## fwk

#### Negate the framework and prefer util

#### 1] Pleasure and pain are the starting point for moral reasoning—they’re our most baseline desires and the only things that explain the intrinsic value of objects or actions

Moen 16, Ole Martin (PhD, Research Fellow in Philosophy at University of Oslo). "An Argument for Hedonism." Journal of Value Inquiry 50.2 (2016): 267.

Let us start by observing, empirically, that **a widely shared judgment about intrinsic value** and disvalue **is that pleasure is intrinsically valuable and pain is intrinsically disvaluable**. On virtually any proposed list of intrinsic values and disvalues (we will look at some of them below), pleasure is included among the intrinsic values and pain among the intrinsic disvalues. This inclusion makes intuitive sense, moreover, for **there is something undeniably good about the way pleasure feels and something undeniably bad about the way pain feels**, and neither the goodness of pleasure nor the badness of pain seems to be exhausted by the further effects that these experiences might have. “Pleasure” and “pain” **are** here **understood inclusively**, as encompassing anything hedonically positive and anything hedonically negative. 2 The special value statuses of pleasure and pain are manifested in how we treat these experiences in our everyday reasoning about values. If you tell me that you are heading for the convenience store**, I might ask: “What for**?” This is a reasonable question, for when you go to the convenience store you usually do so, not merely for the sake of going to the convenience store, but for the sake of achieving something further that you deem to be valuable. You might answer, for example: “To buy soda.” This answer makes sense, for soda is a nice thing and you can get it at the convenience store. I might further inquire, however: “What is buying the soda good for?” This further question can also be a reasonable one, for it need not be obvious why you want the soda. You might answer: “Well, I want it for the pleasure of drinking it.” If I then proceed by asking “But what is the pleasure of drinking the soda good for?” the discussion is likely to reach an awkward end. **The reason is that the pleasure is not good for anything further; it is simply that for which going to the convenience store and buying the soda is good**. 3 As Aristotle observes: “**We never ask** [a man] **what** his **end is in being pleased, because we assume that pleasure is choice worthy in itself**.”4 Presumably, a similar story can be told in the case of pains, for if someone says “This is painful!” we never respond by asking: “And why is that a problem?” We take for granted that **if something is painful, we have a sufficient explanation of why it is bad**. If we are onto something in our everyday reasoning about values, it seems that **pleasure and pain are both places where we reach the end of the line in matters of value**. Although **pleasure and pain thus seem to be good candidates for intrinsic value and disvalue**, several objections have been raised against this suggestion: (1) that pleasure and pain have instrumental but not intrinsic value/disvalue; (2) that pleasure and pain gain their value/disvalue derivatively, in virtue of satisfying/frustrating our desires; (3) that there is a subset of pleasures that are not intrinsically valuable (so-called “evil pleasures”) and a subset of pains that are not intrinsically disvaluable (so-called “noble pains”), and (4) that pain asymbolia, masochism, and practices such as wiggling a loose tooth render it implausible that pain is intrinsically disvaluable. I shall argue that these objections fail. Though it is, of course, an open question whether other objections to P1 might be more successful, I shall assume that if (1)–(4) fail, we are justified in believing that P1 is true itself a paragon of freedom—there will always be some agents able to interfere substantially with one’s choices. The effective level of protection one enjoys, and hence one’s actual degree of freedom, will vary according to multiple factors: how powerful one is, how powerful individuals in one’s vicinity are, how frequent police patrols are, and so on. Now, we saw above that what makes a slave unfree on Pettit’s view is the fact that his master has the power to interfere arbitrarily with his choices; in other words, what makes the slave unfree is the power relation that obtains between his master and him. The difﬁculty is that, in light of the facts I just mentioned, there is no reason to think that this power relation will be unique. A similar relation could obtain between the master and someone other than the slave: absent perfect state control, the master may very well have enough power to interfere in the lives of countless individuals. Yet it would be wrong to infer that these individuals lack freedom in the way the slave does; if they lack anything, it seems to be security. A problematic power relation can also obtain between the slave and someone other than the master, since there may be citizens who are more powerful than the master and who can therefore interfere with the slave’s choices at their discretion. Once again, it would be wrong to infer that these individuals make the slave unfree in the same way that the master does. Something appears to be missing from Pettit’s view. If I live in a particularly nasty part of town, then it may turn out that, when all the relevant factors are taken into account, I am just as vulnerable to outside interference as are the slaves in the royal palace, yet it does not follow that our conditions are equivalent from the point of view of freedom. As a matter of fact, we may be equally vulnerable to outside interference, but as a matter of right, our standings could not be more different. I have legal recourse against anyone who interferes with my freedom; the recourse may not be very effective—presumably it is not, if my overall vulnerability to outside interference is comparable to that of a slave— but I still have full legal standing.68 By contrast, the slave lacks legal recourse against the interventions of one speciﬁc individual: his master. It is that fact, on a Kantian view—a fact about the legal relation in which a slave stands to his master—that sets slaves apart from freemen. The point may appear trivial, but it does get something right: whereas one cannot identify a power relation that obtains uniquely between a slave and his master, the legal relation between them is undeniably unique. A master’s right to interfere with respect to his slave does not extend to freemen, regardless of how vulnerable they might be as a matter of fact, and citizens other than the master do not have the right to order the slave around, regardless of how powerful they might be. This suggests that Kant is correct in thinking that the ideal of freedom is essentially linked to a person’s having full legal standing. More speciﬁcally, he is correct in holding that the importance of rights is not exhausted by their contribution to the level of protection that an individual enjoys, as it must be on an instrumental view like Pettit’s. Although it does matter that rights be enforced with reasonable effectiveness, the sheer fact that one has adequate legal rights is essential to one’s standing as a free citizen. In this respect, Kant stays faithful to the idea that freedom is primarily a matter of standing—a standing that the freeman has and that the slave lacks. Pettit himself frequently insists on the idea, but he fails to do it justice when he claims that freedom is simply a matter of being adequately (and reliably) shielded against the strength of others. As Kant recognizes, the standing of a free citizen is a more complex matter than that. One could perhaps worry that the idea of legal standing is something of a red herring here—that it must ultimately be reducible to a complex network of power relations and, hence, that the position I attribute to Kant differs only nominally from Pettit’s. That seems to me doubtful. Viewing legal standing as essential to freedom makes sense only if our conception of the former includes conceptions of what constitutes a fully adequate scheme of legal rights, appropriate legal recourse, justiﬁed punishment, and so on. Only if one believes that these notions all boil down to power relations will Kant’s position appear similar to Pettit’s. On any other view—and certainly that includes most views recently defended by philosophers—the notion of legal standing will outstrip the power relations that ground Pettit’s theory.

