# R3 – TOC – 1AC vs Strake JS

## 1AR

#### Resolved indicates a policy action.

Parcher 01. [Jeff. 2/26/01. “Re: Jeff P--Is the resolution a question?” [https://web.archive.org/web/20050122044927/http://www.ndtceda.com/archives/200102/0790.html](https://web.archive.org/web/20050122044927/http:/www.ndtceda.com/archives/200102/0790.html)] Justin

(1) Pardon me if I turn to a source besides Bill. American Heritage Dictionary: Resolve: 1. To make a firm decision about. 2. To decide or express by formal vote. 3. To separate something into constiutent parts See Syns at \*analyze\* (emphasis in orginal) 4. Find a solution to. See Syns at \*Solve\* (emphasis in original) 5. To dispel: resolve a doubt. - n 1. Frimness of purpose; resolution. 2. A determination or decision. (2) The very nature of the word "resolution" makes it a question. American Heritage: A course of action determined or decided on. A formal statemnt of a deciion, as by a legislature. (3) The resolution is obviously a question. Any other conclusion is utterly inconcievable. Why? Context. The debate community empowers a topic committee to write a topic for ALTERNATE side debating. The committee is not a random group of people coming together to "reserve" themselves about some issue. There is context - they are empowered by a community to do something. In their deliberations, the topic community attempts to craft a resolution which can be ANSWERED in either direction. They focus on issues like ground and fairness because they know the resolution will serve as the basis for debate which will be resolved by determining the policy desireablility of that resolution. That's not only what they do, but it's what we REQUIRE them to do. We don't just send the topic committtee somewhere to adopt their own group resolution. It's not the end point of a resolution adopted by a body - it's the prelimanary wording of a resolution sent to others to be answered or decided upon. (4) Further context: the word resolved is used to emphasis the fact that it's policy debate. Resolved comes from the adoption of resolutions by legislative bodies. A resolution is either adopted or it is not. It's a question before a legislative body. Should this statement be adopted or not.

#### Interpretation: The negative must concede the affirmative framework if the affirmative framework has an impact calc section that allows for negative ground and if it’sUTIL

#### Violation:

#### Standards:

#### 1 - Planks solve their offense – prevents any auto affirm frameworks and allows for clash on the advantage through the impact calc section.

#### 2 - Inclusion – util forces people to think about their others within their communities and perspective they have in the world compared to other groups – spills over to worldview.

#### 3 - Time skew - Winning the negative framework moots 6 minutes of 1AC offense and forces a 1AR restart against a 7 min 1NC – that outweighson quantifiability and reversibility – I can’t get back time lost and it’s the only way to measure abuse.

## 2

#### Mindset alts are a voter.

#### Ground – it eliminates all policy alt link turns. That means the alt is always guaranteed absolute solvency. Mindset shift and rejection alts are unrealistic. Policy makers and people don’t just wish away the harms of an action. Rather, they pursue courses of action that could solve for harms. Non-policy alts are thus uniquely bad because the don’t actually solve for the K’s impacts. -– fairness is a voter – constitutive to the judge deciding the better debater. Drop them – to deter future abuse.

#### Fairness – every arg concedes its authority.

#### DTD – The 1AR time disadvantage and to deter future abuse.

#### CI – reasonability is arbitrary.

## 3

#### Interp: Debaters must have recordings of their speeches and send them if requested

#### Violation: They didn't record, that was cx

#### 1] Clipping- debaters can cheat and get away with clipping cards, hearing clipping in real time is near impossible unless its egregious since no one is following along the doc unconditionally.

## 1AC

### 1AC – FWK

#### The standard is maximizing expected wellbeing.

#### Prefer:

#### 1 - Pleasure and pain are intrinsic value and disvalue – everything else regresses – robust neuroscience.

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**Pleasure** is not only one of the three primary reward functions but it also **defines reward.** As homeostasis explains the functions of only a limited number of rewards, the principal reason why particular stimuli, objects, events, situations, and activities are rewarding may be due to pleasure. This applies first of all to sex and to the primary homeostatic rewards of food and liquid and extends to money, taste, beauty, social encounters and nonmaterial, internally set, and intrinsic rewards. Pleasure, as the primary effect of rewards, drives the prime reward functions of learning, approach behavior, and decision making and provides the **basis for hedonic theories** of reward function. We are attracted by most rewards and exert intense efforts to obtain them, just because they are enjoyable [10].

Pleasure is a passive reaction that derives from the experience or prediction of reward and may lead to a long-lasting state of happiness. The word happiness is difficult to define. In fact, just obtaining physical pleasure may not be enough. One key to happiness involves a network of good friends. However, it is not obvious how the higher forms of satisfaction and pleasure are related to an ice cream cone, or to your team winning a sporting event. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure [14].

Pleasure as a hallmark of reward is sufficient for defining a reward, but it may not be necessary. A reward may generate positive learning and approach behavior simply because it contains substances that are essential for body function. When we are hungry, we may eat bad and unpleasant meals. A monkey who receives hundreds of small drops of water every morning in the laboratory is unlikely to feel a rush of pleasure every time it gets the 0.1 ml. Nevertheless, with these precautions in mind, we may define any stimulus, object, event, activity, or situation that has the potential to produce pleasure as a reward. In the context of reward deficiency or for disorders of addiction, homeostasis pursues pharmacological treatments: drugs to treat drug addiction, obesity, and other compulsive behaviors. The theory of allostasis suggests broader approaches - such as re-expanding the range of possible pleasures and providing opportunities to expend effort in their pursuit. [15]. It is noteworthy, the first animal studies eliciting approach behavior by electrical brain stimulation interpreted their findings as a discovery of the brain’s pleasure centers [16] which were later partly associated with midbrain dopamine neurons [17–19] despite the notorious difficulties of identifying emotions in animals.

Evolutionary theories of pleasure: The love connection BO:D

Charles Darwin and other biological scientists that have examined the biological evolution and its basic principles found various mechanisms that steer behavior and biological development. Besides their theory on natural selection, it was particularly the sexual selection process that gained significance in the latter context over the last century, especially when it comes to the question of what makes us “what we are,” i.e., human. However, the capacity to sexually select and evolve is not at all a human accomplishment alone or a sign of our uniqueness; yet, we humans, as it seems, are ingenious in fooling ourselves and others–when we are in love or desperately search for it.

It is well established that modern biological theory conjectures that **organisms are** the **result of evolutionary competition.** In fact, Richard Dawkins stresses gene survival and propagation as the basic mechanism of life [20]. Only genes that lead to the fittest phenotype will make it. It is noteworthy that the phenotype is selected based on behavior that maximizes gene propagation. To do so, the phenotype must survive and generate offspring, and be better at it than its competitors. Thus, the ultimate, distal function of rewards is to increase evolutionary fitness by ensuring the survival of the organism and reproduction. It is agreed that learning, approach, economic decisions, and positive emotions are the proximal functions through which phenotypes obtain other necessary nutrients for survival, mating, and care for offspring.

Behavioral reward functions have evolved to help individuals to survive and propagate their genes. Apparently, people need to live well and long enough to reproduce. Most would agree that homo-sapiens do so by ingesting the substances that make their bodies function properly. For this reason, foods and drinks are rewards. Additional rewards, including those used for economic exchanges, ensure sufficient palatable food and drink supply. Mating and gene propagation is supported by powerful sexual attraction. Additional properties, like body form, augment the chance to mate and nourish and defend offspring and are therefore also rewards. Care for offspring until they can reproduce themselves helps gene propagation and is rewarding; otherwise, many believe mating is useless. According to David E Comings, as any small edge will ultimately result in evolutionary advantage [21], additional reward mechanisms like novelty seeking and exploration widen the spectrum of available rewards and thus enhance the chance for survival, reproduction, and ultimate gene propagation. These functions may help us to obtain the benefits of distant rewards that are determined by our own interests and not immediately available in the environment. Thus the distal reward function in gene propagation and evolutionary fitness defines the proximal reward functions that we see in everyday behavior. That is why foods, drinks, mates, and offspring are rewarding.

There have been theories linking pleasure as a required component of health benefits salutogenesis, (salugenesis). In essence, under these terms, pleasure is described as a state or feeling of happiness and satisfaction resulting from an experience that one enjoys. Regarding pleasure, it is a double-edged sword, on the one hand, it promotes positive feelings (like mindfulness) and even better cognition, possibly through the release of dopamine [22]. But on the other hand, pleasure simultaneously encourages addiction and other negative behaviors, i.e., motivational toxicity. It is a complex neurobiological phenomenon, relying on reward circuitry or limbic activity. It is important to realize that through the “Brain Reward Cascade” (BRC) endorphin and endogenous morphinergic mechanisms may play a role [23]. While natural rewards are essential for survival and appetitive motivation leading to beneficial biological behaviors like eating, sex, and reproduction, crucial social interactions seem to further facilitate the positive effects exerted by pleasurable experiences. Indeed, experimentation with addictive drugs is capable of directly acting on reward pathways and causing deterioration of these systems promoting hypodopaminergia [24]. Most would agree that pleasurable activities can stimulate personal growth and may help to induce healthy behavioral changes, including stress management [25]. The work of Esch and Stefano [26] concerning the link between compassion and love implicate the brain reward system, and pleasure induction suggests that social contact in general, i.e., love, attachment, and compassion, can be highly effective in stress reduction, survival, and overall health.

Understanding the role of neurotransmission and pleasurable states both positive and negative have been adequately studied over many decades [26–37], but comparative anatomical and neurobiological function between animals and homo sapiens appear to be required and seem to be in an infancy stage.

Finding happiness is different between apes and humans

As stated earlier in this expert opinion one key to happiness involves a network of good friends [38]. However, it is not entirely clear exactly how the higher forms of satisfaction and pleasure are related to a sugar rush, winning a sports event or even sky diving, all of which augment dopamine release at the reward brain site. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure.

Remarkably, there are pathways for ordinary liking and pleasure, which are limited in scope as described above in this commentary. However, there are **many brain regions**, often termed hot and cold spots, that significantly **modulate** (increase or decrease) our **pleasure or** even produce **the opposite** of pleasure— that is disgust and fear [39]. One specific region of the nucleus accumbens is organized like a computer keyboard, with particular stimulus triggers in rows— producing an increase and decrease of pleasure and disgust. Moreover, the cortex has unique roles in the cognitive evaluation of our feelings of pleasure [40]. Importantly, the interplay of these multiple triggers and the higher brain centers in the prefrontal cortex are very intricate and are just being uncovered.

Desire and reward centers

It is surprising that many different sources of pleasure activate the same circuits between the mesocorticolimbic regions (Figure 1). Reward and desire are two aspects pleasure induction and have a very widespread, large circuit. Some part of this circuit distinguishes between desire and dread. The so-called pleasure circuitry called “REWARD” involves a well-known dopamine pathway in the mesolimbic system that can influence both pleasure and motivation.

In simplest terms, the well-established mesolimbic system is a dopamine circuit for reward. It starts in the ventral tegmental area (VTA) of the midbrain and travels to the nucleus accumbens (Figure 2). It is the cornerstone target to all addictions. The VTA is encompassed with neurons using glutamate, GABA, and dopamine. The nucleus accumbens (NAc) is located within the ventral striatum and is divided into two sub-regions—the motor and limbic regions associated with its core and shell, respectively. The NAc has spiny neurons that receive dopamine from the VTA and glutamate (a dopamine driver) from the hippocampus, amygdala and medial prefrontal cortex. Subsequently, the NAc projects GABA signals to an area termed the ventral pallidum (VP). The region is a relay station in the limbic loop of the basal ganglia, critical for motivation, behavior, emotions and the “Feel Good” response. This defined system of the brain is involved in all addictions –substance, and non –substance related. In 1995, our laboratory coined the term “Reward Deficiency Syndrome” (RDS) to describe genetic and epigenetic induced hypodopaminergia in the “Brain Reward Cascade” that contribute to addiction and compulsive behaviors [3,6,41].

Furthermore, ordinary “liking” of something, or pure pleasure, is represented by small regions mainly in the limbic system (old reptilian part of the brain). These may be part of larger neural circuits. In Latin, hedus is the term for “sweet”; and in Greek, hodone is the term for “pleasure.” Thus, the word Hedonic is now referring to various subcomponents of pleasure: some associated with purely sensory and others with more complex emotions involving morals, aesthetics, and social interactions. The capacity to have pleasure is part of being healthy and may even extend life, especially if linked to optimism as a dopaminergic response [42].

Psychiatric illness often includes symptoms of an abnormal inability to experience pleasure, referred to as anhedonia. A negative feeling state is called dysphoria, which can consist of many emotions such as pain, depression, anxiety, fear, and disgust. Previously many scientists used animal research to uncover the complex mechanisms of pleasure, liking, motivation and even emotions like panic and fear, as discussed above [43]. However, as a significant amount of related research about the specific brain regions of pleasure/reward circuitry has been derived from invasive studies of animals, these cannot be directly compared with subjective states experienced by humans.

In an attempt to resolve the controversy regarding the causal contributions of mesolimbic dopamine systems to reward, we have previously evaluated the three-main competing explanatory categories: “liking,” “learning,” and “wanting” [3]. That is, dopamine may mediate (a) liking: the hedonic impact of reward, (b) learning: learned predictions about rewarding effects, or (c) wanting: the pursuit of rewards by attributing incentive salience to reward-related stimuli [44]. We have evaluated these hypotheses, especially as they relate to the RDS, and we find that the incentive salience or “wanting” hypothesis of dopaminergic functioning is supported by a majority of the scientific evidence. Various neuroimaging studies have shown that anticipated behaviors such as sex and gaming, delicious foods and drugs of abuse all affect brain regions associated with reward networks, and may not be unidirectional. Drugs of abuse enhance dopamine signaling which sensitizes mesolimbic brain mechanisms that apparently evolved explicitly to attribute incentive salience to various rewards [45].

Addictive substances are voluntarily self-administered, and they enhance (directly or indirectly) dopaminergic synaptic function in the NAc. This activation of the brain reward networks (producing the ecstatic “high” that users seek). Although these circuits were initially thought to encode a set point of hedonic tone, it is now being considered to be far more complicated in function, also encoding attention, reward expectancy, disconfirmation of reward expectancy, and incentive motivation [46]. The argument about addiction as a disease may be confused with a predisposition to substance and nonsubstance rewards relative to the extreme effect of drugs of abuse on brain neurochemistry. The former sets up an individual to be at high risk through both genetic polymorphisms in reward genes as well as harmful epigenetic insult. Some Psychologists, even with all the data, still infer that addiction is not a disease [47]. Elevated stress levels, together with polymorphisms (genetic variations) of various dopaminergic genes and the genes related to other neurotransmitters (and their genetic variants), and may have an additive effect on vulnerability to various addictions [48]. In this regard, Vanyukov, et al. [48] suggested based on review that whereas the gateway hypothesis does not specify mechanistic connections between “stages,” and does not extend to the risks for addictions the concept of common liability to addictions may be more parsimonious. The latter theory is grounded in genetic theory and supported by data identifying common sources of variation in the risk for specific addictions (e.g., RDS). This commonality has identifiable neurobiological substrate and plausible evolutionary explanations.

Over many years the controversy of dopamine involvement in especially “pleasure” has led to confusion concerning separating motivation from actual pleasure (wanting versus liking) [49]. We take the position that animal studies cannot provide real clinical information as described by self-reports in humans. As mentioned earlier and in the abstract, on November 23rd, 2017, evidence for our concerns was discovered [50]

In essence, although nonhuman primate brains are similar to our own, the disparity between other primates and those of human cognitive abilities tells us that surface similarity is not the whole story. Sousa et al. [50] small case found various differentially expressed genes, to associate with pleasure related systems. Furthermore, the dopaminergic interneurons located in the human neocortex were absent from the neocortex of nonhuman African apes. Such differences in neuronal transcriptional programs may underlie a variety of neurodevelopmental disorders.

In simpler terms, the system controls the production of dopamine, a chemical messenger that plays a significant role in pleasure and rewards. The senior author, Dr. Nenad Sestan from Yale, stated: “Humans have evolved a dopamine system that is different than the one in chimpanzees.” This may explain why the behavior of humans is so unique from that of non-human primates, even though our brains are so surprisingly similar, Sestan said: “It might also shed light on why people are vulnerable to mental disorders such as autism (possibly even addiction).” Remarkably, this research finding emerged from an extensive, multicenter collaboration to compare the brains across several species. These researchers examined 247 specimens of neural tissue from six humans, five chimpanzees, and five macaque monkeys. Moreover, these investigators analyzed which genes were turned on or off in 16 regions of the brain. While the differences among species were subtle, **there was** a **remarkable contrast in** the **neocortices**, specifically in an area of the brain that is much more developed in humans than in chimpanzees. In fact, these researchers found that a gene called tyrosine hydroxylase (TH) for the enzyme, responsible for the production of dopamine, was expressed in the neocortex of humans, but not chimpanzees. As discussed earlier, dopamine is best known for its essential role within the brain’s reward system; the very system that responds to everything from sex, to gambling, to food, and to addictive drugs. However, dopamine also assists in regulating emotional responses, memory, and movement. Notably, abnormal dopamine levels have been linked to disorders including Parkinson’s, schizophrenia and spectrum disorders such as autism and addiction or RDS.

