various acts. **Second,** obtaining such information would often involve greater costs than are at stake in the decision to be made. **Third,** even if the agent had the information needed to make calculations, the agent might make mistakes in the calculations. (This is especially likely when the agent’s natural biases intrude, or when the calculations are complex, or when they have to be made in a hurry.) **Fourth,** there are what we might call expectation effects. Imagine a society in which people know that others are naturally biased towards themselves and towards their loved ones but are trying to make their every moral decision by calculating overall good. In such a society, each person might well fear that others will go around breaking promises, stealing, lying, and even assaulting whenever they convinced themselves that such acts would produce the greatest overall good. In such a society, people would not feel they could trust one another. This fourth consideration is more controversial than the first three. For example, Hodgson 1967, Hospers 1972, and Harsanyi 1982 argue that trust would break down. Singer 1972 and Lewis 1972 argue that it would not. Nevertheless, **most philosophers** accept that, for all four of the reasons above, **using an act-consequentialist decision procedure would not maximize the good.** Hence even philosophers who espouse the act-consequentialist criterion of moral wrongness reject the act-consequentialist moral decision procedure. In its place, they typically advocate the following: Rule-consequentialist decision procedure: At least normally, agents should decide what to do by applying rules whose acceptance will produce the best consequences, rules such as “Don’t harm innocent others”, “Don’t steal or vandalize others’ property”, “Don’t break your promises”, “Don’t lie”, “Pay special attention to the needs of your family and friends”, “Do good for others generally”. Since act-consequentialists about the criterion of wrongness typically accept this decision procedure, act-consequentialists are in fact partial rule-consequentialists. Often, what writers refer to as indirect consequentialism is this combination of act-consequentialism about wrongness and rule-consequentialism about the appropriate decision procedure.

### Advocacy

#### Thus, I advocate that the Common Heritage Principle is the correct principle of justice in outer space

#### The CHIP is customary international law and prohibits appropriation

Oduntan 5

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To begin with it must be noted that the **common heritage principle** is fast becoming part of **c**ustomary **i**nternational **l**aw. It constitutes a distinct basic principle providing general but not specific legal obligations with respect to the utilisation of areas beyond national jurisdiction. It inherently conflicts with the principle of sovereignty since it operates from the basis of regarding an environment as 'international public utility' requiring the obligation to co-operate. 13 The CHM principle was first introduced to cover outer space by the words contained in Article 1 of the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space of 1962.14

By the time the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Borders (1967)15 was drafted the resolve of states to render outer space a commons for all humanity had deepened. This led to the formulation of another interesting phraseology. In the discussion of the drafting of Article 1 of the Space Treaty (1967) the choice was between the terms ‘province of mankind’ and ‘common heritage’. Eventually the former phraseology was adopted because it was thought to reflect more closely the principles of the freedom of outer space and the **prohibition of appropriation.** However, it must be said that introduction of the newer phrase ought not to lead to any confusion nor does this prove that these phraseologies are mere declarations of intention as some writers have mischievously suggested.

Eventually, clear reference to this term was rendered in Article 11 (1) of the Agreement Governing the Activities of States on the Moon and other Celestial Bodies (1979). 16 It provided that: “The moon and its natural resources are the common heritage of mankind”. In addition to this, Article 4 (1) of the Moon Agreement combines the two terms in the following manner:

"The exploration and use of the moon shall be the province of all mankind and shall be carried out for the benefit and in the interests of all countries irrespective of their degree of economic or scientific development".

It would, therefore, appear that as used in the Moon Agreement (1979) both terms emphasise different things although they are geared towards achieving the same noble objective. Article 4 (1) emphasises the co-operation of states parties in all their undertakings concerning the moon and other celestial bodies; on the other hand Article 11 coupled with Article 5 in particular provide the CHM Principle with **legal teeth.**

#### There is no ambiguity—neg authors are opportunistic lawyers trying to dodge international law

Oduntan 5

Gbenga Oduntan (Lecturer in Law, Canterbury Christ Church University College, England; Legal Adviser to the Nigerian Government and Member, United Nations Nigerian/Cameroon Mixed Sub-Commission on the Demarcation of the Boundary between Nigeria and Cameroon) Imagine There Are No Possessions: Legal and Moral Basis Of The Common Heritage Principle In Space Law. Manchester Journal of International Economic Law, 2 (1). pp. 30-59. ISSN 1742-3945. 2005. JDN. https://kar.kent.ac.uk/1767/1/Imagine%2520There%2520are%2520No%2520Possessions.pdf