#### 2] The only way we can determine would a shared goal should be – the only reason we care about capitalism is because they say it causes pain, thus we evaluate on util

#### 3] Conflict is inevitable – util allows us to have a more realistic way of viewing problems and allowing us to come up with solutions

#### 4] Allows us to mediate conflicting goals – under their fwk everyone should have the same moral goals but the only way to determine what goals ought to be prioritized is through a util lens

#### Also prefer extinction impacts:

#### 1] Prerequisite – Humankind is the sole conferrer of morality therefore extinction is a prerequisite to other frameworks

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I agree with Jonas that the imperative of responsibility, that humankind ought to exist, is the first ethical priority of all, since it is the premise which makes any subsequent kind of moral argumentation possible. Within this broad imperative there are three further practical ramifications which we can derive, based on the fact that there are three major ways to avoid human extinction on Earth (Green, 2017, p. 11).  First, to avoid human extinction on Earth, humankind is morally obligated to preserve the preconditions of its own existence, through mitigating and adapting to existential and global catastrophic risks, protecting the environment, solidifying world peace, controlling and limiting dangerous technologies, reducing natural hazards, etc.  Second, to avoid going extinct on Earth, we can move off-planet. This is vital because even if we do manage to preserve Earth from planetary-scale disaster for a very long time, the statistical risk can never be fully expunged. Therefore, to avoid “having all our eggs in one basket” humankind is morally obligated to grow to new places in the cosmos, to ensure that a single planetary disaster cannot wipe out all of us.  Third, another way (besides mass-death) for humankind to go extinct would be to evolve away from being human, and specifically relevant in this case, away from having a moral capacity. Therefore humanity is under the moral obligation not to direct its evolution away from having a moral capacity, whether through biotechnological, electronic, AI-enabled, or other means. This is a caution against transhumanism, as those who seek to “enhance” humanity into new forms may actually be degrading us (especially if those modifications impinged upon free will and agency) (Green, 2015, p. 211). The first and third of these ramifications might seem relatively easy – most of the risk reduction could be accomplished just by not doing certain unethical things. This is certainly the case for the third, however, for the first, the actions are already being done and we are now in a distinctively bad place where humanity is trapped in deterrent situations with terrible weapons and more, even worse weapons on the way. The first is thus an extremely difficult problem to solve. Furthermore, because no matter what humans do our risk of extinction on Earth cannot be reduced to zero (given natural risks and statistical uncertainties), we therefore ought to examine the second ramification. The second ramification, by contrast to the first and third ramifications (which focus on refraining from bad activities, and thus actually involve lack of action and not spending money), might seem particularly difficult, unpleasant, and ludicrously expensive (though cost should give us less pause considering the existence of the concept of money is itself at stake). However, given the difficulties of ramification one (i.e. that it is politically extremely difficult as well as, given natural threats, statistically impossible), ramification two must be pursued, and, given our present situation, pursued as quickly as possible. It is ethically imperative that we grow human civilization into space. The need for speed Humanity seems to be the only one of its kind: a species capable of deeply considering morality. This ability to tell right from wrong and recognize good and evil is of moral value because moral value itself cannot exist without it. Nihilists and adherents of error theory might still assert that humankind’s existence is irrelevant or insignificant, but they could not assert a moral “ought” to their argument. In opposition to those who have no problem with the death of humanity, those who see moral value in the existence of moral value see people as precious and rare in an otherwise non-living, nonmoral universe. With no current evidence of other morally-capable life anywhere, humanity is apparently burdened with a gift that exists nowhere else in the universe. Given this possibility, the extreme danger to which that gift is now subjected, and the difficultly in resolving that danger, settling a self-sustaining group of humans off-planet as soon as possible, despite the intrinsic danger and difficulty, becomes an ethical mandate. But how fast ought we to pursue this end? Because of the intrinsic uncertainty of risks and of judgments about risks, time of the essence (Sandberg, Drexler, Ord, 2018). We have no idea exactly how much danger we are in, but we know it is approaching, or already is, existential (Bostrom, 2002). Extinction looms, waiting to kill the only morally capable creature in the universe. We can do something to stop this extinction; we can save the existence of morality itself. Our duty, then, must be to try to save it, with as great certainty and determination as possible.

#### 2] Cognitive biases – extinction is more likely than we think

GPP 17 (Global Priorities Project, Future of Humanity Institute at the University of Oxford, Ministry for Foreign Affairs of Finland, “Existential Risk: Diplomacy and Governance,” Global Priorities Project, 2017, <https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf>,

1.2. THE ETHICS OF EXISTENTIAL RISK In his book Reasons and Persons, Oxford philosopher Derek Parfit advanced an influential argument about the importance of avoiding extinction: I believe that if we destroy mankind, as we now can, this outcome will be much worse than most people think. Compare three outcomes: (1) Peace. (2) A nuclear war that kills 99% of the world’s existing population. (3) A nuclear war that kills 100%. (2) would be worse than (1), and (3) would be worse than (2). Which is the greater of these two differences? Most people believe that the greater difference is between (1) and (2). I believe that the difference between (2) and (3) is very much greater. ... The Earth will remain habitable for at least another billion years. Civilization began only a few thousand years ago. If we do not destroy mankind, these few thousand years may be only a tiny fraction of the whole of civilized human history. The difference between (2) and (3) may thus be the difference between this tiny fraction and all of the rest of this history. If we compare this possible history to a day, what has occurred so far is only a fraction of a second.65 In this argument, it seems that Parfit is assuming that the survivors of a nuclear war that kills 99% of the population would eventually be able to recover civilisation without long-term effect. As we have seen, this may not be a safe assumption – but for the purposes of this thought experiment, the point stands. What makes existential catastrophes especially bad is that they would “destroy the future,” as another Oxford philosopher, Nick Bostrom, puts it.66 This future could potentially be extremely long and full of flourishing, and would therefore have extremely large value. In standard risk analysis, when working out how to respond to risk, we work out the expected value of risk reduction, by weighing the probability that an action will prevent an adverse event against the severity of the event. Because the value of preventing existential catastrophe is so vast, even a tiny probability of prevention has huge expected value.67 Of course, there is persisting reasonable disagreement about ethics and there are a number of ways one might resist this conclusion.68 Therefore, it would be unjustified to be overconfident in Parfit and Bostrom’s argument. In some areas, government policy does give significant weight to future generations. For example, in assessing the risks of nuclear waste storage, governments have considered timeframes of thousands, hundreds of thousands, and even a million years.69 Justifications for this policy usually appeal to principles of intergenerational equity according to which future generations ought to get as much protection as current generations.70 Similarly, widely accepted norms of sustainable development require development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs.71 However, when it comes to existential risk, it would seem that we fail to live up to principles of intergenerational equity. Existential catastrophe would not only give future generations less than the current generations; it would give them nothing. Indeed, reducing existential risk plausibly has a quite low cost for us in comparison with the huge expected value it has for future generations. In spite of this, relatively little is done to reduce existential risk. Unless we give up on norms of intergenerational equity, they give us a strong case for significantly increasing our efforts to reduce existential risks. 1.3. WHY EXISTENTIAL RISKS MAY BE SYSTEMATICALLY UNDERINVESTED IN, AND THE ROLE OF THE INTERNATIONAL COMMUNITY In spite of the importance of existential risk reduction, it probably receives less attention than is warranted. As a result, concerted international cooperation is required if we are to receive adequate protection from existential risks. 1.3.1. Why existential risks are likely to be underinvested in There are several reasons why existential risk reduction is likely to be underinvested in. Firstly, it is a global public good. Economic theory predicts that such goods tend to be underprovided. The benefits of existential risk reduction are widely and indivisibly dispersed around the globe from the countries responsible for taking action. Consequently, a country which reduces existential risk gains only a small portion of the benefits but bears the full brunt of the costs. Countries thus have strong incentives to free ride, receiving the benefits of risk reduction without contributing. As a result, too few do what is in the common interest. Secondly, as already suggested above, existential risk reduction is an intergenerational public good: most of the benefits are enjoyed by future generations who have no say in the political process. For these goods, the problem is temporal free riding: the current generation enjoys the benefits of inaction while future generations bear the costs. Thirdly, many existential risks, such as machine superintelligence, engineered pandemics, and solar geoengineering, pose an unprecedented and uncertain future threat. Consequently, it is hard to develop a satisfactory governance regime for them: there are few existing governance instruments which can be applied to these risks, and it is unclear what shape new instruments should take. In this way, our position with regard to these emerging risks is comparable to the one we faced when nuclear weapons first became available. Cognitive biases also lead people to underestimate existential risks. Since there have not been any catastrophes of this magnitude, these risks are not salient to politicians and the public.72 This is an example of the misapplication of the availability heuristic, a mental shortcut which assumes that something is important only if it can be readily recalled. Another cognitive bias affecting perceptions of existential risk is scope neglect. In a seminal 1992 study, three groups were asked how much they would be willing to pay to save 2,000, 20,000 or 200,000 birds from drowning in uncovered oil ponds. The groups answered $80, $78, and $88, respectively.73 In this case, the size of the benefits had little effect on the scale of the preferred response. People become numbed to the effect of saving lives when the numbers get too large. 74 Scope neglect is a particularly acute problem for existential risk because the numbers at stake are so large. Due to scope neglect, decision-makers are prone to treat existential risks in a similar way to problems which are less severe by many orders of magnitude. A wide range of other cognitive biases are likely to affect the evaluation of existential risks.75