Nora Volkow, the director of NIDA, pointed out that one alluring possibility is that the neurotransmitter dopamine plays a substantial role in humans’ ability to pursue various rewards that are perhaps months or even years away in the future. This same idea has been suggested by Dr. Robert Sapolsky, a professor of biology and neurology at Stanford University. Dr. Sapolsky cited evidence that dopamine levels rise dramatically in humans when we anticipate potential rewards that are uncertain and even far off in our futures, such as retirement or even the possible alterlife. This may explain what often motivates people to work for things that have no apparent short-term benefit [51]. In similar work, Volkow and Bale [52] proposed a model in which dopamine can favor NOW processes through phasic signaling in reward circuits or LATER processes through tonic signaling in control circuits. Specifically, they suggest that through its modulation of the orbitofrontal cortex, which processes salience attribution, dopamine also enables shilting from NOW to LATER, while its modulation of the insula, which processes interoceptive information, influences the probability of selecting NOW versus LATER actions based on an individual’s physiological state. This hypothesis further supports the concept that disruptions along these circuits contribute to diverse pathologies, including obesity and addiction or RDS.

#### 2 - Extinction comes first.

**Pummer 15**, Theron. [Theron is a Senior Lecturer in [Philosophy @University of St Andrews](https://www.st-andrews.ac.uk/philosophy/) and Director of the [Centre for Ethics, Philosophy and Public Affairs](https://ceppa.wp.st-andrews.ac.uk/).] “Moral Agreement on Saving the World.” Practical Ethics, 18 May 2015, <https://bioethics.georgetown.edu/2015/05/moral-agreement-on-saving-the-world/> //JQ

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](http://www.existential-risk.org/) is [discussed elsewhere](http://www.givewell.org/labs/causes/global-catastrophic-risks).  My claim here is only that we – whether we’re [consequentialists, deontologists, or virtue ethicists](http://www.amazon.co.uk/Three-Methods-Ethics-Debates-Philosophy/dp/0631194355) – 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](http://www.nickbostrom.com/astronomical/waste.pdf), 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](https://books.google.co.uk/books?id=kvpby7HtAe0C&printsec=frontcover&dq=john+rawls+a+theory+of+justice&hl=en&sa=X&ei=vg1XVdK1E4qu7Ab764CgDw&ved=0CCEQ6AEwAA#v=onepage&q=john%20rawls%20a%20theory%20of%20justice&f=false), “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](http://plato.stanford.edu/entries/well-being/).  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](http://plato.stanford.edu/entries/plato-ethics/), 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](http://www.amazon.co.uk/dp/0521707684/ref=pd_lpo_sbs_dp_ss_1?pf_rd_p=569136327&pf_rd_s=lpo-top-stripe&pf_rd_t=201&pf_rd_i=052143971X&pf_rd_m=A3P5ROKL5A1OLE&pf_rd_r=0PF67NT5WXXFCZ5ZN1EW)).  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](http://ukcatalogue.oup.com/product/9780199982509.do) (quick podcast version [available here](http://philosophybites.com/2013/07/samuel-scheffler-on-the-afterlife.html)) 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](http://wiki.lesswrong.com/wiki/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](https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxuYmVja3N0ZWFkfGd4OjExNDBjZTcwNjMxMzRmZGE)).

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](http://www.amirrorclear.net/academic/ideas/negative-utilitarianism/) (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](http://www.amazon.co.uk/The-Better-Angels-Our-Nature/dp/0141034645).

#### Death is bad and outweighs –

#### A - agents can’t act if they fear for their bodily security which constrains every ethical theory.

#### B - it destroys the subject itself – kills any ability to achieve value in ethics since life is a prerequisite which means it’s a side constraint since we can’t reach the end goal of ethics without life.

#### C - Structural violence - death causes suffering because people can’t get access to resources and basic necessities.

#### 3 - Actor spec—governments must use util because they don’t have intentions and are constantly dealing with tradeoffs—outweighs since different agents have different obligations—takes out calc indicts since they are empirically denied.

#### 4 - Only consequentialism explains degrees of wrongness—if I break a promise to meet up for lunch, that is not as bad as breaking a promise to take a dying person to the hospital. Only the consequences of breaking the promise explain why the second one is much worse than the first which OW on intuition.

#### Outweighs –

#### A – Parsimony - metaphysics relies on long chains of questionable claims that make conclusions less likely.

#### B – Hijacks - intuitions are inevitable since even every framework must take some unjustified assumption as a starting point.

### 1AC - Advantage

#### Plan - The appropriation of outer space by private entities in the People’s Republic of China is unjust.

#### The

Lexico. Oxford Dictionary. The. <https://www.lexico.com/en/definition/the>

Used to refer to a person, place, or thing that is unique.

#### Appropriation of outer space

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

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

#### By

Lexico. Oxford Dictionary. By. https://www.lexico.com/en/definition/by

Identifying the agent performing an action.

#### Private entity

**Cornell Law** https://www.law.cornell.edu/definitions/uscode.php?width=840&height=800&iframe=true&def\_id=6-USC-625312480-168358316&term\_occur=999&term\_src=title:6:chapter:6:subchapter:I:section:1501

private entity (A) In general Except as otherwise provided in this paragraph, the term “private entity” means any person or private group, organization, proprietorship, partnership, trust, cooperative, corporation, or other commercial or nonprofit entity, including an officer, employee, or agent thereof.

#### Outer space

Lexico. Oxford Dictionary. Outer Space. https://www.lexico.com/en/definition/outer\_space

The physical universe beyond the earth's atmosphere.

#### Is

**Merriam Webster**. Is. https://www.merriam-webster.com/dictionary/is

present tense third-person singular of [BE](https://www.merriam-webster.com/dictionary/be)

#### Unjust

**Oxford Dictionary** https://languages.oup.com/google-dictionary-en/unjust

not based on or behaving according to what is morally right and fair.

#### Advantage 1 – Dominance

#### The US has overlooked private sector capabilities in China – opens the floodgates for Chinese space development.

**Goswami 19**, Namrata. [She was subject matter expert in international affairs with the Futures Laboratory, Alabama, U.S., and guest lecturer, India Today Class, Emory University. After earning her Ph.D. in international relations from Jawaharlal Nehru University, New Delhi, she worked as research fellow at the Institute for Defence Studies and Analyses, New Delhi. She has been a visiting fellow at Peace Research Institute, Oslo, Norway; La Trobe University, Melbourne, Australia; and University of Heidelberg, Germany. In 2012-2013, she was a Jennings-Randolph Senior Fellow at the United States Institute of Peace, Washington D.C. and was awarded a Fulbright-Nehru Senior Fellowship. In 2016-2017, she was awarded the MINERVA grant awarded by Office of the U.S. Secretary of Defense to study great power competition in outer space.] “Misplaced Confidence? the US Private Space Sector vs. China.” – The Diplomat, For The Diplomat, 6 Apr. 2019, https://thediplomat.com/2019/04/misplaced-confidence-the-us-private-space-sector-vs-china/.

When China landed on the far side of the lunar surface early this year, Americans tended to dismiss the achievement. Either they said some version of “been there, done that, 50 years ago,” or commented that it was nothing to be concerned about. China would have to contend with not the U.S. government sector in space led by NASA, but the vibrant and successful U.S. private space sector led by Jeff Bezos’s Blue Origin and Elon Musk’s SpaceX. Certainly, the U.S. private space sector today has a significant advantage. But China is hot on their heels — encouraging their own billionaires and private space companies (Onespace, Landspace, iSpace, Linkspace) to enter the sector. To enable this, President Xi Jinping and the Chinese state have created a supportive environment. While the U.S. private space program has a 19 year head-start with the founding of Blue Origin in 2000, the Chinese private space sector that took off around 2015 drew an investment of $2 billion in 2018 alone [China’s state funded space program takes about $6 billion annually] and is growing rapidly. In 2018, iSpace and Onespace began sub-orbital testing with support from the Chinese state. While Onespace’s attempt to launch its OS-M1 four-stage rocket, the Chongqing Liangjiang Star, to place a satellite in orbit failed on March 27, such failures are neither surprising nor new in the private space launch industry. In 2006, Elon Musk’s SpaceX failed in its first launch of the Falcon 1. It failed again to reach orbit in its second and third attempts. Zach Dunn, Senior Vice President of SpaceX production and launch recalled that period: “[W]e all knew that the stakes were incredibly high…it was tense. There was a lot of pressure.” SpaceX finally succeeded in its fourth attempt and the rest is, of course, history. The critical point of note with regard to the Chinese private space industry is how fast it is developing. The same Onespace, while failing in its first attempt to place a satellite into orbit, succeeded in its next two sub-orbital launches with its OS-X rockets in 2018. CEO, Shu Chang, a graduate of Beihang University [the same university that conducted the 365 days simulation of living in a Moon lab], indicated that his company will conduct several launches of the OS-M launch vehicle this year to learn and enhance technological successes. Shu indicated that: DIPLOMAT BRIEF WEEKLY NEWSLETTER N Get briefed on the story of the week, and developing stories to watch across the Asia-Pacific. GET THE NEWSLETTER What we’re focusing on now is the OS-M launch vehicle, which is around 20 tons. Its third and fourth stage engine were successfully tested in late October [2018]. Next, we will conduct several tests for OS-M, such as the structure static test, a comprehensive electrical system test, an attitude control test, and a propulsion system vibration test, etc. Enjoying this article? Click here to subscribe for full access. Just $5 a month. Over the past three years, nearly 60 private space startups have entered the private launch industry, supported by the Chinese state. Spokesperson of the China National Space Administration (CNSA), Li Guoping, specified: The output value of the satellite application sector makes up over 80 percent of the whole satellite industry chain. So we encourage private companies and social capital to invest in the application of satellite communication, remote sensing and navigation…When we make a top-level plan for China’s aerospace development, we will consider the development of commercial space activity. The government will open space programs that can be carried out in a commercial way, and buy services from commercial companies… Since 2014, Xi has urged China’s private space sector to emerge as the leader in the “implementation of civil-military integration strategy.” Xi’s policy guidance has been followed up by the PLA, which opened its Jiuquan Satellite Launch Center (China’s primary launch facility) in the northwestern Gobi Desert for private rocket launches. This civil-military integration has been identified as a priority by Xi for China’s overall national strategy with regard to outer space. The planning chief of the Jiuquan Satellite Launch Center, Jia Lide, stated that “favorable policies and targeted measures have been created for the benefit of private space enterprises.” The latter point is particularly important. The U.S. private sector does very well with strong government support, through programs like Commercial Orbital Transportation System (COTS), Commercial Crew Program, and now the Commercial Lunar Payload Service (CLPS). Most U.S. space industries still rely to a significant degree on the government market either to get started or to stay solvent. It is also cost-effective for the U.S. taxpayer to invest in private space companies. NASA’s internal estimates are that if it had attempted to develop SpaceX Falcon 9 using the same Cost-Plus contract it is using on its Space Launch System (SLS), it would have cost the taxpayer significantly more. Similar differences have been estimated for commercial propellant depots, Moon Bases, and use of Asteroid resources. But the U.S. commercial sector is motivated by a small number of billionaires with an ideological drive for space. Any or all of them could face individual professional, financial or personal troubles. There are reports that Elon Musk’s security clearance, which enables him to contract with the U.S. government, is under review, after an incident in which he smoked marijiana while recording the podcast and YouTube show “Joe Rogan Experience” in September 2018. He is also facing legal problems with the U.S. Securities and Exchange Commission over Tesla tweets. Jeff Bezos, founder of Blue Origin, is facing personal troubles of his own, to include his allegations of blackmail by the National Enquirer, and the alleged involvement of Saudi Arabia in hacking his private phone. Amid this drama, Chinese Premier Li Keqiang offered Musk a “green card” if he decides to come work in China, during his meeting with Musk in Beijing in January 2019. History will remind us that Qian Xuesen, the man solely responsible for the founding of China’s space and rocket program, ironically played an instrumental role in the founding of the Jet Propulsion Laboratory (JPL) for NASA in the 1930s and 1940s. Qian left China in 1935 on a Boxer Rebellion Indemnity Scholarship, completed his education in MIT and CALTECH. During World War II, Xuesen served in the United States Government’s Science Advisory Board, had the rank of Lieutenant Colonel in the U.S. Army Airforce, and was sent to Germany where he debriefed German scientists, including Werner von Braun. Von Braum subsequently developed the Saturn V for the United State, the rocket that took humanity to the Moon in 1969. Xuesen’s mentor, Theodore Von Kármán wrote of him, “At the age of 36, he was an undisputed genius whose work was providing an enormous impetus to advances in high-speed aerodynamics and jet propulsion.” In a twist of fate, Xuesen’s application for U.S. citizenship was denied in the 1950s, and he was accused of being a communist. None of those allegations were ever proved. In 1955, he was deported to China. Qian went on to found China’s ballistic missile program. While drama swirled around Musk and Bezos in the United States, China funded and established the world‘s first space based solar power plant experiment in Chongqing this year and has announced several upcoming robotic probes to the Moon, to include both poles and to establish a lunar base by 2036. Deputy Head of the Chongqing Collaborative Innovation Research Institute for Civil-Military Integration, Xe Gengxi, indicated about this experiment: We plan to launch four to six tethered balloons from the testing base and connect them with each other to set up a network at an altitude of around 1,000 meters. These balloons will collect sunlight and convert solar energy to microwave before beaming it back to Earth. Receiving stations on the ground will convert such microwaves to electricity and distribute it to a grid. In contrast, the United States has no national program to develop major space industrial architecture such as a Solar Power Satellite, or lunar and asteroid mining. The result of this lack of support is clear: Without the U.S. government as an early market, it has left its start-ups to flounder, with two asteroid firms, Planetary Resources Incorporated (PRI) and Deep Space Industries (DSI) being bought out because of an inability to secure funds, and others, like MoonExpress, having to accept funds from the PRC’s TENCENT holdings, famous for starting China’s popular messaging app, WeChat. Although there have been, over the past decade, a number of Space Solar Power start-ups (Solaren, SolarHigh, Space Island Group, Planetary Power, SpaceEnergy), without proactive government support to assist in the regulatory environment, provide incentives, tax credits, or reduce the market risk, none have been able to carry their ideas forward. Enjoying this article? Click here to subscribe for full access. Just $5 a month. The complacent attitude by the U.S. government space sector towards China’s investment in outer space puts the U.S. commercial space sector in a weaker position as research funds required for critical space projects are hard to find. This lack of strategic perspective and an inability to take seriously China’s stated ambitions of permanent presence in outer space and to utilize space-based resources have amounted to a lack of foresight and vision. Although U.S. space thinkers like Paul Spudis, Robert Zubrin, and others have offered compelling ideas for lunar industrialization, such strategic visions have yet to appear on any NASA roadmap. While the U.S. National Space Council’s March 26 meeting in Huntsville, AL recommended the lunar program focus on science and resource utilization, missing from the recommendations were specific space industrial production goals that will drive the U.S. government space sector, offer incentives to private space startups, and make it difficult for NASA to underperform. Chinese interest on the Moon is clear: The Moon offers significant economic and logistical gains. Certainly, U.S. Vice President Mike Pence’s direction to NASA to put humans back on the moon is a step in the right direction. But a fundamental question remains: Why go to the Moon again without a long-term industrial policy? Sending astronauts to the lunar surface is one thing; establishing a lunar facility to ignite new innovation and private enterprise is quite another. A similar complacent attitude in telecommunications has meant that now Huawei is the industry leader in 5G and is setting the standards across Europe, Asia and Africa, opening the door to a global police state. Is that what we want for the final frontier?

#### Surging commercial space industry in China ready to overcome US lead – manufacturing and international collaboration locks in national power.

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The rivalry between the US and China, whose space program has surged over the last two decades, is what most people mean when they refer to the 21st-century's space race. China is set to build a new space station later this year and will likely attempt to send its taikonauts to the moon before the decade ends. But these big-picture projects represent just one aspect of the country’s space ambitions. Increasingly, the focus is now on the commercial space industry as well. The nation's growing private space business is less focused on bringing prestige and glory to the nation and more concerned with reducing the cost of spaceflight, increasing its international influence—and making money.

“The state is really great at large, ambitious projects like going to the moon or developing a large reconnaissance satellite,” says Lincoln Hines, a Cornell University researcher who focuses on Chinese foreign policy. “But it’s not responsive to meeting market needs”—one big way to encourage rapid technological growth and innovation. “I think the government thinks its commercial space sector can be complementary to the state,” he says.

What are the market needs that Hines is referring to? Satellites, and rockets that can launch them into orbit. The space industry is undergoing a renaissance thanks to two big trends spurred by the commercial industry: we can make satellites for less money by making them smaller and using off-the-shelf hardware; and we can also make rockets for less money, by using less costly materials or reusing boosters after they’ve already flown (which SpaceX pioneered with its Falcon 9). These trends mean it is now cheaper to send stuff into space, and the services and data that satellites can offer have come down in price accordingly.