Such arguments as raised in the seven points delineated above may appear to be formidable and are indeed quite capable of attracting scholarly sympathy but again the correct view is that they are nonetheless insufficient. The arguments certainly do not justify any legal reasoning that limits the operation of the CHM principle in outer space in such a manner as to permit national or private appropriation and to recognise extensive property rights in space. Suggestions that sovereignty be introduced into outer space through a loose interpretation of the CHM principle or in any other form whatsoever is a form of legal heresy and should be dismissed for the following reasons.

In the first place it is **merely mischievous** to overstate the obscurity of meaning shrouding the term CHM. Doing so is clearly an undisguised attempt to avoid the legal validity of the CHM principle. Indeed it may be said with a lot of credence that **specific semantic certainty has been afforded to this term** in the works of many authors. R.P. Arnold impressively achieves this when he stated as follows:

“The word heritage suggests property or interests which are reserved to a person by reason of birth, something handed down from one's ancestors or the past. In defining mankind, it is necessary to make a distinction between mankind and man. Mankind refers to the collective group, whereas man refers to individual men and women…Mankind is not yet unified under one government, therefore the collective entity of mankind is represented by the various nations of the world. Thus the exercise of rights to the common heritage of mankind appertains to nations, representing mankind, and not individuals. The use of the phrase common heritage of mankind implies or prescribes worldwide ownership...46”

Furthermore, due to the fact that the primary subjects of international law are independent states, it is logical that they should decide together and as a singular community, inclusive of all, fundamental matters that concern all. This is, therefore, what is legalistically referred to as mankind.47 It has, therefore, become possible to identify some basic elements of the CHM principle:

(a) That the areas constituting a CHM cannot be subject to appropriation.

(b) That the use of such area and the resources thereof shall be subject to a common management system.

(c) That the concept in question implies an active sharing of the benefits derived from the exploration and exploitation of those areas;

(d) That the area be used exclusively for peaceful purposes;

(e) That the area be preserved for future generations in perpetual succession.48

In the light of these definitions and assertions **it is highly unlikely that any** possible **interpretation** of the CHM principle **allows for property rights in space.** The allegation that the existing space treaties recognise exploitation of outer space through the provisions permitting space exploration is yet another unsuccessful attempt to befuddle issues. The answer to this is that there is a **clear separation** in space law between the issue of the use of outer space resources in outer space for scientific experimentation on the one hand and that of exploitation or mining of outer space based resources with a view to repatriating the resources to earth for economic and monetary gain, on the other hand. Regarding the utilisation of space based resources in outer space itself there is little room for controversy. The reasonable use doctrine has been established in Space Law. The Moon Agreement in Article 6 (2) for instance, permits the usage of minerals and other substances of the Moon in quantities appropriate for the support of their missions. This very much falls short of permitting mining for purely monetary gains. Furthermore as will be later elaborated upon, the right to collect and remove substances and minerals from the moon is limited to "... scientific investigations and in furtherance of the provisions of the agreement" (Article 6 (2) Moon Agreement 1979). The phrase "in furtherance of the provisions of this agreement" covers many things. This includes of course the obligation to have due regard to interests of present and future generations as well as the need to promote higher standards of living and conditions of economic and social progress and development in accordance with the Charter of the United Nations (Article 4, Moon Agreement (1979).

### Contention

#### I contend that the Common Heritage Principle is a utility maximizing norm of international law

#### A. Future Generations—

#### The CHP would enshrine respect for future generations into space law

Joyner 86

Christopher C. Joyner (Professor of Government and Foreign Service at Georgetown University). Legal Implications of the Concept of the Common Heritage of Mankind. International and Comparative Law Quarterly, 35(01), 190–199. 1986. JDN. https://www.cambridge.org/core/journals/international-and-comparative-law-quarterly/article/abs/legal-implications-of-the-concept-of-the-common-heritage-of-mankind/27C87188CE97BA536F9FE5DD8E048C78