#### 3] Epistemic modesty – Can’t rule out that util is true therefore extinction still outweighs

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

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

## Mining DA

#### Commercial asteroid mining is coming now – lower costs and improving tech make it economically viable – and the legal basis is already in place in multiple countries– that helps acquire water for rocket fuel and rare earth metals

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**Space exploration is back**. after decades of disappointment, a combination of better technology, falling costs and a rush of competitive energy from the private sector has put space travel **front and center**. indeed, many analysts (even some with their feet on the ground) believe that commercial developments in the space industry may be on the cusp of starting the largest resource rush in history: **mining on the Moon**, Mars and **asteroids**. While this may sound fantastical, some baby steps toward the goal have already been taken. Last year, NASA awarded contracts to four companies to extract small amounts of lunar regolith by 2024, effectively **beginning the era of commercial space mining**. Whether this proves to be the dawn of a gigantic adjunct to mining on earth — and more immediately, a key to unlocking cost-effective space travel — will turn on the answers to a host of questions ranging from what resources can be efficiently. As every fan of science fiction knows, the resources of the solar system appear **virtually unlimite**d compared to those on Earth. There are whole other planets, dozens of moons, thousands of massive asteroids and millions of small ones that doubtless contain humungous quantities of materials that are scarce and very valuable (back on Earth). Visionaries including Jeff Bezos imagine heavy industry moving to space and Earth becoming a residential area. However, as entrepreneurs look to harness the riches beyond the atmosphere, access to space resources remains tangled in the realities of economics and governance. Start with the fact that space belongs to no country, complicating traditional methods of resource allocation, property rights and trade. With limited demand for materials in space itself and the need for huge amounts of energy to return materials to Earth, creating a viable industry will turn on major advances in technology, finance and business models. That said, there’s no grass growing under potential pioneers’ feet. Potential economic, scientific and even security benefits underlie an emerging geopolitical competition to pursue space mining. The United States is rapidly emerging as a front-runner, in part due to its ambitious Artemis Program to lead a multinational consortium back to the Moon. But it is also a leader in **creating a legal infrastructure for mineral exploitation**. The United States has adopted the world’s first spaceresources law, recognizing the property rights of private companies and individuals to materials gathered in space. However, the United States is hardly alone. Luxembourg and the United Arab Emirates (you read those right) are racing to codify space-resources laws of their own, hoping to attract investment to their entrepot nations with business-friendly legal frameworks. China reportedly views space-resource development as a national priority, part of a strategy to challenge U.S. economic and security primacy in space. Meanwhile, Russia, Japan, India and the European Space Agency all harbor space-mining ambitions of their own. Governing these emerging interests is an outdated treaty framework from the Cold War. Sooner rather than later, we’ll need new agreements to facilitate private investment and ensure international cooperation. What’s Out There Back up for a moment. For the record, space is already being heavily exploited, because space resources include non-material assets such as orbital locations and abundant sunlight that enable satellites to provide services to Earth. Indeed, satellite-based telecommunications and global positioning systems have become indispensable infrastructure underpinning the modern economy. Mining space for materials, of course, is another matter. In the past several decades, planetary science has confirmed what has long been suspected: celestial bodies are potential sources for dozens of natural materials that, in the right time and place, are **incredibly valuable**. Of these, water may be the most attractive in the near-term, because — with assistance from solar energy or nuclear fission — H2O can be split into hydrogen and oxygen to make **rocket propellant**, facilitating in-space refueling. So-called “**rare earth” metals** are also **potential targets** of asteroid miners intending to service Earth markets. Consisting of 17 elements, including lanthanum, neodymium, and yttrium, these critical materials (most of which are today mined in China at great environmental cost) **are required for electronic**s. **And they loom as bottlenecks in making the transition from fossil fuels to renewables backed up by battery storage.**

#### Non-appropriation laws wreck legal certainty required for investor confidence in asteroid mining

Campo 21 [Jose A. Martin del Campo, J.D. Candidate at Texas A&M University School of Law, 3-23-2021, “Finders K Finders Keepers: Who Has Say Over Private Property in Space,” Texas A&M Journal of Property Law, https://scholarship.law.tamu.edu/cgi/viewcontent.cgi?article=1155&context=journal-of-property-law]/Kankee

I. INTRODUCTION On October 4, 1957, the Space Age officially began when the Soviet Union launched Sputnik into orbit, the first successful, human-made satellite.1 A little more than a decade later, on July 20, 1969, American astronauts Neil Armstrong and Edwin “Buzz” Aldrin became the first humans to land and step foot on the moon.2 Neil Armstrong marked the completion of John F. Kenney’s national goal of landing an astronaut on the moon when he radioed back to Earth “[t]hat’s one small step for man, one giant leap for mankind.”3 The launch of Sputnik, the moon landing, and other endeavors achieved by the scientific community, kick-started a chain of events leading to the current ambition of exploring outer space and mining resources throughout the solar system. The push for unlocking low-cost space travel and space industrialization by entrepreneurs, like Elon Musk and Jeff Bezos, propels the search for extraterrestrial materials such as water and minerals.4 According to NASA, minerals found in the asteroid belt between Mars and Jupiter contain an estimated value of approximately $100 billion for every person on Earth.5 However, uncertainty lingers because private entities are unsure that they will possess property rights to their payload or the mined celestial body.6 Celestial bodies refer to naturally occurring objects in space. The United States Commercial Space Transportation Advisory Committee (“COMSTAC”), an advisory body to the Federal Aviation Administration’s (“FAA”) Office of Commercial Space Transportation (“FAA-AST”), has undertaken review regarding the granting of private property licenses.7 COMSTAC expressed a desire to confirm that private entity resource extractions may be owned and utilized as it deems appropriate.8 The current framework of space law is a combination of agreements with the foundation of space law consisting of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (“Outer Space Treaty”).9 At the time of signing, the Outer Space Treaty hoped to foster cooperative and peaceful exploration of outer space without discrimination of any kind.10 However, Article II of the Outer Space Treaty contains the bane of private property rights in outer space, which forbids the national appropriation of the moon and other celestial bodies.11 While the Outer Space Treaty explicitly mentions the prohibition of public entities claiming celestial bodies, private enterprises risk failing to have their interest in property rights recognized by the global community. Private entities and investors grapple with the issues pertaining to their rights to mine and extract resources from outer space legally. Without further international recognition of their property rights, private entities may shy away from exploring the concept of celestial mining. The issue of not knowing what laws are applicable, or to whom private companies are accountable, impedes the progress private entities make in achieving their goal of harvesting extraterrestrial resources. Private entities fear that the non-appropriation clause of Article II of the Outer Space Treaty, the epicenter of the issue, will strip them of the right to transport their mined resources back to Earth. A new legal regime will likely need to be formed that facilitates the continuation of innovation and promotes the exploration of outer space. Whether or not past private and public international doctrines, i.e., the law of the sea, may provide guidance in creating a new doctrine of space law is yet to be determined. The advancement in modern technology, along with the depletion of natural resources, creates a unique opportunity for private entities to resolve this issue through the exploitation of outer space. Space law is once again relevant due to its inadequacies in protecting the property rights of said entities in space. Part II will explore the different treaties and principles that gave rise to space law, and Part III will analyze whether the application of such principles should continue, or if the establishment of a new regime offers a more beneficial long-term solution. Part IV will then explore the structure of a new outer space regime and the enforcement of property rights. II. LEGAL PRINCIPLES INFLUENCING THE DEVELOPMENT OF SPACE LAW