China has seen an opportunity. A [2017 report by Bank of America Merrill Lynch](https://www.cnbc.com/2017/10/31/the-space-industry-will-be-worth-nearly-3-trillion-in-30-years-bank-of-america-predicts.html) estimates that the space industry could be worth up to $2.7 trillion by 2030. Setting foot on the moon and establishing a lunar colony might be a statement of national power, but securing a share of such a highly lucrative business is perhaps even more important to the country’s future.

“In the future, there will be tens of thousands of satellites waiting to launch, which is a major opportunity for Galactic Energy” says Wu Yue, a company spokesperson.

The problem is, China has to make up decades’ worth of ground lost to the West.

How did China get here—and why?

Until recently, China’s space activity has been overwhelmingly dominated by two state-owned enterprises: the China Aerospace Science & Industry Corporation Limited (CASIC) and the China Aerospace Science and Technology Corporation (CASC). A few private space firms have been allowed to operate in the country for a while: for example, there’s the China Great Wall Industry Corporation Limited (in reality a subsidiary of CASC), which has provided commercial launches since it was established in 1980. But for the most part, China’s commercial space industry has been nonexistent. Satellites were expensive to build and launch, and they were too heavy and large for anything but the biggest rockets to actually deliver to orbit. The costs involved were too much for anything but national budgets to handle.

That all changed this past decade as the costs of making satellites and launching rockets plunged. In 2014, a year after Xi Jinping took over as the new leader of China, the Chinese government decided to treat civil space development as a key area of innovation, as it had already begun doing with AI and solar power. It issued a policy directive called [Document 60](http://www.cpppc.org/en/zy/994006.jhtml) that year to enable large private investment in companies interested in participating in the space industry.

“Xi’s goal was that if China has to become a critical player in technology, including in civil space and aerospace, it was critical to develop a space ecosystem that includes the private sector,” says Namrata Goswami, a geopolitics expert based in Montgomery, Alabama, who’s been studying China’s space program for many years. “He was taking a cue from the American private sector to encourage innovation from a talent pool that extended beyond state-funded organizations.”

As a result, there are now 78 commercial space companies operating in China, according to a[2019 report by the Institute for Defense Analyses](https://www.ida.org/-/media/feature/publications/e/ev/evaluation-of-chinas-commercial-space-sector/d-10873.ashx). More than half have been founded since 2014, and the vast majority focus on satellite manufacturing and launch services.

For example, Galactic Energy, founded in February 2018, is building its Ceres rocket to offer rapid launch service for single payloads, while its Pallas rocket is being built to deploy entire constellations. Rival company i-Space, formed in 2016, became the first commercial Chinese company to make it to space with its Hyperbola-1 in July 2019. It wants to pursue reusable first-stage boosters that can land vertically, like those from SpaceX. So does LinkSpace (founded in 2014), although it also hopes to use rockets to deliver packages from one terrestrial location to another.

Spacety, founded in 2016, wants to turn around customer orders to build and launch its small satellites in just six months. In December it launched a miniaturized version of a satellite that uses 2D radar images to build 3D reconstructions of terrestrial landscapes. Weeks later, it [released the first images taken by the satellite](https://spacenews.com/spacety-releases-first-sar-images/), Hisea-1, featuring three-meter resolution. Spacety wants to launch a constellation of these satellites to offer high-quality imaging at low cost.

To a large extent, China is following the same blueprint drawn up by the US: using government contracts and subsidies to give these companies a foot up. US firms like SpaceX benefited greatly from NASA contracts that paid out millions to build and test rockets and space vehicles for delivering cargo to the International Space Station. With that experience under its belt, SpaceX was able to attract more customers with greater confidence.

Venture capital is another tried-and-true route. The IDA report estimates that VC funding for Chinese space companies was up to $516 million in 2018—far shy of the $2.2 billion American companies raised, but nothing to scoff at for an industry that really only began seven years ago. At least 42 companies had no known government funding.

And much of the government support these companies do receive doesn’t have a federal origin, but a provincial one. “[These companies] are drawing high-tech development to these local communities,” says Hines. “And in return, they’re given more autonomy by the local government.” While most have headquarters in Beijing, many keep facilities in Shenzhen, Chongqing, and other areas that might draw talent from local universities.

There’s also one advantage specific to China: manufacturing. “What is the best country to trust for manufacturing needs?” asks James Zheng, the CEO of Spacety’s Luxembourg headquarters. “It’s China. It’s the manufacturing center of the world.” Zheng believes the country is in a better position than any other to take advantage of the space industry’s new need for mass production of satellites and rockets alike.

Making friends

The most critical strategic reason to encourage a private space sector is to create opportunities for international collaboration—particularly to attract customers wary of being seen to mix with the Chinese government. (US agencies and government contractors, for example, are barred from working with any groups the regime funds.) Document 60 and others issued by China’s National Development and Reform Commission were aimed not just at promoting technological innovation, but also at drawing in foreign investment and maximizing a customer base beyond Chinese borders.

“China realizes there are certain things they cannot get on their own,” says Frans von der Dunk, a space policy expert at the University of Nebraska–Lincoln. Chinese companies like LandSpace and MinoSpace have worked to accrue funding through foreign investment, escaping dependence on state subsidies. And by avoiding state funding, a company can also avoid an array of restrictions on what it can and can’t do (such as constraints on talking with the media). Foreign investment also makes it easier to compete on a global scale: you’re taking on clients around the world, launching from other countries, and bringing talent from outside China.

#### China’s private space industry is key to tighten the grip on mining of space resources – reinforces lead on REE extraction and space domination over the US.

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A slew of activities amongst China’s private and state-owned aerospace companies this year are a testament to China’s growing ambitions for economic and [military domination](https://www.defensenews.com/congress/2021/04/14/china-aims-to-weaponize-space-says-intel-community-report/) of space. On October 19, the Academy of Aerospace Solid Propulsion Technology (AASPT) – which belongs to the China Aerospace Science and Technology Corporation (CASC) – test fired “the [most powerful solid rocket motor](https://www.space.com/china-tests-giant-solid-fueled-rocket) with the largest thrust in the world so far.” The 500 tons of thrust is designed to propel the next iteration of China’s heavy-lift rockets, which would meet various demands for space missions like crewed Moon landings, deep space exploration, and off-world resource extraction.

Exploration of space-based natural resources are on the Chinese policy makers’ mind. The question is, what Joe Biden thinks?

In April of this year, China’s Shenzen [Origin Space](https://www.washingtontimes.com/news/2020/oct/1/china-determined-to-dominate-future-mining-with-or/) Technology Co. Ltd. [launched the NEO-1](https://origin.space/#/detail?id=27), the first commercial spacecraft dedicated to the mining of space resources – from asteroids to the lunar surface.

Falling costs of space launches and spacecraft technology alongside existing infrastructure provides a unique opportunity to explore extraterrestrial resource extraction. Current technologies are equipped to analyze and categorize asteroids within our solar system with a limited degree of certainty. One of the accompanying payloads to the NEO-1 was the Yuanwang-1, or “little hubble” satellite, which searches the stars for possible asteroid mining targets.

The NEO-1 launch marks another milestone in private satellite development, adding a new player to space based companies which include Japan’s [Astroscale](https://astroscale.com/space-debris_/" \t "_blank" \o "https://astroscale.com/space-debris_/). Private asteroid identification via the Sentinel Space Telescope was [supported by NASA until 2015](https://b612foundation.org/b612-official-statement-nasa-following-canceled-space-agreement-act/). As private investment in space grows, the end goal is to be capable of harvesting resources to bring to Earth.

According to Shenzen [Origin Space](https://www.washingtontimes.com/news/2020/oct/1/china-determined-to-dominate-future-mining-with-or/) Technology company website:

“Through the development and launch of the spacecraft, Origin Space is able to carry out low-Earth orbit space junk cleanup and prototype technology verification for space resource acquisition, and at the same time demonstrate future asteroid defense related technologies.” In the end, it will come down to progressively lowering the cost of launched unit of weight and booster rocket reliability – before fundamentally new engines may drive the launch costs even further down.

The April launch demonstrates that China is already succeeding while the West is spinning its wheels. The much touted Planetary Resources and Deep Space Industries (DSI) [DSI](https://www.forbes.com/investment-funds/dsi/) [+0.1%](https://www.forbes.com/investment-funds/dsi/)were [supposed to be](https://www.technologyreview.com/2019/06/26/134510/asteroid-mining-bubble-burst-history/) the vanguard of extra-terrestrial resource acquisition with major backers including Google’s [GOOG](https://www.forbes.com/companies/google) [+0.3%](https://www.forbes.com/companies/google)Larry Page. But both have since been acquired, the former by block chain company [ConsenSys](https://consensys.net/" \t "_blank" \o "https://consensys.net/) and the latter by [Bradford Space](https://www.bradford-space.com/), neither of which are prioritizing asteroid mining.

This is too bad, given that that supply chain crunches here on Earth – coupled with the global green energy transition – are spiking demand for strategic minerals that are increasingly hard to come by on our environmentally stressed planet. And here China currently [holds a monopoly](https://www.fpri.org/article/2021/06/americas-critical-strategic-vulnerability-rare-earth-elements/) on rare earth element (REE) extraction and processing to the tune of 90%. REE’s 17 minerals essential for modern computing and manufacturing technologies for everything from solar panels to semi-conductors.

Resource-hungry China also has major involvement in global critical mineral supply chains, which include cobalt, tungsten, and lithium. As [I’ve written before](https://www.forbes.com/sites/arielcohen/2021/06/02/chinas-journey-to-the-center-of-the-earth/?sh=673812a9131f), the Chinese hold of upstream and downstream markets is staggering. Possessing 30% of the global mined ore, 80% of the global processing facilities, and an ever increasing list of high dollar investments around the world, China boasts over $36 billion invested in mining projects in Africa alone.

Beijing’s space program clearly indicates that the Chinese would also like to tighten their grip on space-based resources as well. According to research, it is estimated that a small asteroid roughly 200 meters in length that is rich in platinum could be worth up to $300 million. Merrill Lynch predicts the space industry — including extraterrestrial mining industry – to value [$2.7 trillion](https://www.cnbc.com/2017/10/31/the-space-industry-will-be-worth-nearly-3-trillion-in-30-years-bank-of-america-predicts.html) in the next three decades. REEs are fairly common in the solar system, but to what degree remains unknown. The most sought after are M-type asteroids which are mostly metal and hundreds of cubic meters. While these are not the most common, the 27,115 Near Earth asteroids are bound to contain a few. This – and military applications – are no doubt a driving factor of China’s ever increasing space ambitions.

A new goldrush in space based resource extraction has sparked a new age of miners looking to find their fortunes. In reality, the industry cannot get off the ground without further innovation in deep space observation, on-board power, extraction processes, and logistical support in low earth and high earth orbit.

As Uberization of space looms closer, the prices of space launches are falling rapidly. Privately funded satellites like the NEO-1 or Sentinel are the first of many novel economic ventures deploying technologies essential to the viability of solar system mining projects. Private launches by [SpaceX](https://www.spacex.com/) and [Blue Origin](https://www.blueorigin.com/)will provide low cost satellite deployment for further testing craft and classification telescopes.

Right now, the cost to capture and process asteroids is far greater than traditional mining techniques. This is changing, but like in traditional mining and rare earths refining, China is far ahead of the U.S. in terms of industrial policy and new investments. China is cognizant of the riches in space, while the U.S. fails to support both their public and private space missions. The United States cannot afford to cede this industry – like it has so many others – to its peer competitors. If we do, the joke is on U.S., and it will not be funny.

#### Space competition is inevitable and will determine hegemonic power on Earth–it’s just a question of who wins the race – explains sustainability.

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**The strategic competition between the U.S. and China is fierce** even **in** **space** outside of the earth. What do the two countries compete for in space? What are their objectives and what strategic calculations did they start from? Will the space race between the two countries lead to competition over space hegemony? This is one of the most interesting issues for U.S.-China observers in recent days. The space race between the U.S. and China is not just a number fight. How many satellites and spaceships have been launched and how many space stations have been established are the questions that mattered in the past. These mattered for the convenience and benefit for mankind. It could also make possible for some of the curiosity about the universe to be solved. However, starting the 21st century, the space race between the U.S. and China has progressed into an intense, high-level strategic battle. **Whoever rules space rules the future** There is one reason why **the** two **countries' space strategy competition will inevitably lead to a hegemony competition**. This is **because they try to conquer the space order**. Conquering the space order is to define and establish the space order. **Those who dominate space will dominate almost all sectors of the future world, including economy, technology, environment, cyberspace, transportation and energy**. That's why the United States is considered as a hegemonic country on Earth today. **The U.S. is recognized as a hegemonic country because it establishes and leads the economic, financial, trade, political, and diplomatic order.** There are two areas in the world today where international order has not been established. One is virtual space, which is the cyber world. The other is the space. Since the international order of these two areas is closely correlated with each other, it is likely that the establishment of the order in these two areas will be pursued simultaneously. This means that cyber order cannot be discussed without discussing satellite issues. The Communist Party of China recognized this early on. At the 19th National Communist Party Congress in 2017, it expressed its justification for establishing space order. President Xi Jinping declared that China's diplomatic stage in the 21st century has expanded beyond the Earth into space and virtual space. It was the moment when China defined the concept of diplomatic space as the "universe" beyond the Earth. He then explained that the establishment of a system that can even manage the order of the universe and the virtual world eventually means the establishment of practical governance. Therefore, he justified that China's diplomatic horizon has no choice but to expand into space. Furthermore, he stressed that he is confident that the ideation of building such governance serves as the foundation for the community of common destiny for mankind which China pursues. In other words, he publicly urged China to have the capabilities and means to become a key country in building governance in these two areas. This led the Trump administration to spare no effort to develop space science and technology and space projects, which are the basis of space order. Since President George W. Bush, the maintenance work for supremacy in space has been carried out. President Obama also introduced a policy to encourage U.S. private companies to participate in space projects to expand the foundation for supremacy in space. It was President Trump who actualized all these. He was the one who legalized private companies' space development projects under the Space Policy Directive-I. He also thoroughly reflected his “America First” principle in the space business. For example, all the substances obtained in space, including minerals, were no longer defined as "common goods." He also promised that space activities by private companies in the United States would be free from restrictions such as the Outer Space Treaty and the 1979 resolution by the United Nations Committee on the Peaceful Uses of Outer Space. **Space and the moon were known as repositories of resources. As it became known that the resources that are scarce or will be depleted on Earth are very abundant outside the Earth in space, the space race has gotten intense. This is why the space race has been promoted on a geoeconomic level**. However, in order to secure these benefits of geoeconomic strategies, geopolitical strategies must be accompanied. In other words, military defenses should be backed up to protect the resource acquisition process. Fearing this, the United Nations Committee on the Peaceful Uses of Outer Space strictly regulates the military use of space. However, the fact that the logic of developing naval power to protect long-range foreign interests on Earth is reflected in the strategic thinking of securing space profits is the decisive factor that has driven the space race today. The repositories of resources and future energy sources There are three strategic benefits that drive the U.S.-China competition for supremacy in space. The first is the infinite resource in space. **There are endless resources buried in more than 10,000 asteroids orbiting the Earth.** **They are known to have an abundance of resources such as carbon, zinc, cobalt, platinum, gold, silver and titanium, in which platinum and titanium, for example, can be sold for $30,000 to $50,000 per kilogram.** Second, the **future energy source lies in space**. **Power supply using solar energy will be possible by establishing a space power plant that concentrates solar energy in the Earth-Moon area and transmitting it to Earth through laser beams. Here, the supplied solar power is known to be 35 to 70% more powerful than the solar energy on Earth. By 2100, 70 terawatts of energy will be needed, and it is expected that 332 terawatts can be supplied through the development of space solar power plants in a geostationary orbit. Third, the desire to dominate space for hegemony has established the space competition relationship between the U.S. and China. Although each started from different strategic interests, in the end, they have one common goal.** First of all, **China** wants to be free from the U.S. GPS system. This is because only through the freedom China can prevent its future weapons system from becoming vulnerable to U.S. control and restrictions. It **is planning to achieve its goal of establishing a so-called "Space Silk Road" by expanding China's "BeiDou" navigation system to the regions within One Belt One Road and the national satellite and communication systems. The U.S. also plans to spend $25 billion to develop GPS3 systems with stronger defense capabilities against Chinese space and cyberattacks, by 2025.** **The competition between the U.S. and China to establish a space station in order to secure the benefits from space strategies is inevitable.** This is because a space station is the foundation for establishing space order. As the space station has the purpose of protecting and defending from enemies**, militarization is inevitable in the process. It is clear that the outcome will lead to a space arms race. This is why the competition over supremacy in space between the U.S. and China has the aspects of the New Cold War outside the Earth.** Space is a blue ocean. It is a world without order. Preemption is therefore important. In order to prepare space order and accompanying laws, norms, and systems, the U.S. and China have been engaged in a fierce battle through space projects. This is because **space is the decisive factor in the operation of energy, resources, environment, communication, and advanced military weapons systems in the future. Space is no longer a dream world.** Of course, it takes a lot of time for these strategic benefits to become a reality. However, the Fourth Industrial Revolution and the development of AI (Artificial Intelligence) technology will speed up the pace. This is because economic problems can be solved if spacecraft recycling is made possible with the participation of private companies and facilities related to space stations and mineral mining equipment are set up with 3D printers.