Important, too, are the legal implications of "heritage" as presented in a CHM regime. Clearly, the concept of "heritage" conveys the proposition that common areas should be regarded as inheritances transmitted down to heirs, or as estates which by birthright are passed down from ancestors to present and **future generations.**33 A CHM regime would therefore designate that region as an international patrimony, much the same as a piece of property or estate inherited by one generation from its predecessor.34 Thus, a CHM regime would insist that all activities in or around the international area should respect the interests of future generations, **especially** in making decisions that affect whether, when and how the region's resources are to be used, exploited, developed and distributed. **In legal terms,** the concept of **"common heritage" would require** that **serious scrutiny** be given **to every activity in the area** in order to prevent resource waste and to preclude environmental abuse. To fail in the protection, conservation, preservation and prudential management of the region and its resources would breach the trust and legal obligation implicit in responsibly supervising the earth's heritage for mankind in the future.35

#### Integrating future generations into political structures is the only systematic solution to existential risks

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Natalie, Mark O’Brien, and Thomas Ryan (Researcher of Political Science at the University of Cambridge, United Kingdom). "Representation of future generations in United Kingdom policy-making." Futures 102 (2018): 153-163. //Elmer

Global catastrophic and existential risks pose central challenges for **intergenerational justice** and the structure of our current democracy. The Global Challenges Report 2016 defines global catastrophic risk as risk of an ‘event or process that, were it to occur, would end the lives of approximately 10% or more of the global population, or do comparable damage’ (Global Challenges Foundation & Global Priorities Project, 2016). A subset of catastrophic risks are ‘existential’ risks, which would end human civilisation or lead to the extinction of humanity (Global Challenges Foundation & Global Priorities Project, 2016). Catastrophic and existential risks may be categorised in terms of ongoing risks, which could potentially occur in any given year (e.g. nuclear war; pandemics), versus emerging risks which may be unlikely today but will become significantly more likely in the future (e.g. catastrophic climate change; risks stemming from emerging technologies). Ongoing risks have existed for some time now and are generally well-understood. However, emerging risks, particularly those arising from technological developments, are less understood and demand increasing attention from scientists and policymakers. These technological developments include advances in synthetic biology, geoengineering, distributed manufacturing and artificial intelligence (AI) (Global Priorities Project, Future of Humanity Institute, Oxford Martin School, Centre for the Study of Existential Risk, 2014). Although the impact of these technologies is still very uncertain, expert estimates suggest a non-negligible probability of catastrophic harm. In this article we rely on two main premises. The first is that **future generations are under-represented in current political structures** partly due to political ‘short-termism’ or ‘presentism’ (Thompson, 2010). Governments primarily focus on short-term concerns, which mean that they may systematically neglect global catastrophic risks and, accordingly, future generations (Global Priorities Project et al., 2014). The problem of presentism transcends political divisions: people across the political spectrum are concerned about its effects, and should care about mitigating global catastrophic risks. This situation is exacerbated in that the good of mitigating global catastrophic and existential risks is typically global.

#### B. Strong international law grounded in the CHP is key to check nuclear war

Krieger 1

David Krieger (President Emeritus of the Nuclear Age Peace Foundation). “Ending the Nuclear Weapons Threat to Humanity.” Waging Peace. 6 December 2001. JDN. https://www.wagingpeace.org/ending-the-nuclear-weapons-threat-to-humanity/

Our **Common Heritage**

Elisabeth spoke often of the oceans as the Common Heritage of Mankind, a phrase coined by Ambassador Arvid Pardo of Malta. Over the years I have come to see that the concept of Common Heritage applies not only to the oceans, but to virtually everything on our planet, as well as to the planet itself, its biosphere, atmosphere and **outer space.** The land is our Common Heritage as are the skies, the climate, the trees and the crops we plant. Our Common Heritage also includes our cultures, our languages, our art forms, our religions, and our understandings of the mystery and miracle of life.

It is part of the human condition that we do not stop often enough to recognize and appreciate the miracle of our lives. Each one of us is a miracle, unique and special. Every simple thing that we are capable of doing — everything that we take for granted such as walking, talking, thinking and creating – is a miracle. And, of course, we ourselves are miracles. We don’t know where we come from before birth or where we go after death. We don’t know why our hearts or brains work or why we are capable of breathing and doing so much more without conscious effort. Each of us is a miracle shrouded in mysteries we cannot understand.

We now share this incredibly beautiful planet with some six billion other miracles. I have often wondered how it is that miracles are capable of killing other miracles. Perhaps it is because we do not value ourselves highly enough that we are less appreciative of others. Perhaps there is some appreciation for the miracles of who we are and for life that is missing in our cultures and our educational systems.

