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#### Interpretation: Topical affirmatives must instrumentally defend an expansion of the scope of the United States core antitrust laws to substantially increase prohibitions on anticompetitive business practices.

#### Resolved means a policy

Louisiana House 5

(<http://house.louisiana.gov/house-glossary.htm>)

Resolution A legislative instrument that generally is used for making declarations, stating policies, and making decisions where some other form is not required. A bill includes the constitutionally required enacting clause; a resolution uses the term "resolved". Not subject to a time limit for introduction nor to governor's veto. ( Const. Art. III, §17(B) and House Rules 8.11 , 13.1 , 6.8 , and 7.4)

#### Federal government is the legislative, executive and judicial

US Legal No Date (United States Federal Government Law and Legal Definition https://definitions.uslegal.com/u/united-states-federal-government/)

The United States Federal Government is established by the US Constitution. The Federal Government shares sovereignty over the United Sates with the individual governments of the States of US. The Federal government has three branches: i) the legislature, which is the US Congress, ii) Executive, comprised of the President and Vice president of the US and iii) Judiciary. The US Constitution prescribes a system of separation of powers and ‘checks and balances’ for the smooth functioning of all the three branches of the Federal Government. The US Constitution limits the powers of the Federal Government to the powers assigned to it; all powers not expressly assigned to the Federal Government are reserved to the States or to the people.

#### ‘Its’ means cooperation must be governmental

US District Court 7 (United States District Court for the District of the Virgin Islands, Division of St. Thomas and St. John, “AGF Marine Aviation & Transp. v. Cassin,” *2007 U.S. Dist. LEXIS 90808*, Lexis)

The Court inadvertently used the word "his" when the Court intended to use the word "its." The possessive pronoun was intended to refer to the party preceding its use--AGF. Indeed, that reference is consistent with the undisputed facts in this case, which indicate that Cassin completed an application for the insurance policy and submitted it to his agent, Theodore Tunick & Company ("Tunick"). Tunick, in turn, submitted the application to AGF's underwriting agent, TL Dallas. (See Pl.'s Mem. of Law in Supp. of Mot. for Summ. J. 5.)

#### The “core” antitrust statutes are the Sherman Act, Clayton Act, and FTC Act

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U.S. antitrust law is defined by federal and state statutes, as interpreted by the courts. The core federal statutes are the Sherman Act,1 passed by Congress in 1890, and the Federal Trade Commission2 and Clayton Acts,3 both passed in 1914. The United States Department of Justice (“DOJ”) and the Federal Trade Commission (“FTC” or “Commission”) (together the “agencies”) share enforcement of most areas of federal antitrust law but with some differences in the scope of their authority. The FTC has sole authority to enforce Section 5 of FTC Act, which prohibits (1) unfair methods of competition and (2) unfair or deceptive acts or practices. The FTC almost always pursues claims for anticompetitive conduct as unfair methods of competition and reserves charges of unfair or deceptive acts or practices for consumer protection violations. Though the FTC's authority to challenge unfair methods of competition goes beyond conduct prohibited by the Sherman and Clayton Acts, in practice the FTC brings most unfair methods of competition cases under the same standards that courts apply to Sherman Act claims. The most prominent exception is the invitation to collude offense, which falls outside the scope of the Sherman Act (if the invitation is not accepted, there is no agreement). The FTC challenges invitations to collude as so-called “standalone” violations of Section 5.4 The DOJ has sole authority to pursue criminal violations of the antitrust laws. Most states have their own state antitrust and unfair competition statutes. State law follows federal law to some extent, though as discussed below, may differ from federal law in meaningful ways that vary state to state. State attorneys general and private parties can also typically file suit to enforce both federal and state antitrust law.

#### Two standards

#### Predictable Limits—a bounded topic serves as a predictable stasis point for debate that guarantees thematic coherence there are a infinite amount of affs under their interp, making the neg prepare for them is impossible and favors the aff because they get leverage unpredictable offense—absent defined limits, debate’s competitive incentives create a race to the margins that distorts topic research and kills clash.

#### Putting our positions up for debate and studying their flaws best breaks down our neural bias towards intellectual arrogance, and fosters a culture of better scholarship---our brains are terrible at knowing when we’re wrong and updating our beliefs. The impact is intellectual humility

Resnick 19 [Brian Resnick is a science reporter at Vox.com, covering social and behavioral sciences, space, medicine, the environment, and anything that makes you think "whoa that's cool." Before Vox, he was a staff correspondent at National Journal where he wrote two cover stories for the (now defunct) weekly print magazine, and reported on breaking news and politics. Intellectual humility: the importance of knowing you might be wrong. January 4, 2019. https://www.vox.com/science-and-health/2019/1/4/17989224/intellectual-humility-explained-psychology-replication]

I’ve come to appreciate what a crucial tool it is for learning, especially in an increasingly interconnected and complicated world. As technology makes it easier to lie and spread false information incredibly quickly, we need intellectually humble, curious people.