#### Primacy prevents great-power conflict — multipolar revisionism fragments the global order and causes nuclear war.

Brands & Edel 19 — Hal Brands; PhD, Henry A. Kissinger Distinguished Professor of Global Affairs at the Johns Hopkins School of Advanced International Studies. Charles Edel; PhD, Senior Fellow and Visiting Scholar at the United States Studies Centre at the University of Sydney. (“The Lessons of Tragedy: Statecraft and World Order;” Ch. 6: Darkening Horizon; Published by *Yale University Press*; //GrRv)

The revival of great-power competition entails higher international tensions than the world has known for decades, and the revival of arms races, security dilemmas, and other artifacts of a more dangerous past. It entails sharper conflicts over the international rules of the road on issues ranging from freedom of navigation to the illegitimacy of altering borders by force, and intensifying competitions over states that reside at the intersection of rival powers’ areas of interest. It requires confronting the prospect that rival powers could overturn the favorable regional balances that have underpinned the U.S.-led order for decades, and that they might construct rival spheres of influence from which America and the liberal ideas it has long promoted would be excluded. Finally, it necessitates recognizing that great-power rivalry could lead to great-power war, a prospect that seemed to have followed the Soviet empire onto the ash heap of history.

Both Beijing and Moscow are, after all, optimizing their forces and exercising aggressively in preparation for potential conflicts with the United States and its allies; Russian doctrine explicitly emphasizes the limited use of nuclear weapons to achieve escalation dominance in a war with Washington. In Syria, U.S. and Russian forces even came into deadly contact in early 2018. American airpower decimated a contingent of government-sponsored Russian mercenaries that was attacking a base at which U.S. troops were present, an incident demonstrating the increasing boldness of Russian operations and the corresponding potential for escalation. The world has not yet returned to the epic clashes for global dominance that characterized the twentieth century, but it has returned to the historical norm of great-power struggle, with all the associated dangers.

Those dangers may be even greater than most observers appreciate, because if today’s great-power competitions are still most intense at the regional level, who is to say where these competitions will end? By all appearances, Russia does not simply want to be a “regional power” (as Obama cuttingly described it) that dominates South Ossetia and Crimea.37 It aspires to the deep European and extra-regional impact that previous incarnations of the Russian state enjoyed. Why else would Putin boast about how far his troops can drive into Eastern Europe? Why else would Moscow be deploying military power into the Middle East? Why else would it be continuing to cultivate intelligence and military relationships in regions as remote as Latin America?

Likewise, China is today focused primarily on securing its own geopolitical neighborhood, but its ambitions for tomorrow are clearly much bolder. Beijing probably does not envision itself fully overthrowing the international order, simply because it has profited far too much from the U.S.-anchored global economy. Yet China has nonetheless positioned itself for a global challenge to U.S. influence. Chinese military forces are deploying ever farther from China’s immediate periphery; Beijing has projected power into the Arctic and established bases and logistical points in the Indian Ocean and Horn of Africa. Popular Chinese movies depict Beijing replacing Washington as the dominant actor in sub-Saharan Africa—a fictional representation of a real-life effort long under way. The Belt and Road Initiative bespeaks an aspiration to link China to countries throughout Central Asia, the Middle East, and Europe; BRI, AIIB, and RCEP look like the beginning of an alternative institutional architecture to rival Washington’s. In 2017, Xi Jinping told the Nineteenth National Congress of the Chinese Communist Party that Beijing could now “take center stage in the world” and act as an alternative to U.S. leadership.38

These ambitions may or may not be realistic. But they demonstrate just how significantly the world’s leading authoritarian powers desire to shift the global environment over time. The revisionism we are seeing today may therefore be only the beginning. As China’s power continues to grow, or if it is successful in dominating the Western Pacific, it will surely move on to grander endeavors. If Russia reconsolidates control over the former Soviet space, it may seek to bring parts of the former Warsaw Pact to heel. Historically, this has been a recurring pattern of great-power behavior—interests expand with power, the appetite grows with the eating, risk-taking increases as early gambles are seen to pay off.39 This pattern is precisely why the revival of great-power competition is so concerning—because geopolitical revisionism by unsatisfied major powers has so often presaged intensifying international conflict, confrontation, and even war. The great-power behavior occurring today represents the warning light flashing on the dashboard. It tells us there may be still-greater traumas to come.

The threats today are compelling and urgent, and there may someday come a time when the balance of power has shifted so markedly that the postwar international system cannot be sustained. Yet that moment of failure has not yet arrived, and so the goal of U.S. strategy should be not to hasten it by giving up prematurely, but to push it off as far into the future as possible. Rather than simply acquiescing in the decline of a world it spent generations building, America should aggressively bolster its defenses, with an eye to preserving and perhaps even selectively advancing its remarkable achievements.

#### Precedent of success in key sectors like space reinforces China rise - causes nuclear war and destabilizing expansion.

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Using the occasion of the Shangri-La Dialogue in Singapore this month, Chinese Minister of National Defense and State Councilor Gen. Wei Fenghe, delivered a sharp message to the United States, which may be termed the “Xi Doctrine” on China’s use of force, after Chinese premier Xi Jinping. Wei declaring both China’s resolve to aggress to advance its interests and a rationalization for the use of force. Wei’s de facto threat of war should not be lost in his nuances, deliberate ambiguity, or in translation. His remarks were so bellicose that the world has noticed, as was certainly intended by the leadership of the Chinese Communist Party (CCP). Empirical evidence of China’s aggression is increasingly common, from its attempt to dominate the South China Sea, the neo-imperialist effort to gain control of states through the Belt and Road Initiative, to its technological imperialism to control 5G and artificial intelligence technologies. What is rather less frequent are statements from high-level Chinese officials proclaiming the country’s intent to be aggressive and offering an attempted legitimizing principle justifying that aggression. While much of the content of Wei’s remarks were in keeping with the gossamer pronouncements on China’s peaceful intentions, as well as a paean to Xi Jinping’s leadership, they still conveyed that China is ready and willing to resort to war if the United States stands in its way of global expansion; and they made clear that China must go to war, or even a nuclear war, to occupy Taiwan. Specifically, there are four elements that comprise the Xi Doctrine and are indications of China’s signaling its willingness to use force. The first component is a new and alarming proclamation of the undisguised threats to use force or wage an unlimited war. China is becoming bolder as its military power grows. This is evidenced in Wei’s muscular remarks on the People’s Republic of China’s approach against Taiwan, his explicit statement that China does not renounce the use of force against Taiwan, and his effort to deter the United States and its allies from intervention should an attack occur. Wei forcefully stated: “If anyone dares to separate Taiwan from China, the Chinese military has no choice but must go to war, and must fight for the reunification of the motherland at all costs.” “At all cost” means that China will not hesitate to use nuclear weapons or launching another Pearl Harbor to take over Taiwan. This is a clear warning of an invasion. Second, the Xi Doctrine legitimizes territorial expansion. Through his remarks, Wei sought to convince the rest of the world that China’s seizure of most of the South China Sea is an accomplished fact that cannot be overturned. He made bogus accusations, which included blaming the United States for “raking in profits by stirring up troubles” in the region. He insisted that only ASEAN and China must resolve the issue. He claimed that China’s militarization on South China Sea islands and reefs were an act of self-defense. Should this be allowed to stand, then the Xi Doctrine will set a perilous precedent of successful territorial expansion, which will further entice China and jeopardize the peace of the region. Third, the doctrine targets the United States as a cause of the world’s major problems and envisions a powerful China evicting the United States from the region. Wei obliquely identified the United States as the cause wars, conflicts, and unrest, and sought to convey that the United States will abandon the states of the South China Sea (SCS) when it is confronted by Chinese power, a typical divide and conquer strategy used by the CCP regime. The Xi Doctrine’s fourth element is the mendacity regarding China’s historical use of force and current actions. While the distortions of history were numerous, there were three major lies that should be alarming for the states of the region and the global community. First, Wei said that China had never invaded another country, which is a claim so transparently false it can only be a measure of the contempt he held for the audience. China has a long history of aggression, including against the Tibetans and Vietnamese, and perhaps soon against the Taiwanese. Second, Wei argued that hegemony does not conform to China’s values when, in fact, China proudly was Asia’s hegemon for most of the last two thousand years. Lastly, he claimed that the situation in the SCS is moving toward stability—from China’s perspective this stability is caused by its successful seizure of territory. In fact, the SCS is far less stable as a result of China’s actions. Efforts to counter this grab are denounced by Wei as destabilizing, which is a bit like a thief accusing you of a crime for wanting your property returned. Wei’s belligerent rhetoric is an indication that the CCP regime faces deep external and internal crises. Externally, the Trump administration has shocked the CCP with the three major steps it has taken. First, it has shifted the focus of the U.S. national-security strategy and now identifies China explicitly as its primary rival—abandoning the far more muted policies of previous administrations. Second, Trump has acted on this peer competitive threat by advancing tangible measures, such as arms sales to allies and the ban of Huawei. Third, the administration has made credible commitments to assure partners and allies to counter China’s aggression and bullying. These have unbalanced the CCP regime, and its natural reaction is to bully its way out. Additionally, the CCP regime has perceived that the world today has begun to consider the negative implications of China’s rise, and the United States is determined to prevent what heretofore had been considered China’s unstoppable rise. From the perspective of CCP, conflict is increasingly seen as inevitable and perhaps even imminent. Wei’s bellicosity should be seen in this light, and the PLA is tasked with fighting and winning the war. Internally, Xi’s anti-corruption campaign that selectively targets his political rivalries, and his abandoning the established rules such as term limited of presidency, have introduced deep cleavages into the unity of the regime unity. China’s economic slowdown, made worse by the U.S. trade war, is a fundamental challenge to the regime’s legitimacy. Xi’s repression and suppression of the Chinese people, particularly human-rights defenders, Christians, Kazakhs, Uighurs, and other minorities, have miscarried. Drawing from the pages of unfortunate history, in a classic social-imperialist move, the regime wants to direct these internal tensions outward. At the same time, the nationalistic fervor advanced by the CCP’s propaganda and by the rapid military modernization have made many young militant officers in the PLA overconfident. This is infrequently noticed in the West. They can hardly wait to fight an ultimate war to defeat the arch-enemy. This plainly dangerous mentality echoes the Japanese military’s beliefs before Pearl Harbor. The bellicosity evinced in Wei’s speech is serious and is not bluster intended to deter. The United States cannot meet China’s threat with half-measures, which are likely to further encourage China’s aggressive behavior. The United States must respond to China’s belligerence with greater strength, adamantine determination, and more vigorous diplomatic and military measures. With the Xi Doctrine, China has proclaimed and rationalized its aggression. A Trump Doctrine forged in response has to reveal to all global audiences, most importantly the CCP leadership, the recklessness of the Xi Doctrine and the supreme folly of aggression.

#### Transition is devastating and an impact magnifier – shift back to unipolarity is key.

Keck 14 Zachary Keck is Managing Editor of The Diplomat, The Diplomat, January 24, 2014, “America’s Relative Decline: Should We Panic?”, http://thediplomat.com/2014/01/americas-relative-decline-should-we-panic/

Regardless of your opinion on U.S. global leadership over the last two decades, however, there is good reason to fear its relative decline compared with China and other emerging nations. To begin with, hegemonic transition periods have historically been the most destabilizing eras in history. This is not only because of the malign intentions of the rising and established power(s). Even if all the parties have benign, peaceful intentions, the rise of new global powers necessitates revisions to the “rules of the road.” This is nearly impossible to do in any organized fashion given the anarchic nature of the international system, where there is no central authority that can govern interactions between states. We are already starting to see the potential dangers of hegemonic transition periods in the Asia-Pacific (and arguably the Middle East). As China grows more economically and militarily powerful, it has unsurprisingly sought to expand its influence in East Asia. This necessarily has to come at the expense of other powers, which so far has primarily meant the U.S., Japan, Vietnam and the Philippines. Naturally, these powers have sought to resist Chinese encroachments on their territory and influence, and the situation grows more tense with each passing day. Should China eventually emerge as a global power, or should nations in other regions enjoy a similar rise as Kenny suggests, this situation will play itself out elsewhere in the years and decades ahead. All of this highlights some of the advantages of a unipolar system. Namely, although the U.S. has asserted military force quite frequently in the post-Cold War era, it has only fought weak powers and thus its wars have been fairly limited in terms of the number of casualties involved. At the same time, America’s preponderance of power has prevented a great power war, and even restrained major regional powers from coming to blows. For instance, the past 25 years haven’t seen any conflicts on par with the Israeli-Arab or Iran-Iraq wars of the Cold War. As the unipolar era comes to a close, the possibility of great power conflict and especially major regional wars rises dramatically. The world will also have to contend with conventionally inferior powers like Japan acquiring nuclear weapons to protect their interests against their newly empowered rivals. But even if the transitions caused by China’s and potentially other nations’ rises are managed successfully, there are still likely to be significant negative effects on international relations. In today’s “globalized” world, it is commonly asserted that many of the defining challenges of our era can only be solved through multilateral cooperation. Examples of this include climate change, health pandemics, organized crime and terrorism, global financial crises, and the proliferation of weapons of mass destruction, among many others. A unipolar system, for all its limitations, is uniquely suited for organizing effective global action on these transnational issues. This is because there is a clear global leader who can take the initiative and, to some degree, compel others to fall in line. In addition, the unipole’s preponderance of power lessens the intensity of competition among the global players involved. Thus, while there are no shortages of complaints about the limitations of global governance today, there is no question that global governance has been many times more effective in the last 25 years than it was during the Cold War.

#### Nuke war causes extinction AND outweighs other existential risks.

PND 16. internally citing Zbigniew Brzezinski, Council of Foreign Relations and former national security adviser to President Carter, Toon and Robock’s 2012 study on nuclear winter in the Bulletin of Atomic Scientists, Gareth Evans’ International Commission on Nuclear Non-proliferation and Disarmament Report, Congressional EMP studies, studies on nuclear winter by Seth Baum of the Global Catastrophic Risk Institute and Martin Hellman of Stanford University, and U.S. and Russian former Defense Secretaries and former heads of nuclear missile forces, brief submitted to the United Nations General Assembly, Open-Ended Working Group on nuclear risks. A/AC.286/NGO/13. 05-03-2016. <http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/OEWG/2016/Documents/NGO13.pdf> //Re-cut by Elmer

Consequences human survival 12. Even if the 'other' side does NOT launch in response the smoke from 'their' burning cities (incinerated by 'us') will still make 'our' country (and the rest of the world) uninhabitable, potentially inducing global famine lasting up to decades. Toon and Robock note in ‘Self Assured Destruction’, in the Bulletin of Atomic Scientists 68/5, 2012, that: 13. “A nuclear war between Russia and the United States, even after the arsenal reductions planned under New START, could produce a nuclear winter. Hence, an attack by either side could be suicidal, resulting in self assured destruction. Even a 'small' nuclear war between India and Pakistan, with each country detonating 50 Hiroshima-size atom bombs--only about 0.03 percent of the global nuclear arsenal's explosive power--as air bursts in urban areas, could produce so much smoke that temperatures would fall below those of the Little Ice Age of the fourteenth to nineteenth centuries, shortening the growing season around the world and threatening the global food supply. Furthermore, there would be massive ozone depletion, allowing more ultraviolet radiation to reach Earth's surface. Recent studies predict that agricultural production in parts of the United States and China would decline by about **20 percent** for four years, and by 10 percent for a decade.” 14. A conflagration involving USA/NATO forces and those of Russian federation would most likely cause the deaths of most/nearly all/all humans (and severely impact/extinguish other species) as well as destroying the delicate interwoven techno-structure on which latter-day 'civilization' has come to depend. Temperatures would drop to below those of the last ice-age for up to 30 years as a result of the lofting of up to 180 million tonnes of very black soot into the stratosphere where it would remain for decades. 15. Though human ingenuity and resilience shouldn't be underestimated, human survival itself is arguably problematic, to put it mildly, under a 2000+ warhead USA/Russian federation scenario. 16. The Joint Statement on Catastrophic Humanitarian Consequences signed October 2013 by 146 governments mentioned 'Human Survival' no less than 5 times. The most recent (December 2014) one gives it a highly prominent place. Gareth Evans’ ICNND (International Commission on Nuclear Non-proliferation and Disarmament) Report made it clear that it saw the threat posed by nuclear weapons use as one that at least threatens what we now call 'civilization' and that potentially threatens human survival with an immediacy that even climate change does not, though we can see the results of climate change here and now and of course the immediate post-nuclear results for Hiroshima and Nagasaki as well.