The Glorification of War

Most of us on this planet live in cultures in which war is glorified and celebrated. Our history books are filled with stories and pictures of those who led us into battle. Our popular culture celebrates war and warriors. One has only to look at a culture’s movies, television programming and the video games that children play to understand from where the next generation of warriors will arise.

The 20th century was the bloodiest century in human history. Some 200 million people died in international and civil wars. One of the most striking things about the 20th century is that the number of civilians killed in warfare rose dramatically throughout the century. In World War I, soldiers fought each other in trenches. In World War II, civilian casualties rose as aerial attacks were directed against cities. By the end of that war, US bombers were destroying Japanese cities at will. It was not a large step from the fire bombing of Tokyo on the night of March 9-10, 1945, in which some 100,000 civilians were killed, to dropping atomic weapons on the cities of Hiroshima and Nagasaki in August of that year.

By the end of the 20th century over 90 percent of the casualties of warfare were civilians, and throughout the latter half of the 20th century the threat of **nuclear annihilation hung over all humanity.** The United States and the former Soviet Union engaged in a mad arms race in which they each developed the capacity to destroy humanity many times over. Somehow the world survived the insanity of the nuclear arms race, but **we are not yet safe.** There are still far too many nuclear weapons in the world, over 30,000, and even today a surprisingly large number of them, some 4,500, remain on hair-trigger alert.

The Influence of the Hiroshima and Nagasaki Peace Memorial Museums My goal is to help create a world free of nuclear weapons. I was deeply affected in this regard by a relatively early visit to Japan. I came to Japan in 1963, when I was 21 years old. During my stay in Japan, I visited the Hiroshima and Nagasaki Peace Memorial Museums. I learned something at these museums that I had neither seen nor heard before. It was the extent of the suffering of the people who were beneath those bombs. In school in the United States, we had learned a relatively simple lesson about the use of these bombs: Atomic bombs win wars. In the case of World War II, the US dropped the atomic bombs and won the war. There was little discussion of the large numbers of deaths of men, women and children, or of the terrible suffering caused by the bombs. In these museums, however, the people beneath the bombs were brought back into the picture. Surely, nuclear weapons are the least heroic weapons imaginable. Their power is such that they kill indiscriminately. Dropped on a city, nuclear weapons kill everything immediately within a broad radius, and spread their radioactive poisons that go on killing over a much broader area. My visit to those museums at a young age had a profound effect on me. It gave direction to my life. I did not know then exactly what I would do, but I did know that nuclear weapons were not really weapons at all. They were instruments of genocide, capable of destroying cities, civilization and even humanity itself. Nuclear weapons are also profoundly undemocratic. They concentrate power and take it away from the people. Nuclear weapons were born in secrecy and have always been shrouded in secrecy. The decisions to develop, deploy and use these weapons have always been in the hands of only a small number of individuals. Even today, a single leader, or at most a small group of individuals, could envelop the world in nuclear conflagration. The survivors of Hiroshima and Nagasaki had it right: Nuclear weapons and human beings cannot co-exist. If the cry of the atomic bomb survivors, “Never Again!” was to be realized, then nuclear weapons would have to be eliminated. The goal seemed tremendously distant in the face of the implacable hostility being expressed during the Cold War between the United States and the Soviet Union. Yet it seemed necessary. The intention of confronting nuclear weapons and seeking their elimination was set in my mind in 1963, nearly four decades ago. After leaving Japan, I joined the army reserves in lieu of being drafted into the army. A second major force that shaped my life in the direction of working for peace was being called to active duty in the army in 1968. The Vietnam War was at its height, and I soon found myself as a young 2nd lieutenant with orders to go to Vietnam. I was totally opposed to the war in Vietnam, thinking it was illegal, immoral and highly inappropriate for the US to be killing Vietnamese peasants on the other side of the world. I decided to fight against going to Vietnam and took the matter to court. Eventually I won, and was released from the army. My first job was teaching international relations at San Francisco State University. I felt that change was too slow as a teacher, and that is what led me to work with Elisabeth Borgese at the Center for the Study of Democratic Institutions. After that I worked for the Reshaping the International Order (RIO) Foundation in the Netherlands, coordinating a project on the relationship of dual-purpose technologies to disarmament and development. Then, in 1982, I was a founder of the Nuclear Age Peace Foundation. The Nuclear Age Peace Foundation It has been nearly twenty years since our Foundation was born. At that time, the leaders of the United States and Soviet Union were not talking to each other. The world situation looked grim. A small group of us in Santa Barbara believed that more needed to be done, and that citizen action was critical. We met weekly for a year, trying to develop a plan. From these meetings, we created the Nuclear Age Peace Foundation. The implication of the name was that peace is an imperative of the Nuclear Age. I became the president of this new Foundation. We had no resources, but large dreams. Even in those difficult days, I was filled with hope. Each day brought new challenges. Our small Foundation began speaking out and advocating for a world free of nuclear threat. In those early days, during the presidency of Ronald Reagan, we were viewed with some suspicion for our advocacy of nuclear disarmament. The tagline of the Nuclear Age Peace Foundation is Waging Peace. It is a concept that we believe is essential to ending the cycle of violence and building a culture of peace. Waging Peace implies an active commitment to changing the world. It means seeking non-violent means to resolve conflicts, and also working actively to prevent wars by creating the conditions of peace. This means active engagement in ending poverty and starvation. It means fighting against human rights abuses wherever they occur. It means fighting against corporate greed when there is human need. It means working for sustainable conditions of development and an environment that will sustain life on our planet.