I’ve also realized how difficult it is to foster intellectual humility. In my reporting on this, I’ve learned there are three main challenges on the path to humility:

1. In order for us to acquire more intellectual humility, we all, even the smartest among us, need to better appreciate our cognitive blind spots. Our minds are more imperfect and imprecise than we’d often like to admit. Our ignorance can be invisible.

2. Even when we overcome that immense challenge and figure out our errors, we need to remember we won’t necessarily be punished for saying, “I was wrong.” And we need to be braver about saying it. We need a culture that celebrates those words.

3. We’ll never achieve perfect intellectual humility. So we need to choose our convictions thoughtfully.

This is all to say: Intellectual humility isn’t easy. But damn, it’s a virtue worth striving for, and failing for, in this new year.

Intellectual humility, explained

Intellectual humility is simply “the recognition that the things you believe in might in fact be wrong,” as Mark Leary, a social and personality psychologist at Duke University, tells me.

But don’t confuse it with overall humility or bashfulness. It’s not about being a pushover; it’s not about lacking confidence, or self-esteem. The intellectually humble don’t cave every time their thoughts are challenged.

Instead, it’s a method of thinking. It’s about entertaining the possibility that you may be wrong and being open to learning from the experience of others. Intellectual humility is about being actively curious about your blind spots. One illustration is in the ideal of the scientific method, where a scientist actively works against her own hypothesis, attempting to rule out any other alternative explanations for a phenomenon before settling on a conclusion. It’s about asking: What am I missing here?

It doesn’t require a high IQ or a particular skill set. It does, however, require making a habit of thinking about your limits, which can be painful. “It’s a process of monitoring your own confidence,” Leary says.

This idea is older than social psychology. Philosophers from the earliest days have grappled with the limits of human knowledge. Michel de Montaigne, the 16th-century French philosopher credited with inventing the essay, wrote that “the plague of man is boasting of his knowledge.”

Social psychologists have learned that humility is associated with other valuable character traits: People who score higher on intellectual humility questionnaires are more open to hearing opposing views. They more readily seek out information that conflicts with their worldview. They pay more attention to evidence and have a stronger self-awareness when they answer a question incorrectly.

When you ask the intellectually arrogant if they’ve heard of bogus historical events like “Hamrick’s Rebellion,” they’ll say, “Sure.” The intellectually humble are less likely to do so. Studies have found that cognitive reflection — i.e., analytic thinking — is correlated with being better able to discern fake news stories from real ones. These studies haven’t looked at intellectual humility per se, but it’s plausible there’s an overlap.

Most important of all, the intellectually humble are more likely to admit it when they are wrong. When we admit we’re wrong, we can grow closer to the truth.

One reason I’ve been thinking about the virtue of humility recently is because our president, Donald Trump, is one of the least humble people on the planet.

It was Trump who said on the night of his nomination, “I alone can fix it,” with the “it” being our entire political system. It was Trump who once said, “I have one of the great memories of all time.” More recently, Trump told the Associated Press, “I have a natural instinct for science,” in dodging a question on climate change.

A frustration I feel about Trump and the era of history he represents is that his pride and his success — he is among the most powerful people on earth — seem to be related. He exemplifies how our society rewards confidence and bluster, not truthfulness.

Yet we’ve also seen some very high-profile examples lately of how overconfident leadership can be ruinous for companies. Look at what happened to Theranos, a company that promised to change the way blood samples are drawn. It was all hype, all bluster, and it collapsed. Or consider Enron’s overconfident executives, who were often hailed for their intellectual brilliance — they ran the company into the ground with risky, suspect financial decisions.

The problem with arrogance is that the truth always catches up. Trump may be president and confident in his denials of climate change, but the changes to our environment will still ruin so many things in the future.

Why it’s so hard to see our blind spots: “Our ignorance is invisible to us”

As I’ve been reading the psychological research on intellectual humility and the character traits it correlates with, I can’t help but fume: Why can’t more people be like this?

We need more intellectual humility for two reasons. One is that our culture promotes and rewards overconfidence and arrogance (think Trump and Theranos, or the advice your career counselor gave you when going into job interviews). At the same time, when we are wrong — out of ignorance or error — and realize it, our culture doesn’t make it easy to admit it. Humbling moments too easily can turn into moments of humiliation.