#### Advantage 2 – Space War

#### Space is the pinnacle of great power competition – China is set to take advantage – investment in state based launching and military capabilities leaves the US in the dust.

**Zivitski 20**, Liane. (Maj. Liane Zivitski Chief, Operations Branch, J32 American Military University Masters - Strategic Intelligence Intelligence Officer for USAF) “China Wants to Dominate Space, and the US Must Take Countermeasures.” Defense News, Defense News, 23 June 2020, https://www.defensenews.com/opinion/commentary/2020/06/23/china-wants-to-dominate-space-and-the-us-must-take-countermeasures/. //JQ

China is determined to replace the U.S. as the dominant power in space. While proclaiming its peaceful intentions, Beijing’s doctrine considers space a military domain, and it is investing heavily in space infrastructure designed to [secure](https://www.c4isrnet.com/battlefield-tech/space/2019/11/15/chinas-space-silk-road-could-pose-a-challenge-to-the-us/) both economic and military advantages. To ensure that it continues to compete from a position of strength, the U.S. must [invest sufficient resources](https://www.c4isrnet.com/battlefield-tech/space/2020/06/17/pentagon-releases-defense-space-strategy-to-counter-russia-and-china/) in preparing its new Space Force to defend America’s national interests and security in space.

Beijing’s [rapidly improving capabilities](https://www.c4isrnet.com/battlefield-tech/space/2020/06/23/china-launches-final-satellite-in-gps-like-beidou-system/) are clear to see. On May 5, China successfully [launched](https://www.popularmechanics.com/space/rockets/a32383927/china-rocket-launch-long-march-5b/) the Long March-5B rocket designed to eventually transport astronauts into space. This was the first successful launch of any Long March rocket this year after failed attempts to launch the [Long March-3B](https://www.space.com/china-long-march-3b-rocket-launch-failure.html) in April and [Long March-7A](https://www.space.com/china-long-march-7a-rocket-launch-failure.html) in March.

Three weeks later, China completed back-to-back launches from two separate launch facilities placing Earth-imaging and technology demonstration satellites into orbit. China plans to launch more than 60 spacecraft in over 40 launches in 2020, and has led global launches over the past two years.

Currently, China is second only to the U.S. in the number of operational satellites in orbit, with 363 as of March 31, 2020.

These capabilities are a cause for concern because of Beijing’s concurrent investment in space weapons. The Pentagon recently warned China has developed and fielded ground- and space-based anti-satellite, directed-energy, and electronic warfare capabilities that place the peaceful use of international space at risk.

Evidence suggests China could be developing up to three different anti-satellite systems. China launched its first successful ground-based direct ascent anti-satellite missile, [the SC-19](https://www.globalsecurity.org/space/world/china/sc-19-asat.htm), in 2007, and spent the last decade improving follow-on versions. In 2018, the People’s Liberation Army formed military units that began initial operational training with anti-satellite missiles. The SC-19 is now assessed operational and capable of targeting low-Earth orbit satellites.

China also fielded sophisticated on-orbit capabilities, such as satellites with [robotic arm technology](https://aerospace.csis.org/wp-content/uploads/2020/03/Harrison_SpaceThreatAssessment20_WEB_FINAL-min.pdf) for inspection and repair, which the U.S. Defense Intelligence Agency [assesses](https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/Space_Threat_V14_020119_sm.pdf) could also function as a weapon.

Because destruction of assets using anti-satellite technology is easily attributable, China is also pursuing a broad range of nondestructive directed-energy and electronic warfare weapons like lasers for blinding commercial and military imaging satellites. It is also working on radio frequency-jamming technologies capable of degrading or denying satellite communications and global navigation satellite systems like GPS.

China’s counter-space efforts have forced the U.S. to take measures to protect itself against what Secretary of Defense Mark Esper accurately labeled the weaponization of space. The 2020 National Defense Authorization Act established the United States Space Force as the sixth independent branch of the military to meet the threat posed to American space-based assets by potential enemies. U.S. Space Command, the Defense Department’s 11th combatant command, recently finalized its campaign plan with a new mission statement emphasizing “defending against and deterring threats.”

However, China is launching capabilities into space at a pace that is becoming increasingly difficult for the U.S. to match amid the current pandemic. Despite the recent success of the SpaceX launch from U.S. soil to the International Space Station, the U.S. has delayed several launches due to COVID-19.

In March, California-based Rocket Lab postponed the launch of three U.S. intelligence payloads from its launch complex [in New Zealand](https://www.c4isrnet.com/battlefield-tech/space/2020/06/18/us-to-continue-launching-spy-satellites-from-new-zealand-in-2021/). In April, the U.S. Space Force delayed a GPS satellite launch to no earlier than June 30 in order to minimize personnel from [COVID-19 exposure](https://www.c4isrnet.com/battlefield-tech/space/2020/04/07/space-force-delays-gps-launch-to-minimize-covid-19-exposure/). And delays caused by the novel coronavirus also ensured the first launch of NASA’s Artemis program will not happen until late 2021.

Meanwhile, China is already [preparing](https://spacenews.com/rocket-arrives-as-china-targets-july-for-tianwen-1-mars-mission-launch/) for its next launch, the Tianwen-1 Mars mission, scheduled for July.

Space is the new high ground in great power competition, and the U.S. must secure and maintain its superiority there. It would be less expensive to rely on multilateral organizations and international norms to prevent aggression in space, Beijing’s track record of deviation from international norms leaves the U.S. no choice but to prepare to defend itself. The fiscal 2021 U.S. Space Force budget request for $15.4 billion is a critical first step to combat emerging threats, especially from China.

#### Misperception means it goes nuclear.

Rovner 17 – Professor of Political Science, SMU (Joshua, “Two kinds of catastrophe: nuclear escalation and protracted war in Asia,” Journal of Strategic Studies, <http://www.tandfonline.com/doi/abs/10.1080/01402390.2017.1293532?journalCode=fjss20>)

This clash of great power interests has led to concerns that a US–China war may be over the horizon. Such a war is not inevitable, of course, and both sides have obvious reasons to avoid any military conflict. But neither has shown much willingness to back down from the political issues at stake, some of which are infused with nationalism. As long as these issues remain unresolved, and as long as the United States remains committed to the allies who are at loggerheads with Beijing, then conflict will remain a possibility. The fact that both sides possess nuclear weapons raises the danger of a nuclear exchange, even over crises that begin over what to be relatively minor disputes.1 In the event of a war, both China and the United States would seek a quick decisive victory. Any war is likely to exact high costs in blood and treasure. Their high level of trade and financial interdependence, and the centrality of the United States and China to the global economy, means that a prolonged war would be an economic calamity. Chinese military doctrine increasingly stresses the importance of winning quickly, and it puts a premium on seizing the initiative and controlling the pace of combat under what it calls “informatized conditions.” The examples of the US wars in Iraq, Kosovo, and Afghanistan convinced Chinese thinkers that high-intensity conventional combat is no longer a question of relative industrial power. Instead, it is a competition for control of communications. In future conflicts, long-range attacks coupled with aggressive information operations will sew confusion and allow China to dictate the crucial opening stages. The 2001 edition of the Science of Military Strategy (SMS) states that China envisions precision strikes in order to “paralyze the enemy in one stroke.” 2 Organizational changes in the years that followed gave the People’s Liberation Army Air Force (PLAAF) more autonomy and responsibility for long-range strike. In addition, the 2013 edition of SMS called for the PLAAF to develop information operations capable of “effective suppression and destruction” of enemy’s information systems alongside an “information protection capability.” 3 Chinese leaders have committed to the PLA’s military space and counter-space capabilities, investing in more missions, more launches, and more satellites. Finally, the PLA has deliberately merged electronic warfare with psychological operations, based on the idea that confusing the enemy by undermining its communications will force it into operational sclerosis and have a profound psychological effect. The goal is to win fast. The PLA must “seize and control the battlefield initiative, paralyze and destroy the enemy’s operational system of systems, and shock the enemy’s will for war.” 4 This approach closely resembles the US model, which relies on prompt attacks on communications and intelligence networks, which will make it safe for follow-on forces to surge into theater and dictate the scope and pace of combat. American officers have become accustomed to short conventional clashes since the first Gulf War, and their basic operational concept remains largely unchanged. Doctrine continues to emphasize the importance of seizing the initiative, confusing the enemy, and establishing control. The standing joint publication on operations provides a neat summary of the US approach: As operations commence, the (joint force commander) needs to exploit friendly advantages and capabilities to shock, demoralize, and disrupt the enemy immediately. The JFC seeks decisive advantage through the use of all available elements of combat power to seize and maintain the initiative, deny the enemy the opportunity to achieve its objectives, and generate in the enemy a sense of inevitable failure and defeat.5 Rapid attacks cause physical destruction and psychological damage, turning dangerous adversaries into helpless, disorganized, and vulnerable targets. Under these conditions, enemies have neither the ability nor the desire to fight on, and the United States can consolidate its initial gains with additional forces who face little or no resistance. In sum, China and the United States are preparing for a kind of highintensity warfare that requires executing rapid and complex operations while simultaneously disrupting the enemy’s command and control. Both sides believe this operational concept can lead to victory at a reasonably low cost, and are tailoring military doctrine to achieve specific political objectives without risking national disaster. What if both sides are wrong? Great powers often exaggerate their capabilities and minimize the importance of contingency and chance in war. Sometimes they launch campaigns with the false belief that war will be brief and painless, only to learn the opposite. Combat against a thinking adversary reveals the limits of existing capabilities in ways that are impossible to know before the fact. Strategic interaction during war plays havoc with prewar expectations, because the combatants do their utmost to undermine the other. Ambiguous information may not allow either side to judge whether it is succeeding, or, indeed, whether its forces are actually carrying out operations as intended. Great power wars rarely go according to plan. Good strategies thus contain a reasonable margin of error, and good strategists learn to think about what might go wrong. Contingency planning is especially important in cases where nuclear weapons may come into play This article discusses the relationship between conventional and nuclear weapons in a hypothetical war between the United States and China. Both countries have spent lavishly on new conventional military capabilities. Beijing is developing “anti-access” systems to make operations dangerous for US forces in the region, and Washington has responded by refining its operational approach. In the nuclear realm, China is undergoing a modernization of its arsenal and has revised its posture, while the United States has invested in increasingly accurate missiles, lethal warheads, and remote sensing technologies that enable rapid precision strikes. These trends may have important and troubling effects on the dynamics of a potential conventional military confrontation. While optimists imagine a quick and decisive victory, the presence of nuclear weapons opens the possibility of unexpected scenarios that neither side can fully control. The following discussion describes two such scenarios. The first section discusses the prospects for nuclear use. The second section discusses the opposite scenario by looking at the prospects for a protracted conventional war. While escalation concerns have attracted a great deal of scrutiny, scholars have paid much less attention to the possibility of a drawn-out fight. The third section evaluates which scenario is more likely in a US–China conflict. The conclusion discusses the political and military trade-offs leaders will face in a future crisis. Efforts to win quickly will increase the risk of nuclear use. Efforts to reduce the risk of escalation, on the other hand, will increase the risk of a prolonged war. Escalation What would cause leaders to cross the nuclear threshold? In some cases, the choice may be a conscious decision to marry conventional and nuclear doctrine and incorporate escalatory moves in prewar plans. This would be the case if they believe they can execute a preemptive first strike and disable or destroy the adversary’s arsenal. Preemptive attacks are particularly appealing against states with incautious or irrational leaders, especially if they possess small and vulnerable forces. Deliberate escalation is also possible if leaders believe that they must signal resolve by indicating their control at all levels of violence. Preparations for conventional war would transparently include plans for nuclear use in the case of certain contingencies. According to this logic, a clear signal of “escalation dominance” is necessary to convince the enemy that the risks are overwhelming and the prospects of victory are slim. If demonstrations of dominance fail, however, then the stronger state can simply execute its plan in order to defeat the enemy. US leaders in the Cold War invested in capabilities to enable attacks on enemy nuclear weapons and associated systems.6 If this was the case in the Cold War, when the United States faced a superpower adversary with a sprawling nuclear weapons complex, then leaders today probably remain interested in counterforce. Open-source analyses of US technology, along with some telling statements from US leaders, reveal an ongoing program for building and deploying weapons to preempt enemy escalation during a conventional conflict.7 They are also concerned with adversary innovations that complicate counterforce strikes.8 But suppose that leaders have no intention of using nuclear weapons. It is one thing to develop impressive technologies, but quite another to use them, and policymakers may blanch at the real prospect of authorizing first use. Even in these cases, there are several theoretical pathways to escalation. The first is psychological. Cognitive biases may cause leaders to misperceive rival intentions, mistaking signals of restraint for signs of danger. Prewar expectations strongly influence how individuals interpret new information, and they will ignore or reframe dissonant information so it fits into their existing beliefs. Misperceptions intensify after the shooting starts, when information is ambiguous and incomplete. Carl von Clausewitz dwelt on the problem in the aftermath of the Napoleonic Wars, noting that intelligence reports were often contradictory and unreliable “in the thick of fighting.” Despite advances in intelligence and communications, the fog of war remains an enduring problem. Organized violence is an iterative process, and each side has incentives to hide its actions and deceive its adversary. Violence also unleashes intense emotions that obscure the material effects of battle. Commanders may not understand whether they are winning or losing, and in lieu of reliable intelligence they are likely to let passion overtake good judgment. “In short,” Clausewitz concluded, “most intelligence is false, and the effect of fear is to multiply lies and inaccuracies.” 9 Wartime leaders are prone to attribution bias, or the belief that their counterparts are inherently evil. Leaders in conflict are likely to assume the worst about their rivals or else they would not have picked a fight in the first place. Attribution bias causes them disregard the notion that their enemies have limited goals and are willing to accept partial victories. They are also prone to reject peace overtures as meaningless gestures at best, or as efforts to lull them into passivity before escalating the conflict.10 Finally, prospect theory tells us that individuals will fight harder to avoid losing a possession than they will to gain something new. If leaders equate settling with losing, then they will be tempted to risk escalation. All of these psychological pressures are exacerbated under stress and tight time constraints.11 Domestic pressures might lead to escalation if one or both governments fear that regime change will be the political penalty for battlefield failure. Escalation is also possible if the issues at stake are wrapped up in nationalism or ideologies that inflate the value of the object. Leaders will be hard pressed to accept defeat in such cases, especially if military outcome is particularly lopsided and humiliating. Leaders who depend on particularly hawkish constituencies to remain in power are especially likely to take new risks even against long odds. Rather than negotiating an end to the war, they might gamble for resurrection by escalating to the nuclear level.12 Such a move would not necessarily be irrational. Instead, resurrection succeeds by shifting the war towards the balance of interests rather than the balance of capabilities. A retreating combatant, battered in the early stages of a conflict, may still affect the enemy’s calculation by taking extraordinary risks. Escalation signals a willingness to fight to the finish and a reminder that it has powerful interests at stake. Such a strategy is admittedly risky, but it may be effective, especially if the escalating state is fighting to defend its own territory against a distant rival. Transforming a conflict into a test of resolve makes sense when a state is failing the test of arms.13 Finally, inadvertent escalation may occur when conventional attacks put the adversary’s nuclear force at risk. Under these conditions, the target state might reasonably worry that the attack is only the first phase of a larger war. There may be no way to offer credible reassurances that it is not. Fearing the destruction or incapacitation of its nuclear deterrent, the target state might face a “use it or lose it” dilemma. Inadvertent escalation is especially likely if key command and control nodes are vulnerable or if conventional and nuclear target sets are indistinguishable. The danger also increases if military organizations indulge organizational preferences for offensive action. This encourages planners to err on the side of attacking all available targets. While it might sense to allow the adversary to retain some capabilities in order to reduce the incentives for escalation, planners may bridle at the thought of consciously allowing the enemy to retain the capacity for attack.14 In recent years, China has invested heavily in capabilities that will complicate US maritime operations and threaten US bases in Japan and Guam. Equipped with a range of anti-access capabilities, China may be able to deter the United States from intervening in the case of a regional war. If it does intervene, China may attempt to damage or destroy US assets or force carrier groups to operate at prohibitively long distances from the mainland.

#### Beijing and Moscow commercial partnership uses dual-use disguise to weaponize space and destroy US nuclear communication and defense.

**Bowman**, Bradley, **and** Jared **Thompson 21**. (Bradley Bowman is the senior director of the Center on Military and Political Power at the Foundation for Defense of Democracies and a former advisor to members of the Senate Armed Services and Foreign Relations committees.) (Jared Thompson is a U.S. Air Force major and visiting military analyst at the Foundation for Defense of Democracies.) “Russia and China Seek to Tie America's Hands in Space.” Foreign Policy, 31 Mar. 2021, https://foreignpolicy.com/2021/03/31/russia-china-space-war-treaty-demilitarization-satellites/.