There are four main areas in which we have worked. The first is for the abolition of nuclear weapons. We believe that the elimination of nuclear weapons is essential to ensure a human future. We were a founding member of the Abolition 2000 Global Network, a network that has grown to over 2,000 organizations and municipalities throughout the world. We were also a founding member of the Middle Powers Initiative, a small group of non-governmental organizations that has encouraged and supported middle power governments to play a leading role in nuclear disarmament efforts. The Foundation organized an Appeal to End the Nuclear Weapons Threat to Humanity, which has been signed by many world leaders, including 37 Nobel Laureates. I will discuss this Appeal in more detail in a moment.

The second area of our concern is international law and institutions. We believe that **international law must be strengthened** and that the United Nations and its specialized agencies must be empowered to do their jobs effectively. We have fought hard for the creation of an International Criminal Court, a court that can hold individuals accountable for the most serious international crimes. An International Criminal Court would bring Nuremberg into the twenty-first century. It would set a standard in the world that no one stands above international law, and that crimes against peace, crimes against humanity, war crimes and genocide will not go unpunished. To this list of crimes, the crime of international terrorism should now be added.

Without universal respect for and enforcement of international law, it will not be possible to effectively stop human rights abuses, destruction of the environment, and **weaponization of the planet and outer space.** Nor will it be possible to provide protection to the oceans, atmosphere, outer space and other areas of **Common Heritage** of Mankind.

#### C. Default to the CHP in case of moral uncertainty—it reflects moral and political consensus

Joyner 86

Christopher C. Joyner (Professor of Government and Foreign Service at Georgetown University). Legal Implications of the Concept of the Common Heritage of Mankind. International and Comparative Law Quarterly, 35(01), 190–199. 1986. JDN. https://www.cambridge.org/core/journals/international-and-comparative-law-quarterly/article/abs/legal-implications-of-the-concept-of-the-common-heritage-of-mankind/27C87188CE97BA536F9FE5DD8E048C78

Although these expressions of the CH principle were undoubtedly important in pushing it onto the world political and legal stage, they provide an overly narrow view of how and why the principle developed. With any principle, it is important to try to identify its core underlying values. When political formulations of a principle are linked to longstanding values and traditions, the principle is more likely to resonate with people and gain acceptance. A thorough investigation of the values associated with the CH principle could fill at least a book, but I note here a few pertinent points. The CH principle's antecedents include the legal public trust doctrine and precepts of Roman law applicable to common space resources. 47 A complete story of the origins of the principle would also note its religious and natural law underpinnings. For example, all religious traditions emphasize the promotion of peace and the resolution of disputes without recourse to violence.48 **All religious traditions** emphasize the importance of generosity, of sharing wealth with the poor and unfortunate, even if they have not "earned" that wealth. 49 Furthermore, Judeo-Christian, Islamic, and Buddhist traditions support the notion of human stewardship of the earth, with responsibilities for future generations. 50 It is, admittedly, a large step from the view that individuals have certain moral responsibilities to the view that nation-states should embrace them with respect to non-citizens. Nonetheless, the ideals of peaceful resolution of disputes, sharing with the poor, and stewardship of the earth for future generations persuaded religious leaders to endorse the CH principle.5 1 Furthermore, the perceived benefits of the principle for individuals have led some commentators to regard it as a human rights principle. 52