So how can we promote intellectual humility for both of these conditions?

In asking that question of researchers and scholars, I’ve learned to appreciate how hard a challenge it is to foster intellectual humility.

First off, I think it’s helpful to remember how flawed the human brain can be and how prone we all are to intellectual blind spots. When you learn about how the brain actually works, how it actually perceives the world, it’s hard not to be a bit horrified, and a bit humbled.

We often can’t see — or even sense — what we don’t know. It helps to realize that it’s normal and human to be wrong.

It’s rare that a viral meme also provides a surprisingly deep lesson on the imperfect nature of the human mind. But believe it or not, the great “Yanny or Laurel” debate of 2018 fits the bill.

For the very few of you who didn’t catch it — I hope you’re recovering nicely from that coma — here’s what happened.

An audio clip (you can hear it below) says the name “Laurel” in a robotic voice. Or does it? Some people hear the clip and immediately hear “Yanny.” And both sets of people — Team Yanny and Team Laurel — are indeed hearing the same thing.

Hearing, the perception of sound, ought to be a simple thing for our brains to do. That so many people can listen to the same clip and hear such different things should give us humbling pause. Hearing “Yanny” or “Laurel” in any given moment ultimately depends on a whole host of factors: the quality of the speakers you’re using, whether you have hearing loss, your expectations.

Here’s the deep lesson to draw from all of this: Much as we might tell ourselves our experience of the world is the truth, our reality will always be an interpretation. Light enters our eyes, sound waves enter our ears, chemicals waft into our noses, and it’s up to our brains to make a guess about what it all is.

Perceptual tricks like this (“the dress” is another one) reveal that our perceptions are not the absolute truth, that the physical phenomena of the universe are indifferent to whether our feeble sensory organs can perceive them correctly. We’re just guessing. Yet these phenomena leave us indignant: How could it be that our perception of the world isn’t the only one?

That sense of indignation is called naive realism: the feeling that our perception of the world is the truth. “I think we sometimes confuse effortlessness with accuracy,” Chris Chabris, a psychological researcher who co-authored a book on the challenges of human perception, tells me. When something is so immediate and effortless to us — hearing the sound of “Yanny” — it just feels true. (Similarly, psychologists find when a lie is repeated, it’s more likely to be misremembered as being true, and for a similar reason: When you’re hearing something for the second or third time, your brain becomes faster to respond to it. And that fluency is confused with truth.)

Our interpretations of reality are often arbitrary, but we’re still stubborn about them. Nonetheless, the same observations can lead to wildly different conclusions.

(Here’s that same sentence in GIF form.)

For every sense and every component of human judgment, there are illusions and ambiguities we interpret arbitrarily.

Some are gravely serious. White people often perceive black men to be bigger, taller, and more muscular (and therefore more threatening) than they really are. That’s racial bias — but it’s also a socially constructed illusion. When we’re taught or learn to fear other people, our brains distort their potential threat. They seem more menacing, and we want to build walls around them. When we learn or are taught that other people are less than human, we’re less likely to look upon them kindly and more likely to be okay when violence is committed against them.

Not only are our interpretations of the world often arbitrary, but we’re often overconfident in them. “Our ignorance is invisible to us,” David Dunning, an expert on human blind spots, says.

You might recognize his name as half of the psychological phenomenon that bears his name: the Dunning-Kruger effect. That’s where people of low ability — let’s say, those who fail to understand logic puzzles — tend to unduly overestimate their abilities. Inexperience masquerades as expertise.

An irony of the Dunning-Kruger effect is that so many people misinterpret it, are overconfident in their understanding of it, and get it wrong.

When people talk or write about the Dunning-Kruger effect, it’s almost always in reference to other people. “The fact is this is a phenomenon that visits all of us sooner or later,” Dunning says. We’re all overconfident in our ignorance from time to time. (Perhaps related: Some 65 percent of Americans believe they’re more intelligent than average, which is wishful thinking.)

Similarly, we’re overconfident in our ability to remember. Human memory is extremely malleable, prone to small changes. When we remember, we don’t wind back our minds to a certain time and relive that exact moment, yet many of us think our memories work like a videotape.

Dunning hopes his work helps people understand that “not knowing the scope of your own ignorance is part of the human condition,” he says. “But the problem with it is we see it in other people, and we don’t see it in ourselves. The first rule of the Dunning-Kruger club is you don’t know you’re a member of the Dunning-Kruger club.”