Consider the actions of the United States’ two great-power adversaries when it comes to anti-satellite weapons. China and Russia have [sprinted](https://thedispatch.com/p/we-must-work-to-prevent-a-space-pearl) to develop and deploy both ground-based and space-based weapons targeting satellites while simultaneously pushing the United States to sign a treaty banning such weapons.

To protect its vital space-based military capabilities—including communications, intelligence, and missile defense satellites—and effectively deter authoritarian aggression, Washington should avoid being drawn into suspect international treaties on space that China and Russia have no intention of honoring.

The Treaty on the Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force Against Outer Space Objects (PPWT), which Beijing and [Moscow](https://undocs.org/en/CD/2181) have submitted at the United Nations, is a perfect example. PPWT signatories [commit](https://undocs.org/pdf?symbol=en/CD/1985) “not to place any weapons in outer space.” It also says parties to the treaty may not “resort to the threat or use of force against outer space objects” or engage in activities “inconsistent” with the purpose of the treaty.

On the surface, that sounds innocuous. Who, after all, wants an arms race in space?

The reality, however, is that China and Russia are already racing to field anti-satellite weapons and have been for quite some time. “The space domain is competitive, congested, and contested,” Gen. James Dickinson, the head of U.S. Space Command, [said](https://www.defense.gov/Explore/News/Article/Article/2483340/commander-lists-5-tasks-to-ensuring-continued-space-superiority/) in January. “Our competitors, most notably China and Russia, have militarized this domain.”

Beijing already has an [operational ground-based anti-satellite missile capability](https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/Space_Threat_V14_020119_sm.pdf#page=3). People’s Liberation Army units are training with the missiles, and the U.S. Defense Department [believes](https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF#page=90) Beijing “probably intends to pursue additional [anti-satellite] weapons capable of destroying satellites up to geosynchronous Earth orbit.” That is where America’s most sensitive nuclear communication and missile defense satellites orbit and keep watch.

Similarly, Moscow [tested](https://www.spacecom.mil/News/Article-Display/Article/2448334/russia-tests-direct-ascent-anti-satellite-missile/) a ground-based anti-satellite weapon in December that could destroy U.S. or allied satellites in orbit. That attack capability augments a ground-based laser weapon that Russian President Vladimir Putin [heralded](https://tass.com/defense/1034344) in 2018. In a moment of candor, Russia’s defense ministry admitted the system was designed to “fight satellites.”

To make matters worse, both countries are also working to deploy space-based—or so-called “[on-orbit](https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/Space_Threat_V14_020119_sm.pdf#page=3)”—capabilities to attack satellites.

Meanwhile, at the United Nations and other international forums, China and Russia are pushing the PPWT and advocating for a “[no first placement](https://2017-2021.state.gov/whither-arms-control-in-outer-space-space-threats-space-hypocrisy-and-the-hope-of-space-norms/index.html)” resolution—saying all governments should commit not to be the first to put weapons in space.

Yet more than two years ago, the U.S. Defense Intelligence Agency [noted](https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/Space_Threat_V14_020119_sm.pdf) that both China and Russia were already putting in space capabilities that could be used as weapons. The PPWT would thus protect their weapons while tying Washington’s hands.

In a thinly veiled attempt to mask their intentions, the two countries claim that their on-orbit capabilities are simply for peaceful purposes—for assessing the condition of broken satellites and conducting repairs as needed. This “dual-use” disguise permits Beijing and Moscow to put into orbit ostensibly peaceful or commercial capabilities that those countries can actually use to disable or destroy U.S. military and intelligence satellites.

China, for example, has tested several so-called [scavenger](https://www.scmp.com/news/china/science/article/3007186/how-chinas-scavenger-satellites-are-being-used-develop-ai) satellites, which use [grappling arms to capture](https://www.uscc.gov/sites/default/files/annual_reports/2015%20Annual%20Report%20to%20Congress.PDF#page=307) other satellites. China has also demonstrated the capability to [maneuver a satellite](https://breakingdefense.com/2018/04/china-satellite-sj-17-friendly-wanderer/) around the geosynchronous belt, allowing its satellites to sidle up to other satellites in space.

Not to be outdone, Russia deployed a pair of “nesting doll” satellites that [shadowed](https://time.com/5779315/russian-spacecraft-spy-satellite-space-force/) a U.S. satellite in space. One Russian satellite birthed another, with Russia’s defense ministry [claiming](https://tass.ru/armiya-i-opk/7285111) its purpose was to assess the “technical condition of domestic satellites.”

But later, the second satellite conducted a weapons test, [firing](https://www.spacecom.mil/MEDIA/NEWS-ARTICLES/Article/2285098/russia-conducts-space-based-anti-satellite-weapons-test/) what appeared to be a [space torpedo](https://spacewatch.global/2020/12/spacewatchgl-opinion-2020-in-review-a-space-security-perspective/). The Kremlin never explained how a fast-moving one-time projectile provided superior inspection benefits compared with the other Russian satellite flying persistently nearby.

#### Dual-use capability destroys early warning, navigation, and communication – causes miscalculation that escalates to nuclear use.

Kelley, Brandon, and Brian Chow 21. (Brian Chow - Independent policy analyst (Ph.D. physics, MBA with Distinction, Ph.D. finance) with over 160 publications in space and other national security policies) “China's Anti-Satellite Weapons Could Conquer Taiwan-or Start a War.” The National Interest, The Center for the National Interest, 21 Aug. 2021, https://nationalinterest.org/feature/china%E2%80%99s-anti-satellite-weapons-could-conquer-taiwan%E2%80%94or-start-war-192135. /

If current trends hold, then China’s[Strategic Support Force](https://ndupress.ndu.edu/Portals/68/Documents/stratperspective/china/china-perspectives_13.pdf) will be capable by the late 2020s of holding key U.S. space assets at risk. [Chinese military doctrine](https://nationalinterest.org/blog/reboot/nowhere-earth-will-be-safe-us-china-war-172523), statements by senior officials, and past behavior all suggest that China may well believe threatening such assets to be an effective means of deterring U.S. intervention. If so, then the United States would face a type of “Sophie’s Choice”: decline to intervene, potentially leading allies to follow suit and Taiwan to succumb without a fight, thereby enabling Xi to achieve his goal of “peacefully” snuffing out Taiwanese independence; or start a war that would at best be long and bloody and might well even cross the nuclear threshold.

This emerging crisis has been three decades in the making. In 1991, China watched from afar as the United States used space-enabled capabilities to obliterate the Iraqi military from a distance in the first Gulf War. The People’s Liberation Army quickly set to work developing capabilities targeted at a perceived Achilles’ heel of this new [American way of war](https://nationalinterest.org/feature/secrets-and-lies-role-truth-great-power-information-warfare-170579): reliance on vulnerable space systems.

This project came to fruition with a direct ascent[ASAT weapons test](https://fas.org/sgp/crs/row/RS22652.pdf) in 2007, but the test was limited in two key respects. First, it only reached low Earth orbit. Second, it generated thousands of pieces of long-lasting space junk, provoking immense[international ire](https://spacenews.com/u-s-official-china-turned-to-debris-free-asat-tests-following-2007-outcry/). This backlash appears to have taken China by surprise, driving it to seek new, more usable ASAT types with minimal debris production. Now, one such ASAT is nearing operational status: spacecraft capable of rendezvous and proximity operations (RPOs).

Such spacecraft are[inevitable](https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-12_Issue-2/Chow.pdf#page=22) and cannot realistically be limited. The United States, European Union, China, and others are developing them to provide a range of satellite services essential to the[new space economy](https://www.morganstanley.com/ideas/space-economy-themes-2021), such as in situ repairs and refueling of satellites and active removal of space debris. But RPO capabilities are dual-use: if a satellite can grapple space objects for servicing, then it might well be capable of grappling an adversary’s satellite to move it out of its servicing orbit. Perhaps it could degrade or disable it by bending or disconnecting its solar panels and antennas all while producing minimal debris.

This is [a serious threat](https://nationalinterest.org/feature/can-america-lose-china-189020), primarily because no international rules presently exist to limit close approaches in space. Left unaddressed, this lacuna in international law and space policy could enable a prospective attacker to pre-position, during peacetime, as many spacecraft as they wish as close as they wish to as many high-value targets as they wish. The result would be an ever-present possibility of sudden, bolt-from-the-blue attacks on vital space assets—and worse, on many of them at once.

China has conducted at least[half a dozen tests of RPO](https://swfound.org/media/207179/swf_chinese_rpo_fact_sheet_apr2021.pdf#page=3) capabilities in space since 2008, two of which went on for years. Influential space experts have noted that these tests have plausible peaceful purposes and are in many cases similar to those conducted by the United States. This, however, does not make it any less important to establish effective legal, policy, and technical counters to their offensive use. Even if it were certain that these capabilities are intended purely for peaceful applications—and it is not at all clear that that is the case—China (or any other country) could at any time decide to repurpose these capabilities for ASAT use.

There is still time to get out ahead of this threat, but likely not for much longer. China’s RPO capabilities have, thus far, lagged about five years behind those of the United States. There are reasons to believe this gap may close, but even assuming that it holds, we should expect to see China demonstrate an operational dual-use rendezvous spacecraft by around 2025. (The first instance of a U.S. commercial satellite docking with another satellite to change its orbit occurred in[February 2020](https://news.northropgrumman.com/news/releases/northrop-grumman-successfully-completes-historic-first-docking-of-mission-extension-vehicle-with-intelsat-901-satellite).)

At the same time, China is expanding its capacity for rapid spacecraft manufacturing. The[Global Times](https://www.globaltimes.cn/page/202101/1213345.shtml) reported in January that China’s first intelligent mass production line is set to produce 240 small satellites per year. In April,[Andrew Jones](https://spacenews.com/china-is-developing-plans-for-a-13000-satellite-communications-megaconstellation/#:~:text=China%20is%20developing%20plans%20for%20a%2013%2C000%2Dsatellite%20megaconstellation,-by%20Andrew%20Jones&text=HELSINKI%20%E2%80%94%20China%20is%20to%20oversee,the%20country's%20major%20space%20actors.) at SpaceNews reported that China is developing plans to quickly produce and loft a thirteen thousand-satellite national internet megaconstellation. It is not unreasonable to assume that China could manufacture two hundred small rendezvous ASAT spacecraft by 2029, possibly more.

If this happens, and Beijing was to decide in 2029 to launch these two hundred small RPO spacecraft and position them in close proximity to strategically vital assets, then China would be able to simultaneously threaten disablement of the entire constellations of U.S. satellites for missile early warning (about a dozen satellites with spares included); communications in a nuclear-disrupted environment (about a dozen); and positioning, navigation, and timing (about three dozen); along with several dozen key communications, imagery, and meteorology satellites. Losing these assets would severely degrade U.S. deterrence and warfighting capabilities, yet once close pre-positioning has occurred such losses become almost impossible to prevent. For this reason, such pre-positioning could conceivably deter the United States from coming to Taiwan’s aid due to the prospect that intervention would spur China to disable these critical space systems. Without their support, the war would be much bloodier and costlier—a daunting proposition for any president.

Should the United States fail to intervene, the consequences would be disastrous for both Washington and its allies in East Asia, and potentially the credibility of U.S. defense commitments around the globe. Worse yet, however, might be what could happen if China believes that such a threat will succeed but proves to be wrong. History is rife with examples of major wars arising from miscalculations such as this, and there are many pathways by which such a situation could easily escalate out of control to a full-scale conventional conflict or even to nuclear use.

#### Space conflicts go nuclear – the risk is high and there are no breaks on escalation.

Grego 15 [LAURA GREGO is a physicist in the Global Security program at UCS. She is an expert in space weapons and security; ballistic missile proliferation; and ballistic missile defense. "Preventing Space War." https://allthingsnuclear.org/lgrego/preventing-space-war]

So says a very good New York Times editorial “Preventing a Space War” this week. Sounds right, if X-Wing fighters come to mind when you think space conflict. But in reality conflict in space is both more likely than one would think and less likely to be so photogenic. Space as a locus of conflict The Pentagon has known that space could be a flash point at least since the late 1990s when it began including satellites and space weapons in earnest as part of its wargames. The early games revealed some surprises. For example, attacking an adversary’s ground-based anti-satellite weapons before they were used could be the “trip wire” that starts a war: in the one of the first war games, an attack on an enemy’s ground-based lasers was meant to defuse a potential conflict and protect space assets, but instead was interpreted as an act of war and initiated hostilities. The games also revealed that disrupting space-based communication and information flow or “blinding” could rapidly escalate a war, eventually leading to nuclear weapon exchange. The war games have continued over the years with increased sophistication, but continue to find that conflicts can rapidly escalate and become global when space weapons are involved, and that even minor opponents can create big problems. The report back from the 2012 game, which included NATO partners, said these insights have become “virtually axiomatic.” Participants in the most recent Schriever war games found that when space weapons were introduced in a regional crisis, it escalated quickly and was difficult to stop from spreading. The compressed timelines, the global as well as dual-use nature of space assets, the difficulty of attribution and seeing what is happening, and the inherent vulnerability of satellites all contribute to this problem. Satellite vulnerability & solutions Satellites are valuable but, at least on an individual basis, physically vulnerable. Vulnerable in that they are relatively fragile, as launch mass is at a premium and so protective armor is too expensive, and a large number of low-earth-orbiting satellites are no farther from the earth’s surface than the distance from Boston to Washington, DC.

#### Space militarization turns neg DAs. Collapse of R&D, commercial ops, economy, and deterrence – global war is inevitable.

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Consequences of Armament and Aggression in Space

The consequences of weapons testing and aggression in space could span generations, and current technological advances only increase the urgency for policymakers to pursue a limitations treaty. As it stands, there are three major ramifications of a potential arms race in space:

The destruction of satellites

As both financial and technological barriers to the space services industry have decreased, the number of governmental and private investors with assets in space has inevitably increased. There is now an abundance of satellites in space owned by multiple states and corporations. These satellites are used to not only coordinate military actions, but to perform more mundane tasks, like obtaining weather reports, or managing on-ground communications, and navigation.

Should states begin weapons testing in space, debris could cloud the orbit and make positioning new satellites impossible, disrupting our current way of life. More pressing, however, is that if a country’s satellites are successfully destroyed by an enemy state, military capabilities can be severely hindered or destroyed, leaving the country vulnerable to attack and unable to coordinate its military forces on the ground.

Diminished future use of near space

Whether caused by weapons testing or actual aggression, the subsequent proliferation of debris around the planet would damage our future ability to access space. Not only would debris act as shrapnel to preexisting assets in space, but it would also become much more difficult to launch satellites or rockets, hindering scientific research, space exploration, and commercial operations.

From the past fifty-odd years of activity in space alone, the debris left behind in Earth’s orbital field has already become hazardous to spacecraft — a main reason why the U.S. and the Soviet Union did not continue with ASAT testing during the Cold War. If greater pollution were to occur, space itself could be become unusable, resulting in the collapse of the global economic system, air travel, and various communications.

Power imbalances and proliferation on the ground

Only so many states currently have access to space—which means any militarization be by the few, while other states would be left to fend for themselves. This would establish a clear power imbalance that could breed distrust among nations, resulting in a more insecure world and a veritable power keg primed for war. Additionally, deterrence measures taken by states with access to space would escalate, attempting to build up weapons caches not dissimilar to the nuclear weapons stockpiling activities of the Cold War.

In any arms race, it is inevitable that more advanced weaponry is created. Yet, this does not only pose a risk to assets in space. Should a terrestrial war break out, this weaponry may eventually be deployed on the ground, and space-faring states would be able to capitalize on the power imbalance by using these new developments against states that have not yet broken into the space industry or developed equally-advanced weaponry.

### UV

#### 1 - Aff gets 1AR theory since the neg can be infinitely abusive and I can’t check back. It’s drop the debater since and CI since the 1ar is too short to win both theory and substance. No RVIs or 2NR theory and paradigm issues – 6 min 2NR means they can brute force me every time. Competing interps since reasonability is arbitrary and invites judge intervention. Aff theory first – it’s a much larger strategic loss because 1min is ¼ of the 1AR vs 1/7 of the 1NC which means there’s more abuse if I’m devoting a larger fraction of time.

#### 2 - Permissibility and presumption affirm.

**A – Freeze - otherwise we would not be able to justify morally neutral actions since there isn’t a prohibition and we would have to prove an obligation.**

**B – Trivialism - statements are true until proven false, if I told you my name you’d believe me.**

#### C - Negation Theory - Negating requires a complete absence of an existing obligation

Dictionary.com - “Negate” https://www.dictionary.com/browse/negate.

Negate: to deny the existence of

#### D - The Law of Excluded Middles - if something is not false, it must be true, which means that if something is not prohibited, it must be obligatory, and permissibility is the same as obligatory.

#### E - If anything is permissible, then so is the aff since there is nothing prohibiting us.

#### F - Epistemics – we wouldn’t be able to start a strand of reasoning since we’d have to question that reason.

### 1AC – Heg-Add Ons

#### Biden’s ally-shoring not only reverses Trump-era damage, it resolves structural problems with American leadership sustainability – regaining total hegemony is key through the aff will lock us in.