A consideration of context reveals, then, **two important underpinnings of the CH principle.** In general, aspects of the principle **coincide with long-held values.** Second, political leaders articulated the principle at a time in history when it was important to develop **legal guidance concerning common space resources.**

#### D. Cooperative space development is more efficient, which link turns their econ DAs

Raclin 86

Grier C. Raclin (Partner, Heron, Burchette, Ruckert & Rothwell, Washington, D.C. B.A. 1975, J.D. 1978, Northwestern University). “From Ice to Ether: The Adoption of a Regime to Govern Resource Exploitation in Outer Space.” Northwestern Journal of International Law & Business, Volume 7 Issue 4. Fall 1986. JDN. https://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1214&context=njilb

It must be recognized that more than half of the countries constituting the United Nations won independence within the last twenty years. These countries reject the traditional method of obtaining sovereignty and benefits through simple occupation of territory. 9 2 They seek to develop industrially quite quickly, hoping to establish a new international economic order in which developed countries are called upon to assist developing countries in a modernization campaign.193 Unless the United States seeks to withdraw from the numerous international organizations governed by one-nation-one-vote systems - a move which would render its terrestrial activities extremely difficult - the United States must now recognize, at least to some extent, developing countries' demands to have a voice in the development and exploitation of Antarctic and outer space resources. 194

From a purely practical standpoint, unilateral action by the United States to explore and exploit lunar and other resources would be **extremely inefficient**. Such an undertaking would require duplicative **r**esearch **and** **d**evelopment, construction, transportation, and management efforts and activities that could be shared more profitably among numerous countries. As the United States has recognized the practicality of shared efforts regarding its plan to share the construction of the space station with Japan, Canada, and the European Space Agency, 195 so will **the world's countries undoubtedly find it advantageous to unify** in order **to explore** outer **space.** The early establishment of a predictable method of sharing the benefits of extraterrestrial resource development also will lessen the likelihood that **inefficient "get-it-while-you-can" activities** will characterize development efforts.

Finally, adoption of an international accord to regulate commercial activities in outer space and to allocate the benefits of such activities in a predictable manner would appear to be a **prerequisite to financing** these activities. Banks and investors will be reluctant to lend funds to any mining entrepreneur or consortium that did not have the uncontested, or at least predictable, right to the benefits of the resources it plans to develop or prospect. Similarly, it cannot be expected that an entrepreneur will take on the significant risks associated with extraterrestrial mining activities if its ability to obtain the benefits of those activities is open to question. Indeed, were the United States to fail to adopt a regime governing extraterrestrial resource exploration, it must be anticipated that entrepreneurs might seek the protection of parties to such a convention. Thus, the failure of the United States to secure such an agreement may result in the United States losing its ability to participate in such activities. 196

### UV 2—Theory

#### 1. Neg gets one uncondo world. 2NR will always go for the least covered flow which structurally minimizes clash and exacerbates neg time skew. Reading a different CP each round solves their education “testing” claims better by allowing a full round of depth on each one.

**2. Aff gets RVIs because:   
(a) 1AR time skew means I can’t cover theory and still have a fair shot on substance.  
(b) no risk theory would give neg a free source of no risk offense which moots the AC.**

### UV 3-Mining Pre-empts

#### . TURN- CHP solves mining better-

#### (A) Duplication- Private ventures result in wasted efforts to develop and deploy resources- CHP better for sharing methods and efforts among countries

#### (B) Racing- private appropriation results in inefficient “get-it-while-you can” activities

#### (C) Funding- CHP creates incentives to finance mining ventures

#### That’s all 1AC Raclin

#### 2. TURN- private appropriation causes dangerous space mining and deregulation globally

Edd Gent 20, freelance science and technology writer, “Space Mining Should Be a Global Project—But It's Not Starting Off That Way,” Singularity Hub, 10-12-2020, <https://singularityhub.com/2020/10/12/the-us-is-trying-to-hijack-space-mining-and-there-could-be-disastrous-consequences/>