#### This solves climate change in 2 ways:

#### 1] Asteroid mining offsets terrestrial growth that ruins the environment and enables solar power satellites – both solve climate change

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The mission is essential, Joyce declares, to save Earth from its **major problems**. First of all, the fictional billionaire wheels in a fictional Nobel economist to demonstrate the actual truth that the entire global economy is sitting on a **mountain of debt**. It has to keep growing or it will **implode**, so we might as well take the majority of the **industrial growth off-world where it can’t do any more harm to the biosphere.**

Secondly, there’s the **climate change fix**. Suarez sees asteroid mining as the only way we’re going to build **solar power satellites.** Which, as you probably know, is a form of uninterrupted solar power collection that is theoretically more effective, inch for inch, than any solar panels on Earth at high noon, but operating 24/7. (In space, basically, **it’s always double high noon).**

The power collected is beamed back to large receptors on Earth with large, low-power microwaves, which researchers think will be harmless enough to let humans and animals pass through the beam. A space solar power array like the one China is said to be working on could reliably supply 2,000 gigawatts — or **over 1,000 times more power than the largest solar farm currently in existence.**

“We're looking at a 20-year window to **completely replace human civilization's power infrastructure,**” Suarez told me, citing the report of the Intergovernmental Panel on Climate Change on the coming catastrophe. Solar satellite technology “has existed since the 1970s. What we were missing is **millions of tons of construction materials** in orbit. **Asteroid mining can place it there.”**

The Earth-centric early 21st century can’t really wrap its brain around this, but the idea is not to bring all that building material and precious metals down into our gravity well. Far better to create a whole new commodities exchange in space. You mine the useful stuff of asteroids both near to Earth and far, thousands of them taking less energy to reach than the moon. That’s something else we’re still grasping, how relatively easy it is to ship stuff in zero-G environments.

#### 2] Asteroid mining solves rare earth metal depletion – prevents tech stagnation and unsustainable resource extraction

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As electronics continue to become increasingly more important in everyday life, so is the ability to **produce electronic components**. With the supply of minerals on Earth having a finite size, some are worried that Earth will soon run out of critical resources such as **platinum and lithium**. What are asteroids, what are they composed of, and could they be the key to providing humanity with a near-infinite source of minerals? What minerals are commonly needed for electronics? Since the introduction of the first commercial circuits, electronics have become incredibly advanced with silicon dies having billions of active components, resistors the size of dust specks, and capacitors that can hold obscene amounts of charge for their size. However, many of these components rely on minerals that most will never have heard of for them to be able to work. Basic components such as resistors and capacitors use common materials including iron, carbon, and aluminium, but components such as LEDs, silicon dies, and thin-film displays use lanthanum, cerium, neodymium, and europium. While many of these minerals **fall under the “rare-earth” category**, that does not necessarily mean that they are rare; but many are. Why are these minerals running out? Minerals that are rare by nature are uncommon in the crust, and mass industrialisation is quickly using up remaining reserves of these minerals. However, it is important to understand what reserve means and how reserves are calculated. Let’s take Uranium as an example to understand this concept better; as things currently stand, there are 80 years of Uranium reserves left. Now, this does not mean that all the uranium will be used up globally in 80 years, this means that at the current price of Uranium, proven sources will continue to supply Uranium at a profitable rate for 80 years. When all reserves are used up, the price for that mineral increases, and this makes areas that used to be unprofitable more profitable, thus generating new reserves. However, there is another aspect to resources that need to be considered; **environmental damage**. A good example to demonstrate this is Lithium. While Lithium is rather abundant in the crust, it is spread very wide, making most crust uneconomical to mine. If all cars on earth went electric, the proven reserves of Lithium would run out in 3 years. Of course, new reserves would be made available, and this would extend the ability to use Lithium in industrial practices. However, mining Lithium has a massive environmental impact and sees vast amounts of land destroyed and made toxic due to by-products in the extraction process. The same applies to many rare minerals; many tons of earth is needed to get even the smallest quantity. What are asteroids, and what are they made of? Asteroids are small cosmic bodies that orbit a star and can range in size, density, and composition. One of the largest asteroids in the Solar System, Vesta, has a diameter approximately 330 miles, while some of the smallest can be just two meters across. Asteroids mostly consist of rock as well as minerals, but their exact composition greatly varies. For example, M-type asteroids are those that mostly consist of nickel-iron, while C-type asteroids consist of clay and silicate rocks. Other minerals that are often found in asteroids include gold, cobalt, palladium, platinum, and osmium. Could asteroid mining be the key to ensuring limitless supplies? While asteroids themselves may contain trace amounts of rare minerals, their size and lack of an ecosystem **would allow for a mining operation to destroy an entire asteroid with no repercussions.** Asteroids are also plentiful in the Solar System, and would most likely **provide humanities resource needs for millions of years.** For perspective, the total weight of the asteroid belt is only 3% that of the moon, but that is still 2.39×1021 kilograms. Even then, that is only the asteroid belt and does not consider stray asteroids that orbit the sun, planets, and rings around Saturn / Jupiter.

#### We don’t have enough REM in the squo to transition to renewables, which are key to climate change

**Mosaddeq 18** Nafeez Mosaddeq Ahmed (British investigative journalist, author and academic. He is editor of the crowdfunded investigative journalism platform INSURGE intelligence. He is a former environment blogger for The Guardian) We Don't Mine Enough Rare Earth Metals to Replace Fossil Fuels With Renewable Energy, 12/12/2018, VICE, https://www.vice.com/en\_us/article/a3mavb/we-dont-mine-enough-rare-earth-metals-to-replace-fossil-fuels-with-renewable-energy