Dezenski and Austin 21 (Elaine Dezenski and John C. Austin are Senior Fellows for the Brookings Institute. Dezenski is also Chief Growth Officer for Blank Slate Technologies, 6/8/21, “Rebuilding America’s Economy and Foreign Policy with ‘Ally-Shoring’”, <https://www.brookings.edu/blog/the-avenue/2021/06/08/rebuilding-americas-economy-and-foreign-policy-with-ally-shoring/>, acc 7/18/21)

Last month, President Joe Biden came to Michigan to [push America to seize leadership in making electric vehicles](https://www.detroitnews.com/story/business/autos/2021/05/18/biden-tour-ford-plant-dearborn-electric-vehicle-priorities/5133176001/)—or risk ceding economic leadership in autos and other fields to China. In doing so, the president held out the prospect of more good-paying domestic jobs and reconfiguring our supply chains in mobility and other sectors for domestic production.

We do need more domestic production and more of the high-paying jobs that go along with it—but we won’t get there by going it alone. That’s because pivoting supply chains back home is not always realistic; we rely on components and materials from many parts of the world. There is a better way forward, and it starts by selectively leaning into our trade and co-production relationships with friends and allies we trust—what we call “[ally-shoring](https://www.fdd.org/analysis/2020/07/13/check-china-abroad-rebuild-economy-at-home/).”

In [announcing its strategy for supply chain resilience](https://www.npr.org/2021/06/08/1004269871/u-s-to-address-supply-chain-issues-that-were-exposed-by-the-pandemic), the Biden White House recently embraced ally-shoring as the most realistic and effective path to ensuring U.S. supply chains are never as vulnerable as was exposed by COVID-19. It also is the best way to rebuild our economy and that of our friends, which strengthens the health of all our democracies. Additionally, working together to rewire supply chains and co-produce high-tech products in emerging sectors will serve to **rebuild bruised alliances** and U.S. global economic and **political leadership**, as well as **check China’s** bid to extend their own authoritarian economic and political model across the globe.

One reason ally-shoring makes so much sense is that in automotive and other industries, we don’t so much engage in “trade” as we make things together with other countries. This is especially true in our auto and mobility sector. Nearly 50% of [Midwest states’ so-called “trade” is with Canada](https://www.brookings.edu/blog/the-avenue/2018/03/06/why-the-rust-belt-economy-will-suffer-in-a-trade-war/), and 30% is with Mexico. Over half of this North American trade and 37% of our trade with allies in the EU [is in intermediate goods](https://www.brookings.edu/blog/the-avenue/2017/03/30/how-u-s-states-rely-on-the-nafta-supply-chain/)—meaning component parts of a finished product. This “co-production” reality will be true for electric vehicles as well as other emerging mobility products, like the [AI-controlled delivery robot vehicle now being “trained” on the streets of Ann Arbor, Mich](https://www.detroitnews.com/story/business/autos/mobility/2019/12/26/refraction-ai-food-delivery-robots-ann-arbor/2679010001/).

With the disruptions of COVID-19, it is understandable that [many of our leaders](https://www.warren.senate.gov/oversight/letters/warren-and-smith-urge-congress-to-shore-up-pharmaceutical-supply-chain-through-covid-19-relief-reconciliation) are [proposing the “onshoring”](https://homelandprepnews.com/stories/49618-bills-target-medical-supply-chain-manufacturing-issues/) of critical supplies. But as attractive as onshoring sounds, it is not an effective way to win the strategic competition with China. An onshoring push would not only irk our allies, but would also be problematic for U.S. companies (including our automakers) who want to keep doing business in foreign markets and using foreign-made component parts in products. It would also be impractical and impossibly costly. With sophisticated, IT-laced products like cars and phones integrating dozens of components from around the globe at the lowest cost possible, no one could afford to buy a solely domestically made one. Even attempting to onshore many supplies would reduce our influence on the world stage. Alliances have benefits too, particularly when in the middle of a global strategic tug of war for primacy between autocratic and democratic political systems.

Ally-shoring is a much better choice. It involves deliberately sourcing essential materials, goods, and services with countries who share our democratic values and commitment to an open, transparent, rules-based international economic and trade regime. Many countries would prefer to work with the U.S. than China and its [dependency-building and corrupting development approach](https://www.fdd.org/analysis/2020/05/04/below-the-belt-and-road/), including lower-cost producers such as [Mexico](https://usmexicofound.org/images/programas/documentos/1614490856AllyShoring.pdf), Vietnam, India, and other developing world economies that are essential in keeping supply chains cost-efficient and where we can work together to reinforce strong institutions, a level playing field for manufacturers, and transparent supply chains.

Ally-shoring increases the reliability of critical supply chains while reducing dependence on China and other state actors who will seek to continue to use that dependence to undermine the U.S. Reworking relationships to promote partnership with countries that share our values and interests would reduce our vulnerabilities while maintaining access to a wide variety of goods and markets for U.S. businesses and consumers alike.

#### Heg solves global nuclear war - decline emboldens China, Russia, and Iran - causes counter-balancing and transition wars.

**Twining 17** (director of the Asia Program at The German Marshall Fund of the United States, based in Washington, DC, MPhil & PhD degrees from Oxford University (Daniel, "Abandoning the Liberal International Order for a Spheres-of-Influence World is a Trap for America…," *Medium*, 3-21-2017, https://medium.com/out-of-order/abandoning-the-liberal-international-order-for-a-spheres-of-influence-world-is-a-trap-for-america-7bfcdbb83df4)

The liberal world order is **under assault**. Polls suggest an American ambivalence about upholding the rules-based global system. Populists are besieging governing elites in the West while Russia works strategically to destabilize European and American governments through propaganda and proxies. A rising China wants to create a global system that is not U.S.-centric, one in which smaller powers defer to bigger ones and norms of democracy and rule of law do not prevail. Meanwhile, the U.S. alliance system looks adrift while competitors in China and Russia appear to be on the march. If it holds, this trend could produce a spheres-of-influence world — which many, including the current presidents of the United States, China, and Russia, find **intuitively** attractive. But were such an order to replace one based on global integration and American leadership in the geopolitical cockpits of Europe and Asia, it would only engender insecurity and conflict. In a spheres-of-influence world, great powers order their regions. The United States would go back to a “Monroe Doctrine” version of grand strategy; Russia would dominate the former Soviet space; China would govern East Asia, and India South Asia. The problem with this kind of order, however, is several-fold. Too many spheres overlap in ways that would generate conflict rather than clean lines of responsibility. Japan would oppose Chinese suzerainty in East Asia, including by develop**ing** nuclear weapons; India and China would **compete vigorously** in Southeast Asia; Russia and China would contest the resources and loyalties of Central Asia; Europe and Russia would clash over primacy of Central and Eastern Europe. The Middle East would be an even more likely arena for hot war between Saudi Arabia and Iran, and Turkey would contest regions also claimed by Russia, Europe, and possibly China. Russia, like the Soviet Empire before it, would keep pushing west until it met enough hard power to stop it. A spheres of influence world would also **sharpen great power competition** outside of each region. Regional hegemony is a **springboard** for global contestation. China would be more likely to challenge the United States out-of-area if it had subdued strategic competition in its own region. Russia, like the Soviet Empire before it, would keep pushing west until it met enough hard power to stop it. (The fact that Russian troops marched through Paris during the Napoleonic Wars demonstrates that the limits of Russian power need not be confined to the former Warsaw Pact). American leaders have long understood that a “Fortress America” approach is a source of national insecurity. Franklin Roosevelt made this case in a series of “fireside chats” in the run-up to America’s participation in World War II — even before the advent of the far more sophisticated power-projection technologies that exist today. Roosevelt and his generals well understood that the United States could not be safe if hostile powers controlled Europe and Asia, despite the wide oceans separating North America from both theaters. A spheres-of-influence world would also **crack up** the integrated global economy that underlies the miracle in human welfare that has lifted billions out of poverty in past decades. It would replicate the **exclusive economic blocs** of the 1930s, including an East Asia “co-prosperity sphere,” seeding conflict and undercutting prosperity. A real-world and real-time example of what happens when American power retreats in an effort to encourage regional powers to solve their own problems is the mess in Syria. It has produced the greatest refugee crisis since 1945 — a stain on the consciousness of human civilization — and has led many to conclude that the Middle Eastern order of states dating to the end of World War 1 is collapsing. President Obama pursued an express policy of retracting American military power from the Middle East, including withdrawing all troops from Iraq and refusing to intervene militarily when President Assad used chemical weapons against his own people, despite a red-line injunction from the United States not to do so. Obama and his White House political advisors believed that American withdrawal from the Arab Middle East (if not from the ironclad U.S. commitment to Israel) would lead a new balance of power to form, one policed by regional powers rather than by America. This flawed, amoral, and un-strategic approach has led to a series of hot wars— in Syria, Iraq, and Yemen — the collapse of Arab allies’ confidence in the United States as an ally, as well as an **intensified** cold war with Iran. Despite the international agreement freezing Iran’s nuclear program, Iran’s support for terrorism and hostile insurgencies targeting American allies across its region actually **intensified** during this period. A spheres-of-influence world leaves weaker states to become the victims of stronger or more aggressive ones, and it seeds **insecurity** by removing the reassuring variable of American military guarantees and presence This experience underlines a core problem with a spheres-of-influence world. It leaves weaker states to become the victims of stronger or more aggressive ones, and it seeds insecurity by removing the reassuring variable of American military guarantees and presence. It emboldens American adversaries and leads American allies to take self-help measures that themselves may undercut American security interests. A spheres-of-influence world would also produce contestation of the open global commons that are the basis for the **unprecedented prosperity** produced by the liberal international economic order. Should the Indian and Pacific Oceans, or the Arctic and Mediterranean Seas, become arenas of great-power conflict (like the South China Sea already has thanks to China’s militarization and unilateral assertion of sovereignty over it) as leading states seek to incorporate them into their privileged zones of control, economic globalization would **collapse**, harming the economies of every major power. The United States, because of its sheer power and resource base as well as its relative geographical isolation, might do OK in a spheres-of-influence world. Most of America’s friends and allies would not. Their weakening and insecurity would in turn render the United States weaker and more insecure — since U.S. allies are force-multipliers for American hard and soft power, and since norms like freedom of the global commons are in fact underwritten by that power. More broadly, such a transition would also likely lead to the kind of **hot wars** that **reorder the international balance of power**, including by **incentivizing aggressive states to push out and assert regional dominion**, knowing that America does not have the will or interest to oppose them. The fact that U.S. competitors such as Russia, China, and Iran — all of whom want to weaken the American-led world order — would welcome a spheres-of-influence world is another reason for Americans to oppose it. It would also be ironic if the United States were to back away from its historic commitment to shaping a world that is an idealized vision of America itself — one ruled by laws, norms, institutions, markets, and peaceful settlement of disputes.

#### China is revisionist challenge to the military and economic order—hegemony is key to prevent Chinese aggression and global wars.

Ji Young Choi 18 – (Ji Young Choi, Associate Professor of Politics and Government, Director of East Asia Studies, Affiliate Professor of International Studies, “Historical and Theoretical Perspectives on the Rise of China: Long Cycles, Power Transitions, and China's Ascent,” *Asian Perspective*, Vol. 42, Issue 1, January-March 2018, pages 61-84)//ND

I have explored in light of historical and theoretical perspectives whether China is a candidate to become a global hegemonic power. The next question I will address is whether the ascent of China will lead to a hegemonic war or not. As mentioned previously, historical and theoretical lessons reveal that a rising great power tends to challenge a system leader when the former's economic and other major capabilities come too close to those of the latter and the former is dissatisfied with the latter's leadership and the international rules it created. This means that the rise of China could produce intense hegemonic competition and even a global hegemonic war. The preventive motivation by an old declining power can cause a major war with a newly emerging power when it is combined with other variables (Levy 1987). While a preventive war by a system leader is historically rare, a newly emerging yet even relatively weak rising power at times challenges a much more powerful system leader, as in the case of Japan's attack on Pearl Harbor in 1941 (Schweller 1999). A historical lesson is that "incomplete catch-ups are inherently conflict-prone" (Thompson 2006, 19). This implies that even though it falls short of surpassing the system leader, the rise of a new great power can produce significant instability in the interstate system when it develops into a revisionist power. Moreover, the United States and China are deeply involved in major security issues in East Asia (including the North Korean nuclear crisis, the Taiwan issue, and the South China Sea disputes), and we cannot rule out the possibility that one of these regional conflicts will develop into a much bigger global war in which the two superpowers are entangled. According to Allison (2017), who studied sixteen historical cases in which a rising power confronted an existing power, a war between the United States and China is not unavoidable, but escaping it will require enormous efforts by both sides. Some Chinese scholars (Jia 2009; Wang and Zhu 2015), who emphasize the transformation of China's domestic politics and the pragmatism of Beijing's diplomacy, have a more or less optimistic view of the future of US-China relations. Yet my reading of the situation is that since 2009 there has been an increasing gap between this optimistic view and what has really happened. It is premature to conclude that China is a revisionist state, but in what follows I will suggest some important signs that show China has revisionist aims at least in the Asia Pacific and could develop into a revisionist power in the future. Beijing has concentrated on economic modernization since the start of pro-market reforms in the late 1970s and made efforts to keep a low profile in international security issues for several decades. It followed Deng Xiaoping's doctrine: "hide one's capabilities, bide one's time, and seek the right opportunity." Since 2003, China's motto has been "Peaceful Rise" or "Peaceful Development," and Chinese leadership has emphasized that the rise of China would not threaten any other countries. Recently, however, Beijing has adopted increasingly assertive or even aggressive foreign policies in international security affairs. In particular, China has been adamant about territorial issues in the East and South China Seas and is increasingly considered as a severe threat by other nations in the Asia Pacific region. Since 2009, for example, Beijing has increased naval activities on a large scale in the area of the Diaoyu/Senkaku Islands in the East China Sea. In 2010, Beijing announced that just like Tibet and Taiwan, the South China Sea is considered a core national interest. We can identify drastic rhetorical changes as well. In 2010, China's foreign minister publicly stated, "China is a big country . . . and other countries are small countries and that is just a fact" (Economist 2012). In October 2013, Chinese leader Xi Jinping also used the words "struggle and achieve results," emphasizing the importance of China's territorial integrity (Waldron 2014, 166-167). Furthermore, China has constructed man-made islands in the South China Sea to seek "de facto control over the resource-rich waters and islets" claimed as well by its neighboring countries (Los Angeles Times 2015). As of now, China's strategy is to delay a direct military conflict with the United States as long as possible and use its economic and political prowess to pressure smaller neighbors to give up their territorial claims (Doran 2012). These new developments and rhetorical signals reflect significant changes in China's foreign policies and signify that China's peaceful rise seems to be over. A rising great power's consistent and determined policies to increase military buildups can be read as one of the significant signs of the rising power's dissatisfaction with the existing order and its willingness to do battle if it is really necessary. In the words of Rapkin and Thompson (2003, 318), "arms buildups and arms races . . . reflect substantial dissatisfaction on the part of the challenger and an attempt to accelerate the pace of military catchup and the development of a relative power advantage." Werner and Kugler (1996) also posit that if an emerging challenger's military expenditures are increasing faster than those of a system leader, parity can be very dangerous to the international political order. China's GDP is currently around 60 percent of that of the United States, so parity has not been reached yet. China's military budget, however, has grown enormously for the past two decades (double-digit growth nearly every year), which is creating concerns among neighboring nations and a system leader, the United States. In addition to its air force, China's strengthening navy or sea power has been one of the main goals in its military modernization program. Beijing has invested large financial resources in constructing new naval vessels, submarines, and aircraft carriers (Economist 2012). Furthermore, in its new defense white paper in 2015, Beijing made clear a vision to expand the global role for its military, particularly its naval force, to protect its overseas economic and strategic interests (Tiezzi 2015). Sea power has special importance for an emerging great power. As Mahan (1987 [1890]) explained cogently in one of his classic books on naval strategy, Great Britain was able to emerge as a new hegemonic power because of the superiority of its naval capacity and technology and its effective control of main international sealanes. Naval power has a special significance for China, a newly emerging power, as well as for both economic and strategic reasons. First, its economy's rapid growth requires external expansion to ensure raw materials and the foreign markets to sell its products. Therefore, naval power becomes crucial in protecting its overseas business interests and activities.

#### Heg solves unstable nuclear alliances that cause war

Hayes 18 [Peter Hayes, Nautilus Institute, Berkeley, California, USA; Center for International Security Studies, Sydney University. Trump and the Interregnum of American Nuclear Hegemony. November 8, 2018. <https://www.tandfonline.com/doi/full/10.1080/25751654.2018.1532525>]

During a **post-hegemonic era**, **long-standing** nuclear **alliances** are likely to be **replaced** by **ad hoc nuclear coalitions**, aligning and realigning around different congeries of threat and even actual **nuclear wars**, with **much higher levels** of **uncertainty** and unpredictability **than** was the case in the **nuclear hegemonic system**.