Exploiting the resources of outer space might be key to the future expansion of the human species. But researchers argue that the US is trying to skew the game in its favor, with potentially disastrous consequences. The enormous cost of lifting material into space means that any serious effort to colonize the solar system will require us to rely on resources beyond our atmosphere. Water will be the new gold thanks to its crucial role in sustaining life, as well as the fact it can be split into hydrogen fuel and oxygen for breathing. Regolith found on the surface of rocky bodies like the moon and Mars will be a crucial building material, while some companies think it will eventually be profitable to extract precious metals and rare earth elements from asteroids and return them to Earth. But so far, there’s little in the way of regulation designed to govern how these activities should be managed. Now two Canadian researchers argue in a paper in Science that recent policy moves by the US are part of a concerted effort to refocus international space cooperation towards short-term commercial interests, which could precipitate a “race to the bottom” that sabotages efforts to safely manage the development of space. Aaron Boley and Michael Byers at the University of British Columbia trace back the start of this push to the 2015 Commercial Space Launch Competitiveness Act, which gave US citizens and companies the right to own and sell space resources under US law. In April this year, President Trump doubled down with an executive order affirming the right to commercial space mining and explicitly rejecting the idea that space is a “global commons,” flying in the face of established international norms. Since then, NASA has announced that any countries wishing to partner on its forthcoming Artemis missions designed to establish a permanent human presence on the moon will have to sign bilateral agreements known as Artemis Accords. These agreements will enshrine the idea that commercial space mining will be governed by national laws rather than international ones, the authors write, and that companies can declare “safety zones” around their operations to exclude others. Speaking to Space.com Mike Gold, the acting associate administrator for NASA’s Office of International and Interagency Relations, disputes the authors’ characterization of the accords and says they are based on the internationally-recognized Outer Space Treaty. He says they don’t include agreement on national regulation of mining or companies’ rights to establish safety zones, though they do assert the right to extract and use space resources. But given that they’ve yet to be released or even finalized, it’s not clear how far these rights extend or how they are enshrined in the agreements. And the authors point out that the fact that they are being negotiated bilaterally means the US will be able to use its dominant position to push its interpretation of international law and its overtly commercial goals for space development. Space policy designed around the exploitation of resources holds many dangers, say the paper authors. For a start, loosely-regulated space mining could result in the destruction of deposits that could hold invaluable scientific information. It could also kick up dangerous amounts of lunar dust that can cause serious damage to space vehicles, increase the amount of space debris, or in a worst-case scenario, create meteorites that could threaten satellites or even impact Earth. By eschewing a multilateral approach to setting space policy, the US also opens the door to a free-for-all where every country makes up its own rules. Russia is highly critical of the Artemis Accords process and China appears to be frozen out of it, suggesting that two major space powers will not be bound by the new rules. That potentially sets the scene for a race to the bottom, where countries compete to set the laxest rules for space mining to attract investment. The authors call on other nations to speak up and attempt to set rules through the UN Committee on the Peaceful Uses of Outer Space. Writing in The Conversation, Scott Shackelford from Indiana University suggests a good model could be the 1959 Antarctic Treaty, which froze territorial claims and reserved the continent for “peaceful purposes” and “scientific investigation.” But the momentum behind the US’ push might be difficult to overcome. Last month, the agency announced it would pay companies to excavate small amounts of regolith on the moon. Boley and Byers admit that if this went ahead and was not protested by other nations, it could set a precedent in international law that would be hard to overcome. For better or worse, it seems that US dominance in space exploration means it’s in the driver’s seat when it comes to setting the rules. As they say, to the victor go the spoils.

#### That causes causes space debris

Scoles, 15 -- Reporter at New Scientist

[Sarah, "Dust from asteroid mining spells danger for satellites," New Scientist, 5-27-15, https://www.newscientist.com/article/mg22630235-100-dust-from-asteroid-mining-spells-danger-for-satellites/, accessed 6-25-21]