A new scientific study supported by the Dutch Ministry of Infrastructure warns that **the renewable energy industry could be about to face a fundamental obstacle: shortages in the supply of rare metals**. **To meet greenhouse gas emission reduction targets under the Paris Agreement, renewable energy production has to scale up fast. This means that global production of several rare earth minerals used in solar panels and wind turbines—especially neodymium, terbium, indium, dysprosium, and praseodymium—must grow twelvefold by 2050. But according to the new study by Dutch energy systems company Metabolic, the “current global supply of several critical metals is insufficient to transition to a renewable energy system.”**The study focuses on demand for rare metals in the Netherlands and extrapolates this to develop a picture of how global trends are likely to develop. “If the rest of the world would develop renewable electricity capacity at a comparable pace with the Netherlands, a considerable shortage would arise,” the study finds. This doesn’t include other applications of rare earth metals in other electronics industries (rare earth metals are widely used in smartphones, for example). “When other applications (such as electric vehicles) are also taken into consideration, the required amount of certain metals would further increase.” Demand for rare metals is pitched to rise exponentially across the world, and not just due to renewables. Demand is most evident in “consumer electronics, military applications, and other technical equipment in industrial applications. The growth of the global middle class from 1 billion to 3 billion people will only further accelerate this growth.” But the study did not account for those other industries. This means the actual problem could be far more intractable. In 2017, a study in Nature found that a range of minerals essential for smartphones, laptops, electric cars and even copper wiring could face supply shortages in coming decades. **The other challenge is that rare metals mining is massively concentrated in just a few countries: particularly China, which dominates 80 percent of mining and nearly 95 percent of refining. Although Australia and Turkey are significant producers of specific metals (such as neodymium and boron respectively), Europe and the US are overwhelmingly dependent on China, which would be in a position to control global supply—a position that could be easily abused.**

#### Climate change causes extinction

Smith, 17 – Writer at Georgia Straight for 25 years

(Charlie Smith, 2-11-2017, "Could abrupt climate change lead to human extinction within 10 years?," Georgia Straight, <span class="skimlinks-unlinked">https://www.straight.com/news/868051/could-abrupt-climate-change-lead-human-extinction-within-10-20-years</span>)

One of the world's most outspoken climate-change Cassandras is U.S. conservation biologist Guy McPherson. A professor emeritus of natural resources and the environment at the University of Arizona, he's warned that sharply rising methane emissions are going to create a catastrophe in our lifetimes. McPherson, author of Going Dark, has even predicted the nearterm extinction of many species, including human beings, by the middle of 2026. It's because of something called abrupt climate change, also known as nonlinear climate change. This results when feedback loops caused by rising atmospheric greenhouse gas levels cause the climate system to rapidly transition to a different mode, occurring on a scale that human or natural systems cannot adapt to. In the first two decades after methane is released into the atmosphere, it's about 85 times more powerful as a heat-trapping gas than carbon dioxide. Large amounts of methane are stored in "clathrates", which are chemical substances along the Arctic continental shelves storing methane molecules. McPherson and coauthor Carolyn Baker addressed this in their 2014 book, Extinction Dialogs: How to Live with Death in Mind. On his website, McPherson criticizes scientists, who know about this problem, for not doing nearly enough to educate the public. He also blames politicians and the leaders of corporations and nongovernmental organizations for not raising the alarm. "Worse than the aforementioned trolls are the media," MacPherson writes. "Fully captured by corporations and the corporate states, the media continue to dance around the issue of climate change. Occasionally a forthright piece is published, but it generally points in the wrong direction, such as suggesting climate scientists and activists be killed (e.g., James Delingpole’s 7 April 2013 hate-filled article in the Telegraph). Leading mainstream outlets routinely mislead the public." Author and former professor Guy McPherson fears that methane releases could lead to the demise of humankind. Writer says jet stream changes are having an effect A recent post on the Arctic News blog by its editor, Sam Carana, has even declared that human extinction could occur within a decade. Carana cites "the decreasing difference in temperature between the Equator and the North Pole causes changes to the jet stream, in turn causing warmer air and warmer water to get pushed from the North Atlantic into the Arctic". "Warmer water flowing into the Arctic Ocean in turn increases the strength of further feedbacks that are accelerating warming in the Arctic," Carana writes. "Altogether, these feedbacks and further warming elements could trigger a huge abrupt rise in global temperature making that extinction of many species, including humans, could be less than one decade away." At the root of this extinction prediction is methane, which is being released from sea floors along continental shelves in the Arctic as a result of melting ice. The Counterpunch website has an article by Dave Lindroff explaining how this could rapidly increase the average global temperature by three degrees Celsius over pre-industrial times. Lindroff suggests this would be "enough to actually reverse the carbon cycle, so that plants would end up releasing more carbon into the atmosphere rather than absorbing it". This is what abrupt climate change looks like. McPherson has maintained that abrupt climate change could even result in the average global temperature soon rising four degrees Celsius over pre-industrial times. Many scientists warn that increases of just two degrees will cause enormous havoc; four degrees is unfathomable.

### AT: Cap

#### 1] Private appropriation of outer space allows us to exceed capitalism and ensure human survival – not continuation of capitalism but removal of restrictions on new state formations

Valentine 21 Valentine, David. “Exit Strategy: Profit, Cosmology, And The Future Of Humans In Space.” Anthropological Quarterly 85:4. October, 2012. Web. December 12, 2021. <https://www.jstor.org/stable/41857289?seq=1#metadata\_info\_tab\_contents>.

The ideology of the necessary relationship between entrepreneurialism and a rejuvenated human future has a strongly contemporary flavor, activating social scientists' understandings of the incessant search of globalizing-now, literally universalizing- neoliberal capitalism for new resources, products, and markets, and the negative consequences to both human communities and to the environment. But can we dismiss NewSpace visions of space settlement as just more of the same, as the new spatial fix, as only fantasies of capitalist expansion and extraction? Gibson-Graham (2006) argues that critical treatments of neoliberalism as homogenous and totalizing have in part helped build the ideological unity of late capitalism. Collins (2008) has also argued, directly in relation to conceptions of the future, that contemporary anthropology is actually aligned with neoliberal imaginaries by assuming that the market is the inevitable shaper of the future. Following these arguments, it seems to me that if we accept the argument that the market, or profit motive, are the only explanatory frameworks for these activities, we ignore other central and consequential aspects of the Utopian visions at the heart of NewSpace endeavors. Harvey (2000) and Frederic Jameson (2005) both argue that Utopian thinking is a key mode for a progressive and socialist politics, but that such a mode must account for spatial context, temporality, and local conditions. The key here is to think about the Utopian imaginations of capitalists in the same terms, ones that do not simplify or homogenize them. And as I will show, NewSpace activities are not simply in the realm of fantasy: companies are actually building rockets, spaceports, and habitats. My overall point is thus very simple: without denying the potential significance of outer space as a site for new capital accumulation (and recognizing the desires of my NewSpace interlocutors for this very thing), or the need to critically examine the implications of such a phenemenon, we should not assume that such goals can explain private space enterprise in toto. Real fears of species extinction, ideologies of exploration as key to human nature, and a desire to escape the strictures of contemporary state formations ( and capital) are all powerful motivations for the hopes of space settlement. These resonate strongly with capital's need for a “spatial fix,” but they are not the same thing. In the following pages, I examine some of the tensions within NewSpace Utopian thinking and imaginations of the future, both to contribute to debates about the complexity of contemporary capitalism; but also to ask how cosmology (rather than only capitalist ideologies and profit motives) may explain the extraordinary plans and work of NewSpace entrepreneurs and advocates.