There are a number of ways that this dynamic could play out during the interregnum, and these dynamics are likely to be inconsistent and contradictory. In some instances, the sheer **momentum** of past policy combined with bureaucratic inertia and the potency of political, military service and corporate interests, may ensure that **residual aspects** of the formerly **hegemonic postures** are adhered to even as formal nuclear alliances rupture. Even as they **reach for** the **old anchors**, these states may be forced to adjust and retrench strategically, or start to **take** their own **nuclear risks** by making **increasingly explicit nuclear threats** and deployments against nuclear-armed adversaries – as **Japan** has begun to do with reference to its “technological deterrent” since about 2012.9 This period could last for many years **until and when** **nuclear war breaks out** and leads to a post-nuclear war disorder; or a new, post-hegemonic strategic framework is established to manage and/or abolish nuclear threat.

**Under** full-blown **American nuclear hegemony**, **fewer states** had **nuclear weapons**, the **major nuclear** weapons **states** entered into **legally binding restraints** on force levels and they learned from nuclear near-misses to **promulgate rules** of the road and tacit understandings. The lines drawn during full-blown collisions involving nuclear weapons were stark and concentrated the minds of leaders greatly. In a nuclear duel, it was clear that only one of two sides could fire first; the only question was which one. Now, with nine nuclear weapons states, and conflicts conceivably involving three, four or more of them, no matter how much leaders concentrate, it will not be evident who is aiming at who, who may fire first, and during a volley, who fired first and even who hit whom.

In a highly proliferated world, nuclear-armed states may feel driven to obtain larger nuclear forces able to deter multiple adversaries at the same time, sufficient to conduct not only a few nuclear attacks but configured to fight **more than one** protracted **nuclear war** **at a time**, especially in nuclear states torn apart by civil war and post-nuclear attack reconstruction. The first time nuclear weapons are used since 1945 will be shocking, the second time, less so, the third time, the **new normal**.

#### US hegemony is key to prevent regional conflicts from going nuclear – China is uniquely destabilizing.

Edelman, PhD, and Roughead et al. 18 (Co-chairs: Eric, USDiplomaticHistory@Yale, FormerUSAmbassador, Gary, FormerUSAdmiral/ChiefOFNavalOperations Fellow@Hoover, Authors: Christine Fox, FormerDeuptySecrataryOfDefense, Kathleen Hicks, PhD PoliSci@MIT, DirectorInternationalSecurity@CSIS, Jack Keane, Retired-4StarGeneral, FormerViceCheifOfStaff-Army, HonPhD PublicService@EasternKentucky, Andrew Krepinevich, PhD Harvard, President@CenterForStrategicAndBidgetaryAssesments, RetiredArmyLt.Col., Jon Kyl, FormerArizonaSenator, JD@UArizona, Thomas Mahnken, PhD InternationalAffairs@JohnsHopkins, ProfStrategicStudies@JohnsHopkins, MA PublicPolicy@Penn, FormerDOD-UndersecrataryOfDefense+CFO, Michael Morell, FormerDirectorOfTheCIA, MA Econ@Gtown, Anne Patterson, FormerUSAmbassador, FormerAssistSecrataryOfState-NearEasternAffairs, Roger Zakheim, MPhil IR@Cambridge, FormerDepAssistSecrataryOfDefense, FormerDeputyStaffDirector-USHouseArmedServicesCommitee) Providing for the Common Defense: The Assessment and Recommendations of the National Defense Strategy Commission, United States Institute of Peace 2018 https://www.usip.org/sites/default/files/2018-11/providing-for-the-common-defense.pdf

Our specific findings are outlined in the text. But at the outset, we wish to underscore the central theme of this report: There is a need for extraordinary urgency in addressing the crisis of national defense. We believe that the NDS is a broadly constructive document that identifies most of the right objectives and challenges. Yet we are deeply concerned that the Department of Defense and the nation as a whole have not yet addressed crucial issues such as force sizing, developing innovative op- erational concepts, readiness, and resources with the degree of urgency, persistence, and analytic depth that an increasingly dangerous world demands. Put bluntly, the American people and their elected representatives must understand that U.S. military superiority is not guaranteed, that many global trends are adverse and threatening, and that the nation has reached a pivotal moment regarding its ability to defend its vital interests and preserve a world in which the United States and other like-minded nations can thrive. The choices we make today and in the immediate future will have profound and potentially lasting consequences for American security and influence. If we do not square up to the challenge now, we will surely regret it.1 Chapter 1 The Purpose of American Military Power and the Crisis of National Defense Any defense strategy must protect the fundamental interests of the United States. Since the inception of the Republic, America’s most vital interests have remained constant. They include the physical security of the United States and its citizens; the promotion of a strong, innovative, and growing U.S. economy; and the protection of the nation’s democratic freedoms and domestic institutions. These interests were enshrined in the Declaration of Independence as “life, liberty, and the pursuit of happiness,” and collectively, they represent the pole star toward which any American strategy must be oriented. Since the mid-20th century, there has been a bipartisan consensus that America should take an international leadership role to secure these interests. The events of the 1930s and 1940s showed that the United States could not remain prosperous in a world ravaged by global depression, nor could it remain safe in a world convulsed by instability and war. Moreover, these events illustrated to Americans the danger that their own free institutions might not survive in a world ruled by hostile autocracies. As a result, Americans and their elected leaders concluded that the United States must use its unmatched power to foster a larger global environment in which America could thrive. This endeavor has often been referred to as building the “liberal international order,” but it simply reflects the common-sense idea that America will be most secure, prosperous, and free in a world that is itself secure, prosperous, and free. This straightforward judgment has underpinned the sustained global leadership the United States has exercised since the 1940s. America has anchored an open global economy in which trade and investment flow freely and Americans can see their creative energies rewarded. It has built international institutions that facilitate problem-solving and cooperation on important global issues. It has defended democratic values and human rights abroad in order to enhance U.S. influence and safeguard democratic values and human rights at home. It has sought to uphold favorable balances of power in key regions and concluded military alliances and security partnerships with dozens of like-minded countries— not as a matter of charity, but as a way of deterring aggression and preventing conflicts that could pose a serious threat to U.S. national security and prosperity. These have not been Republican policies or Democratic policies; they have been American policies, meant to create a world conducive to American interests and values. The role of alliances and partnerships deserves special emphasis here. U.S. alliances and partnerships are sometimes mischaracterized as arrangements that squander American resources on behalf of free-riding foreign countries. In reality, U.S. alliances and partnerships have been deeply rooted in American self-interest. They have served as force-multipliers for U.S. influence, by promoting institutionalized cooperation between America and like-minded nations. They have allowed America to call on the aid of its friends in every major conflict it has waged since World War II. They have buttressed the concept of international order that the United States seeks to preserve, by enlisting other nations in the promotion of a world favorable to American interests. They have provided intelligence support, regional expertise, and other critical assistance. In short, alliances and partnerships rooted in shared interests and mutual respect have reduced the price America pays for global leadership and enhanced the advantages America enjoys over any geopolitical rival. And although these alliances and partnerships—like all of America’s postwar policies—have required the persistent use of diplomacy, economic power, and other tools of statecraft, they have ultimately rested on a foundation of military strength. Since World War II, America has had a military second to none. After the Cold War, it possessed military power far greater than that of any rival or group of rivals. This position of unmatched strength has provided for the defense and security of the United States, American citizens overseas, and American allies and partners. It has been crucial to deterring and, if necessary, defeating aggression by hostile powers, whether the Soviet Union and its allies during the Cold War or al-Qaeda and Islamic State in Iraq and al-Sham (ISIS) more recently. It has preserved stability in key regions from Europe to East Asia and beyond, and ensured the freedom of the global commons on which U.S. and international prosperity depends. It has prevented America from being coerced or intimidated, or once again finding itself the situation of the early 1940s, when democracy itself was endangered because aggressive authoritarian powers were on the verge of dominating the globe. It has given the United States unrivaled influence on a wide range of global issues. America’s leadership role has never been inexpensive or easy to play, and today many Americans are questioning whether it is worth the cost. But by any reasonable standard, U.S. global engagement has been a great investment. U.S. leadership has prevented a recurrence of the devastating world wars that marked the first half of the 20th century and required repeated U.S. interventions at a cost of hundreds of thousands of American lives. That leadership has also fostered an unprecedented growth in human freedom, with the number of democracies rising from roughly a dozen during World War II to 120 in the early 21st century. And as democracies displaced dictatorships, America itself became more secure and influential. The growth of prosperity has been even more astounding. According to World Bank data, inflation-adjusted U.S. gross domestic product has increased nearly six-fold since 1960. Both U.S. and global per capita income have also increased roughly three-fold (also in inflation-adjusted terms) over the same period. To be clear, the evolution of the economy in recent decades has left too many of our citizens behind, and it is essential that all benefit from our national prosperity. On the whole, however, both the United States and the world are far richer than they would have been absent the open international economy America has fostered. Here, too, American policy has been successful in what it has avoided as well as what it has achieved: the world has not suffered another global depression that would cause rampant poverty, political radicalism, and international aggression, and that would surely lead to catastrophic effects for the United States. Decades of experience have taught that American leadership is not a fool’s errand or a matter of altruism, but a pragmatic approach to advancing American security and wellbeing. There is little reason to think the situation has changed today. The fundamental lesson of the 1930s and 1940s—that no country is an island— remains as relevant as ever. If anything, as the world becomes increasingly interdependent, the security and prosperity of the United States are becoming ever more closely linked to the health of the larger international environment. And although the United States has many powerful allies, none of them can fill the singular role America has played in providing the international peace, stability, and prosperity in which the United States itself has flourished. U.S. leadership of a stable and open international environment remains as profoundly in the country’s own national interests as it was more than seven decades ago. Unfortunately, in recent years changes at home and abroad have eroded American military advantages and threatening U.S. interests. The Changing Strategic Environment After the Cold War, the United States faced a relatively benign security environment. There remained dangerous challenges to U.S. interests and—as shown by the terrorist attacks of September 11, 2001—the American homeland. Yet tensions between the world’s major powers were historically low, and the actors that threatened the United States, from so-called rogue states to jihadist terror organizations, were compar- atively weak. Today, however, the international landscape is more ominous. The United States confronts the most challenging security environment in decades. Six trends are particularly worthy of note. First, and most important, is the rise of major-power competition and conflict. The world America shaped has brought great security and prosperity to many countries. Yet today, powerful authoritarian rivals— China and Russia—see U.S. leadership as a barrier to their ambitions. These countries seek to overturn existing regional balances of power and re-create spheres of influence in which they can dominate their neighbors’ economic, diplomatic, and security choices. They are also seeking to project power and exert influence beyond their peripheries. They are pursuing their agendas, moreover, through the use of coercion, intimidation, and in some cases outright aggression, all backed by major military buildups that specifically target U.S. military advantages and alliance commitments and relationships. The challenge China presents is particularly daunting. It is natural for China to exert greater influence as its power grows, and the rise of China would present challenges for America and the world even if Beijing pursued its interests through entirely legitimate means. Unfortunately, China is increasingly exerting influence in illegitimate and destabilizing ways. China is using military, paramilitary, and diplomatic measures to coerce U.S. allies and partners from Japan to India; contest international law and freedom of navigation in crucial waterways such as the South China Sea; undermine the U.S. position in East and Southeast Asia; and other- wise seek a position of geopolitical dominance. It is using predatory economic statecraft to weaken its rivals, including the United States, and give it decisive strategic leverage over its neighbors. Meanwhile, China is reaping the fruits of a multi-decade military buildup. Beijing has invested in systems designed to counter American power-projection and thereby prevent the United States from protecting its allies, partners, and economic interests. China is also modernizing its nuclear forces, developing sophisticated power-projection capabilities, and undertaking the most thoroughgoing military reforms since the founding of the People’s Republic. China already presents a severe test of U.S. interests in the Indo-Pacific and beyond and is on a path to become, by mid-century, a military challenger the likes of which America has not encountered since the Cold War-era Soviet Union. Russia, too, is pursuing regional hegemony and global influence in destabilizing ways. Moscow has invaded and dismembered neighboring states, used cyberwarfare and other tactics to attack democratic nations’ political systems, and employed measures from military intimidation to information warfare to undermine and weaken NATO and the European Union. Russia has intervened militarily in Syria to bolster Bashar al-Assad’s brutal regime and restore lost influence in the Middle East, while supporting many other authoritarian governments. Across these in- itiatives, the Putin regime has demonstrated a propensity for risk-taking backed up by enhanced military power. Moscow has developed ad- vanced conventional capabilities meant to prevent America from project- ing power and aiding its allies along Russia’s periphery and to project its own power farther afield. Russia is also conducting a comprehensive nuclear modernization, including sustainment and modernization of a large number of non-strategic nuclear weapons and the development of a ground-launched cruise missile that violates the Intermediate-Range Nuclear Forces Treaty. These developments are accompanied by Russian doctrinal writings that emphasize the prospect of using limited nuclear escalation to control the trajectory of a potential conflict against the United States and NATO. Russia is seeking to create situations of military strength vis-à-vis America and its allies, and despite its limited resource base, it is having considerable success. Second, aggressive regional challengers—notably North Korea and Iran—are expanding their military capabilities consistent with their geopolitical ambitions. The United States and its allies have faced threats from a brutal, erratic, and aggressive North Korea for decades, but never before has Pyongyang possessed such destructive power. North Korea may already have the capability to detonate a nuclear weapon over a major American city; the regime also continues to develop biological, chemical, and conventional capabilities as a way of guaranteeing its sur- vival and coercing adversaries. Today, Kim Jong Un’s military can threaten America more directly than his father or grandfather. He can also exert great pressure on U.S. alliances with South Korea and Japan, sowing doubt about whether America would defend those allies in a cri- sis. This Commission hopes that ongoing negotiations will lead to the complete, verifiable, and irreversible denuclearization of North Korea, but the history of U.S.-North Korean negotiations give little cause for optimism. Even successful negotiations would leave America facing sig- nificant security challenges on the Korean Peninsula and in East Asia, most significantly the robust ballistic missile threat posed to our allies, Japan and the Republic of Korea. The threat from Iran, another longtime U.S. adversary and the world’s foremost state sponsor of terrorism, has also worsened. Iran has skillfully utilized asymmetric tactics including terrorism, the weaponization of sectarianism, support for insurgent groups, and a reliance on proxy and special operations forces to weaken U.S. influence and pursue hegemony in the Middle East. Iranian military capabilities are growing in areas such as unmanned aerial vehicles and explosive boats, advanced naval mines and submarines, more sophisticated cyber forces, and anti-ship and land- attack cruise missiles. Iran is also expanding what is already the largest ballistic missile force in the region. In a conflict with the United States, Iran could use these capabilities to obstruct freedom of navigation in regional waterways, target U.S. military facilities and critical infrastructure in the Persian Gulf, and otherwise inflict substantial costs on America and its partners. The challenges of major power conflict and aggressive regional challengers are linked by a third, which is the growing prevalence of aggression and conflict in the gray zone—the space between war and peace. The means of gray-zone conflict include everything from strong-arm diplomacy and economic coercion, to media manipulation and cyber- attacks, to use of paramilitaries and proxy forces. Singly or in combination, such tactics confound or gradually weaken an adversary’s positions or resolve without provoking a military response.

#### Goes nuclear – extinction.

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The tensions stoked by the assertive regimes in the Kremlin or Tiananmen Square could spark a political or military incident that might set off a chain reaction leading to a large-scale war. Historically, powerful rivalries nearly always lead to at least skirmishes, if not a full-blown war. The anomalous Cold War era spared the United States and Soviet Russia a direct conflict, largely from concerns that one would trigger a nuclear exchange destroying both states and much of the world. Such a repetition might reoccur in the unfolding three-cornered geopolitical world. It seems safe to acknowledge that an ascendant China and a resurgent Russia will persist in their geo-strategic ambitions. What Is To Be Done? The first marching order is to dodge any kind of perpetual war of the sort that George Orwell outlined in “1984,” which engulfed the three super states of Eastasia, Eurasia, and Oceania, and made possible the totalitarian Big Brother regime. A long-running Cold War-type confrontation would almost certainly take another form than the one that ran from 1945 until the downfall of the Soviet Union. What prescriptions can be offered in the face of the escalating competition among the three global powers? First, by staying militarily and economically strong, the United States will have the resources to deter its peers’ hawkish behavior that might otherwise trigger a major conflict. Judging by the history of the Cold War, the coming strategic chess match with Russia and China will prove tense and demanding—since all the countries boast nuclear arms and long-range ballistic missiles. Next, the United States should widen and sustain willing coalitions of partners, something at which America excels, and at which China and Russia fail conspicuously. There can be little room for error in fraught crises among nuclear-weaponized and hostile powers. Short- and long-term standoffs are likely, as they were during the Cold War. Thus, the playbook, in part, involves a waiting game in which each power looks to its rivals to suffer grievous internal problems which could entail a collapse, as happened to the Soviet Union.