IF THE gold mine is too far from home, why not move it nearby? It sounds like a fantasy, but would-be miners are already dreaming up ways to drag resource-rich space rocks closer to home. Trouble is, that could threaten the web of satellites around Earth. Asteroids are not only stepping stones for cosmic colonisation, but may contain metals like gold, platinum, iron and titanium, plus life-sustaining hydrogen and oxygen, and rocket-fuelling ammonia. Space age forty-niners can either try to work an asteroid where it is, or tug it into a more convenient orbit. NASA chose the second option for its Asteroid Redirect Mission, which aims to pluck a boulder from an asteroid’s surface and relocate it to a stable orbit around the moon. But an asteroid’s gravity is so weak that it’s not hard for surface particles to escape into space. Now a new model warns that debris shed by such transplanted rocks could intrude where many defence and communication satellites live – in geosynchronous orbit. According to Casey Handmer of the California Institute of Technology in Pasadena and Javier Roa of the Technical University of Madrid in Spain, 5 per cent of the escaped debris will end up in regions traversed by satellites. Over 10 years, it would cross geosynchronous orbit 63 times on average. A satellite in the wrong spot at the wrong time will suffer a damaging high-speed collision with that dust. The study also looks at the “catastrophic disruption” of an asteroid 5 metres across or bigger. Its total break-up into a pile of rubble would increase the risk to satellites by more than 30 per cent (arxiv.org/abs/1505.03800). That may not have immediate consequences. But as Earth orbits get more crowded with spent rocket stages and satellites, we will have to worry about cascades of collisions like the one depicted in the movie Gravity. Handmer and Roa want to point out the problem now so that we can find a solution before any satellites get dinged. “It is possible to quantify and manage the risk,” says Handmer. “A few basic precautions will prevent harm due to stray asteroid material.”

#### Space debris causes war- the US would misinterpret debris as a deliberate attack on its satellites

Beauchamp, 14 -- senior correspondent at Vox

[Zack, "How space trash could start a nuclear war," Vox, 4-21-14, https://www.vox.com/2014/4/21/5625246/space-war-china-north-korea-iran, accessed 7-13-21]

Panic in the skies! "The threats to U.S. space assets are significant and growing," according to a new report from the Council on Foreign Relations, which warns that there's a real chance of breaching conflict's final frontier.

This isn't idle fearmongering. The report makes a not-crazy case that efforts by China and other powers to limit America's total military dominance of space could accidentally destroy an American satellite, inadvertently convincing the US that war was coming and prompting retaliation on Earth. Its author, Micah Zenko, has made a name for himself in report-after-report downplaying the threat to the United States from China, terrorists, and, really, most things. So that fact that Zenko is this concerned about space should tell you something.

The basic dynamic is simple: the US controls space and its opponents don't. Of all the money spent on space by all countries combined, America spends 75 percent. It also owns 43 percent of all satellites. It uses that huge satellite network for, among other things, all sorts of military spying and coordination purposes. At one point, the Bush Administration mused openly about putting actual weapons pointed at Earth in space.

Countries who might hypothetically fight a war with the United States hate that space dominance, which gives the US a real strategic edge. Some have developed anti-satellite (ASAT) weapons, usually missiles that shoot into space. Zenko thinks ASAT weapons are really dangerous, particularly those owned by China, North Korea, and Iran. The threat comes from both deliberate use and the risk of a misunderstanding that could spiral out of control.

The "greatest threat to international space security," in Zenko's view, is a Chinese accident. China is seriously investing in ASAT weaponry, which it has tested by blowing up old satellites in low earth orbit, one of the places place where satellites live. These explosions create debris, which can travel tens of thousands of miles per hour and shred up other satellites and spacecraft.

If debris from a Chinese test destroys a US military satellite, the US could mistake it as a preemptive strike against its space capabilities — some of which are designed to detect nuclear missile launches. If the US thinks China is trying to take out its ability to detect a nuclear launch, things could get very bad, very quickly.

Accidents aren't the only concern. Zenko also worries about intentional space attacks, either during peacetime or a crisis. Here, Iran and North Korea are probably bigger threats, though their ASAT capabilities are far from proven.

North Korea has a pattern of crazy military moves designed to extort concessions from South Korea and the West; it could extend that behavior to space. Iran, according to Zenko, "already views space as a legitimate arena in which to contest US military power." He worries that Iran might fire missiles into space "during a major crisis, especially if it believes war is imminent — an assessment that could have self-fulfilling consequences."

But even if none of these scenarios for war are likely, preparing and testing for space war is intrinsically dangerous. Space debris don't discriminate between military and non-military satellites; the more ASAT testing there is, the more hazardous space travel becomes for everyone. As satellites become increasingly important to the economy and scientific research, even preparation for space war becomes deadly.