#### 2] Regulations and taxation solves: we can change the system to be sustainable with grounded, existing policy and the state

Juniper 14 (Tony Juniper is a campaigner, writer, sustainability adviser and environmentalist. “Capitalism v Environment: Can Greed ever be Green?” The Guardian, 11/26/14, https://www.theguardian.com/sustainable-business/2014/nov/26/capitalism-environment-green-greed-slow-life-symposium-tony-juniper)//SLiang

Is it possible to run an expanding capitalist economy while keeping its impacts within safe ecological boundaries, or is the greed-driven system effectively a suicide machine that is doomed to destroy itself? The fact that the now dominant capitalist economic system is unsustainable is not in doubt. It has contributed to the breaching of several ecological boundaries, in relation to climate change, biodiversity loss and nutrient enrichment. At the same time as damaging the natural systems that sustain it, capitalism is also leading to increasing inequality, in turn creating social tensions that make it still more exposed. As the negative consequences of current growth strategies escalate, what to do in response becomes an ever more vital and urgent question. It was one of the themes addressed at the Slow Life Symposium recently concluded on the island of Soneva Fushi in the Maldives. The low-lying nation is one of the most vulnerable on Earth and a place where the effects of past economic choices are already exacting a heavy toll. The dead corals and rising seas reveal how global change can bring big costs for, among other things, tourism and infrastructure. In diagnosing where the main blockage to more benign practices might lie, symposium participant Jamie Arbib, an investor and founder of the philanthropic foundation Tellus Mater, highlighted what is perhaps the most basic problem of all. “People who own the system are not active, other than to increase shareholder value,” he said. “Companies quoted on stock exchanges are worth about $70tn with about half that owned by pension companies”. His foundation is funding efforts to put pressure on asset managers, especially in the pension funds, so that they adopt strategies that lead toward more positive impacts. Arbib reflected on how it might be possible to get traction to create change. “Is it through divestment, more active engagement with companies, or should the focus be on particular projects?” he asked. Peter Wheeler, former managing director in Goldman Sachs’ London office is now an executive vice president at The Nature Conservancy where he advises an impact investment unit run in partnership with JPMorgan. Following more than two decades experience in finance he described why the kind of pressure being supported by Arbib’s foundation is necessary, in shifting managers from being “slaves to only the bottom line”. He added how changing that would depend not only on investor pressure, however, but also official policies. When it came to what those policies might consist of the Symposium focused on the measurement, reporting and management of “externalities”. These are the off-balance-sheet impacts caused by economic activity, including increasingly well-documented environmental stresses. Pavan Sukhdev is another leading finance sector professional who has turned his attention to the question of how best to align capitalism with ecological capacities. The former Deutsche Bank managing director and now founding director of Corporation 2020, told the symposium how “negative externalities are basically the public costs that come from the pursuit of private profit”. He takes the view that the measurement of these thus far hidden costs is vital for their effective management, even if the numbers are, to start with, quite ballpark. “It’s hard to quantify the value of externalities but we know the cost is not nothing. We need metrics to reflect that fact – to show which companies are actually adding value to society and to reveal those that are not.” Sukhdev pointed out how externalities represent massive risks, including in relation to stranded assets that could be impacted by ecological change or policies to limit damage, with fossil fuel reserves being a case in point. He added: “Banks don’t measure the externalities even though they have whole teams devoted to risk. Externalities need to be under the risk lens and central banks need to demand that.” He reminded participants how all recent recessions arose from the mis-allocation of risks. For example, in relation to excessive mortgage lending or sovereign loans. That this new set of risks is not being managed should be a cause for grave concern. The conclusion was that companies needed to move on from seeing private profit as their sole purpose and for policy-based tools to move them in that direction. This should embrace a range of approaches including the tax system. For example, shifting levies from income to waste and pollution. Why such obvious steps are not being taken is an important question and was largely considered to be down to resistance from vested interests. This is made worse by how even the progressive investors and companies who see the need for change remain largely silent. Not rocking the boat, they mainly go with the flow, even as they drift toward collective disaster. Remedying this situation through coalitions of investors and corporations implementing divestment strategies while calling for policies that identify and price externalities is clearly a key element of what is needed. Senior figures who once worked at the heart of the finance world lay out an increasingly clear view of what is needed to fix a failing system. Those still working there must understand that if their lead is not followed soon, then capitalism in its present form will cease to exist. The big questions are really about when and how it will happen. In relation to the first, and on the basis of the best ecological science, the answer is “in the not too distant future”. On the second point, we have a choice. We either create an ecologically sustainable version of capitalism, or we wait for the consequences to precipitate collapse of the old one. The financial and business organisations so focused on their bottom lines must respond to what the science says. If in pursuit of their individual vested interests the entire system upon which they depend is undermined, then the short-term strategies they’ve adopted will not be just externalities picked up by society, but will pave a road toward the end of their demise too. If they allow that to happen then the only conclusion to be reached is that the captains of finance and industry have indeed constructed a suicide machine.

#### 3] Cap solves inequality

#### Spreading capitalism creates global prosperity and environmental sustainability. Abandoning it is disastrous.

Rhonheimer, 20—teaching professor at the Pontifical University of the Holy Cross (Martin, “Capitalism is Good for the Poor – and for the Environment,” <https://austrian-institute.org/en/subjects-en/catholic-social-doctrine-2/capitalism-is-good-for-the-poor-and-for-the-environment/>, dml)

It is not social policy but capitalism that has created today’s prosperity.

What is important is that what made today’s mass prosperity possible – a phenomenon unprecedented in history – was not social policy or social legislation, organised trade union pressure, or corrective interventions in the capitalist economy, but rather market capitalism itself, due to its enormous potential for innovation and the ever-increasing productivity of human labour that resulted from it.

Increasing prosperity and quality of life are always the result of increasing labour productivity. Only increased productivity enabled higher social standards, better working conditions, the overcoming of child labour, a higher level of education, and the emergence of human capital. This process of increasing triumph over poverty and the constantly rising living standards of the general masses is taking place on a global scale – but only where the market economy and capitalist entrepreneurship are able to spread.

From industrial overexploitation of nature to ecological awareness

The first phase of industrialisation and capitalism was characterised by an enormous consumption of resources and frequent overexploitation of nature, which soon gave the impression that this process could not be sustainable. Since the end of the 19th century, disaster and doom scenarios have repeatedly been put forward, but in retrospect they have proved to be wrong: The combination of technological innovation, market competition, and entrepreneurial profit-seeking (with the compulsion to constantly minimise costs) have meant that these scenarios never occurred. The ever-increasing population has been increasingly better supplied thanks to innovative technologies, ever-increasing output with lower consumption of resources less harmful to the environment – e.g. less arable land in agriculture, or oil and electricity instead of coal for rapidly increasing mobility. More recent disaster scenarios, such as those spread by reputable scientists since the late 1960s and in the 1970s, have also proved to be inaccurate.

The reason things developed differently was the always underestimated innovative dynamism of the capitalist market economy, a growing ecological awareness and, as a result, legislative intervention that took advantage of the logic of market capitalism: As a result of the ecological movement that had come out of the United States since 1970, wise legislation began to use the price mechanism to apply market incentives to internalize negative externalities. Environmental pollution was given a price-tag.

This led to an enormous decrease in air pollution and other ecological consequences of growth, which is only possible in free, market-based societies, because the production process here is characterized by competition and constant pressure to reduce costs, i.e. to the most profitable use of resources. On the other hand, all forms of socialism, i.e. a state-controlled economy, have proved to be ecological disasters and have left behind destruction of gigantic proportions, without providing the population with anything that is near comparable in prosperity, often even by destroying existing prosperity, such as happened in Venezuela.

Capitalist profit motive combined with digitalization as a solution: Increasing decoupling of growth and resource consumption

Moreover, technological innovations combined with capitalist profit-seeking and market competition have led to a new and surprising phenomenon over the past decades, which is still hardly noticed in the public debate: the decoupling of growth and resource consumption (“dematerialization”). In a wide variety of industrial sectors, the developed countries, above all the U.S., are now achieving ever greater productive output with increasingly fewer resources. This has a lot to do with technology, especially the digitalization of the economy and of our entire lives.

As the well-known MIT professor Andrew McAfee shows in his book More from Less, published in October 2019, this process also follows the logic of capitalist profit maximization. To get it going, we do not need politics, even though wise, properly incentivizing legislation can be helpful and sometimes necessary. Above all, however, it is the combination of technological innovation, capitalist profit-seeking, and market-based entrepreneurial competition that will also solve the problem of man-made global warming.

In addition, property rights and their protection are decisive for the careful use of natural resources. And where this is not possible, legal support for collective self-governing structures, in accordance with the principle of subsidiarity, are important—as is analysed by Nobel Economic Prize winner Elinor Ostrom. By contrast, the growing ideologically motivated anti-capitalist eco-activism, and the policies influenced by it, are leading in the wrong direction, distracting precisely from what would be best for the climate and the environment—and distracting us from what could help protect us against the inevitable consequences of global warming.

#### 4] Capitalism is self-correcting, evolutionary, and inevitable---there’s no chance of collapse

Madsen Pirie 13, co-founder of the Adam Smith Institute, Pirie worked for the United States House of Representatives. He was a Distinguished Visiting Professor of Logic and Philosophy at Hillsdale College, Pirie appears regularly as a commentator on CNN, He graduated with an [MA](http://en.wikipedia.org/wiki/Master_of_Arts_(Scotland)) in History from the [University of Edinburgh](http://en.wikipedia.org/wiki/University_of_Edinburgh) (1970), with a [PhD](http://en.wikipedia.org/wiki/Doctor_of_Philosophy) in Philosophy from the [University of St Andrews](http://en.wikipedia.org/wiki/University_of_St_Andrews) (1974), and with an [MPhil](http://en.wikipedia.org/wiki/Master_of_Philosophy) in Land Economy from [Pembroke College](http://en.wikipedia.org/wiki/Pembroke_College,_Cambridge), [Cambridge](http://en.wikipedia.org/wiki/University_of_Cambridge) (1997), Adam Smith Institute, “Why Marx Was Wrong about Capitalism”, 4/11, [http://www.adamsmith.org/research/think-pieces/why-marx-was-wrong-about-capitalism/](http://www.adamsmith.org/research/think-pieces/why-marx-was-wrong-about-capitalism/)//jk)

Like many public figures who leave a legacy, either in their writings or their deeds, Karl Marx was sometimes right and sometimes wrong. I concentrate on some of the things about which he was wrong. He was wrong to predict that history would take us to the inevitable triumph of the proletariat and then stop. History shows no signs of doing either. Marx was also wrong to suggest that this would happen first in the most advanced economies as the final stage of capitalism. In fact such revolutions as came took place in less developed economies such as Russia and China. It has not happened in the advanced economies, and this could be because Marx was wrong about something else. He predicted that capitalism would drive down wages to survival level before its final denouement. In fact as economies became more advanced, both wages and living standards rose to levels not even dreamt of in Marx’s day, and this seems to have lowered the pressure for revolutionary change. Marx was also wrong about something more fundamental. He was wrong about change. I don’t just mean that he was wrong about the changes that would come about; more fundamentally he was wrong about how change takes place. He took the Hegelian model of change. To Hegel change comes about through staccato triangles. A state of affairs nurtures its opposite, and from the violent clash between the two a new state of affairs emerges. Thesis, Antithesis and Synthesis. Violence is at the core of it, and hence Marx’s commitment to revoution. But Marx was a contemporary of Darwin. He had read Darwin’s “Origin of Species” and admired Darwin’s account of the origins of humankind. He failed, however, to spot the significance of Darwin’s theory of change and to incorporate it into his own programme. Darwin advanced a gradual mechanism of change in which small differences gradually come to dominate over time. It is evolutionary, not revolutionary, and is a much more accurate description of how change usually happens in human societies than was Hegel’s account. Indeed, Darwin was right and Hegel was wrong. This means that Marx was also wrong, wrong about change, and wrong about how capitalism would develop. The point is that capitalism changes and evolves. It has been through many transformations. The capitalism that Marx thought would collapse under its own contradictions is not the capitalism of today – the one this motion refers to. In the material world organisms evolve. They respond to crises and they change. A similar thing happens with our social practices. They evolve and adapt to new circumstances. Capitalism has faced many crises, and each time it has evolved and changed. Each time a new form of capitalism has emerged to solve the problems its predecessor faced. This is how human beings progress. We solve our problems by adapting our practices. Capitalism certainly faced a crisis in 2008, but it is still with us, as yet uncollapsed. It is evolving and responding to the changes that are needed and, as before, when the dust of crisis has settled, it will be a new version of capitalism that goes on to generate more wealth and to expand the opportunities open to humankind. That new version of capitalism that emerges will have to be one which somehow manages to keep at arm’s length the politicians wanting to fix its outcomes for political advantage. Greedy bankers can only take reckless risks if politicians make it cheap for them to do so by turning on the taps of credit and money. Politicians like booms and bubbles because they help them to win elections and office, so procedures must be found that limit their ability to do this. Those whose greed is for power are no less deadly than those who greed is for gain, and both need rules to circumscribe their scope for action. I wish to make a further point: that capitalism will survive because it is the only valid way we have found that works in practice to create wealth and the opportunities it brings. Marx was wrong about another important thing. He subscribed to the labour theory of value, believing that the value of a thing arises from the labour put into producing it. Wrong. Value is based on demand. If no-one wants a thing, then no matter how much labour went into producing it, it is valueless. We all value things differently, which is why trade takes place. We trade because we each put greater value on what the other person has than on what we are offering in exchange. We both gain more value when we trade, and that’s how we create wealth. We produce in order to trade and to create wealth, and we invest in order to produce. That’s in essence what capitalism is, and it works – certainly better than anything else that has been tried. And it works more humanely, too. Yes, capitalism grows more complicated and more ambitious as it evolves, but its principles remain. Capitalism will survive its current crisis. It will be tweaked and modified but it will not collapse, because nothing has ever been found that can replace it or do what it does, or bring the advantages and benefits it brings. It has brought the resources that have lifted most of humankind above subsistence and starvation, that have enabled us to conquer diseases, to fund education and social services, to enable people to engage in artistic and cultural activities and to enrich their lives with previously undreamt-of opportunities.

#### 5] If cap does fail as shamas holen says it does, that would cause extinction – running out of resources means extinction

#### 5] No environmental crises

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Other scholars, commonly referred to as cornucopians or resource optimists, do not share this pessimistic view. They acknowledge that environmental degradation may negatively affect human wellbeing. But they argue that humans can adapt to resource scarcity by using market mechanisms (pricing), technological innovation, and other means (Lomborg 2001; Simon 1998). Simon (1998) for instance notes that, although population growth can lead to shortages or increased economic burdens in the short run, the ability of society to respond to such circumstances by improvements in technology and efficiency usually outstrips the constraints imposed by an increasing population**.**¶The neo-Malthusian argument has also been criticized for being overly complex and deterministic, and for ignoring important economic and socio-political factors (e.g. Gleditsch 1998; de Soysa 2002a,b; Barnett and Adger 2007; Salehyan 2008). Critics have argued that scarcity of renewable resources is just one of the factors in the overall relationship between climate change and conflict. Buhaug et al. (2008:20) note that “climate change may increase the risk of armed conflict only under certain conditions and in interaction with several socio-political factors”. They reject the idea that climate change has a direct effect on the likelihood of conflict and propose several causal pathways through which economic and political instability, social fragmentation, and migration could increase the probability of climate change leading to armed conflict.¶ Qualitative case studies (e.g. Baechler et al. 1996) provide some, albeit anecdotal evidence that climate change induced environmental degradation (such as water scarcity, soil degradation, or deforestation) has contributed to conflict in some parts of the world (e.g. the Sahel region**).** But it remains unclear to what extent these case specific findings can be generalized. Large-N studies have, so far, not been able to provide conclusive evidence. One part of this variance in empirical evidence is certainly due to the use of different measures of climate change and environmental degradation, data problems, and different sample sizes and time periods. Another part, we submit, is due to the fact that past research has focused on identification of a direct link between climatic conditions and conflict. Conditional effects that stem from key factors such as economic development and the political system characteristics may thus have been overlooked.

#### 6] Capitalism prevents war---all their evidence is based on a misreading of history and doesn’t assume modern IR

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The growth of international economic exchange in Europe before the war was uneven. Much of Western Europe belonged to a highly interdependent subsystem of states in which crises arose but were resolved peacefully. By contrast, economic interdependence was much shallower in most of Eastern Europe and parts of Central Europe. The Ottoman Empire, Serbia, Austria-Hungary, and several other newly independent Balkan states traded relatively little with each other. Unlike in the interdependent West, crises in this region tended to escalate to war. It is no coincidence that World War I was sparked among the non-interdependent states in Eastern Europe. Economic ties played an important role in averting escalation to major warfare in the crises that led up to the Great War, especially in the first and second Balkan wars. These crises, however, produced the need for the more economically integrated countries, most importantly Germany and Russia, to demonstrate an increasing resolve to support their weaker, less interdependent, allies, Austria-Hungary and Serbia. Alliances tightened after Germany and Russia took turns backing down under the pressure of war in previous crises. Tighter alliances increased the leverage of Balkan allies, but only by in effect handing the foreign policies of the interdependent powers over to countries that were less well integrated into the world economy, and thus had fewer reasons not to engage in war. Economic integration could not forestall conflict where integration had yet to occur. And a partial European network of economic interdependence could not prevent war, once started, from spreading through the competing network of alliance commitments, making it more difficult for Western powers to take advantage of available economic linkages to their greatest pacific effect. The world is different today from 1914, but there are enough similarities that it is tempting to draw on historical analogy. U.S. hegemony is on the wane, much as British hegemony was at the close of the 19th century. Rising powers were and are creating a more complex set of political dynamics, even as strong trading relations among the most prominent nations led and lead to liberal optimism, and realist skepticism, about peace. Tensions exist and existed between status quo nations and those nations that perceive that they have been denied their rightful status as they rise in power in world affairs. A naval arms race enshrouded Europe for the first two decades of the 20th century, much as one appears to be developing in Asia today. Prime Minister Shinzo Abe of Japan recently compared Sino-Japanese tensions to relations between Great Britain and Germany a century ago, citing strong trade relationships between both pairs of nations as well as the onset of world war. Will economic interdependence in Asia today again fail to prevent a major war? The size and organization of existing trade networks suggest that Asia, like western European powers in the decades before World War I, is more likely to manage secondary crises without bloodshed. If interdependence works as theorized, disputes such as those over the Senkaku/Diaoyu Islands are more likely to be occasions of considerable posturing and no actual force. While no one likes to be the loser, excessive brinksmanship is not a practical strategy in the world that Japan, China and other developed nations inhabit today. Discretion is likely to rule these relationships, even if there is occasional grumbling from those on the short end of the stick. There is much to gain from tough talk, but more to lose by failing to pull back from the brink. The larger risk to international stability today comes from nations cast in the role of the Eastern European powers a century ago. Lacking economic inhibitions and with no other methods to advance themselves, sovereigns in some countries will find it useful to heighten international tensions. North Korea is a prime example. Russia is on the cusp. Reliance on energy exports rather than a more diversified trading base has allowed President Putin to bluster more often and occasionally to engage in naked aggression, if only against minor powers so far. Fortunately, fewer of these countries exist today and most are on the periphery of the international system, not near its center. Still, the risk with North Korea, Russia and others is much the same as that of Eastern European powers in 1914. Alliance ties produce their own logic of (non-economic) interdependence. Alliance ties can be forged in part because interdependent states find it difficult signal their resolve to fight. Nations with no wish for war can be drawn into contests simply because abandonment is not a viable option, shifting discretion to client states. The effectiveness of economic ties in producing or failing to produce peace is again, as it was a century ago, not so much about economics as it is about alliance commitments to nations with no such investment in stability. The relative scarcity of such relationships offers promise today, and hope that interdependence will prove more successful in fostering peace this time around.

#### 7] Cap isn’t root cause of inequality – killing cap doesn’t solve

Geras 5 (Norman, Emeritus Professor of Politics at the University of Manchester, "The Reductions of the Left," Dissent, 52:1, Winter, p. 57-58)

THE SECOND PART of the answer- to which I now turn—is a seeming lack of ability, of the imagination, to digest the meaning of the great moral and political evils of the world and to look at them unflinchingly. This is a complementary failure. Elsewhere I have argued that Marxism is as familiar as any other intellectual tradition with **the realities of** humanviolence and oppressionand the more negative traits and potentialities in the makeup of human beings. At the same time, because of its Utopian aspiration—-which I do not mean in any pejorative sense—because of its progressive and meliorative impulse, there has always been a tendency within this tradi¬tion to minimize, or sometimes just deny, the independent force of such negative character¬istics. They **come to be treated, genericallv, as the** product of class societies and, today, as the product of capitalism**. The affinity between this** overall intellectual **tendency** within Marxist and other left thinking, **and the** practical **reductionism** I have just described—**in which America** **is identified as the source of all worldly wrongs—should be transparent**. **The effect** of the tendency, however, **is, to** **denature what one is looking at when one looks at the horrors of the world:** a massacre of in- nocents; a woman being beaten in a public place or hanged in a football stadium; a place in which a man can have his ears surgically re¬moved or his tongue cut out, or be broken and destroyed, to be followed by the next such vic-tim, and the next, in a continuous sequence ol atrocity; or a place in which a parent can be forced to watch her child tortured and mur¬dered in front of her; or a place in which a hus¬band can be forced to watch his wife repeat-edly raped; an "ethnic^leansing" or a genocide in progress, in which entire communities are pulled up by the roots-arid people are shot or hacked or starved to death by the thousands or the tens of thousands; mass graves opened to yield up their terrible story. The list, as anyone knows who keeps read¬ing when the overwhelming temptation is to look away, could be much extended. The items on it are moral and political realities **in their own right.** They need to be registered and fully recognized as such. **To collapse them too quickly into their putative original causes, to' refer them immediately, or refer from them, to other things that have preceded them is not to give them their due as the specific phenomena they are**, the horrors, tor those destroyed by them or enduring them, for those whose lives are torn and wrecked and filled with grief by them, are in a double sense reduced by this quick and easy reference back to something else, putatively their real cause or origin. Furthermore, not all the contributory causes of such grim events are of the type that the section of the left under discussion here likes to invoke—that is, causes arising else- where, either geographically (in the United States) or societally (in the dynamics of capi- talism). Moral and political **evils of this order** and I make no apology for calling them that— can and generally do **have causes that are** more **local** in a spatial sense; **and they are governed or influenced by political, ideological, and moral specificities every bit as real as the capitalist economy. Not everything is systemic**, in the sense of being an effect of pressures or ten¬dencies of economic provenance, whether from the global economy or from some more par¬ticular region of it. **There are independent patterns of coercion and cruelty, both interper¬sonal and embedded within political structures**; forms of authoritarian imposition; **types of invasive assault and violence**, at the micro-level and at the macro-level, **involving large social forces.**