People are unlikely to judge you harshly for admitting you’re wrong

In 2012, psychologist Will Gervais scored an honor any PhD science student would covet: a co-authored paper in the journal Science, one of the top interdisciplinary scientific journals in the world. Publishing in Science doesn’t just help a researcher rise up in academic circles; it often gets them a lot of media attention too.

One of the experiments in the paper tried to see if getting people to think more rationally would make them less willing to report religious beliefs. They had people look at a picture of Rodin’s The Thinker or another statue. They thought The Thinker would nudge people to think harder, more analytically. In this more rational frame of mind, then, the participants would be less likely to endorse believing in something as faith-based and invisible as religion, and that’s what the study found. It was catnip for science journalists: one small trick to change the way we think.

But it was a tiny, small-sample study, the exact type that is prone to yielding false positives. Several years later, another lab attempted to replicate the findings with a much larger sample size, and failed to find any evidence for the effect.

And while Gervais knew that the original study wasn’t rigorous, he couldn’t help but feel a twinge of discomfort.

“Intellectually, I could say the original data weren’t strong,” he says. “That’s very different from the human, personal reaction to it. Which is like, ‘Oh, shit, there’s going to be a published failure to replicate my most cited finding that’s gotten the most media attention.’ You start worrying about stuff like, ‘Are there going to be career repercussions? Are people going to think less of my other work and stuff I’ve done?’”

Gervais’s story is familiar: Many of us fear we’ll be seen as less competent, less trustworthy, if we admit wrongness. Even when we can see our own errors — which, as outlined above, is not easy to do — we’re hesitant to admit it.

But turns out this assumption is false. As Adam Fetterman, a social psychologist at the University of Texas El Paso, has found in a few studies, wrongness admission isn’t usually judged harshly. “When we do see someone admit that they are wrong, the wrongness admitter is seen as more communal, more friendly,” he says. It’s almost never the case, in his studies, “that when you admit you’re wrong, people think you are less competent.”

Sure, there might be some people who will troll you for your mistakes. There might be a mob on Twitter that converges in order to shame you. Some moments of humility could be humiliating. But this fear must be vanquished if we are to become less intellectually arrogant and more intellectually humble.

Humility can’t just come from within — we need environments where it can thrive

But even if you’re motivated to be more intellectually humble, our culture doesn’t always reward it.

The field of psychology, overall, has been reckoning with a “replication crisis” where many classic findings in the science don’t hold up under rigorous scrutiny. Incredibly influential textbook findings in psychology — like the “ego depletion” theory of willpower or the “marshmallow test” — have been bending or breaking.

I’ve found it fascinating to watch the field of psychology deal with this. For some researchers, the reckoning has been personally unsettling. “I’m in a dark place,” Michael Inzlicht, a University of Toronto psychologist, wrote in a 2016 blog post after seeing the theory of ego depletion crumble before his eyes. “Have I been chasing puffs of smoke for all these years?”

What I’ve learned from reporting on the “replication crisis” is that intellectual humility requires support from peers and institutions. And that environment is hard to build.

“What we teach undergrads is that scientists want to prove themselves wrong,” says Simine Vazire, a psychologist and journal editor who often writes and speaks about replication issues. “But, ‘How would I know if I was wrong?’ is actually a really, really hard question to answer. It involves things like having critics yell at you and telling you that you did things wrong and reanalyze your data.”

And that’s not fun. Again: Even among scientists — people who ought to question everything — intellectual humility is hard. In some cases, researchers have refused to concede their original conclusions despite the unveiling of new evidence. (One famous psychologist under fire recently told me angrily, “I will stand by that conclusion for the rest of my life, no matter what anyone says.”)

Psychologists are human. When they reach a conclusion, it becomes hard to see things another way. Plus, the incentives for a successful career in science push researchers to publish as many positive findings as possible.

There are two solutions — among many — to make psychological science more humble, and I think we can learn from them.

One is that humility needs to be built into the standard practices of the science. And that happens through transparency. It’s becoming more commonplace for scientists to preregister — i.e., commit to — a study design before even embarking on an experiment. That way, it’s harder for them to deviate from the plan and cherry-pick results. It also makes sure all data is open and accessible to anyone who wants to conduct a reanalysis.

That “sort of builds humility into the structure of the scientific enterprise,” Chabris says. “We’re not all-knowing and all-seeing and perfect at our jobs, so we put [the data] out there for other people to check out, to improve upon it, come up with new ideas from and so on.” To be more intellectually humble, we need to be more transparent about our knowledge. We need to show others what we know and what we don’t.

And two, there needs to be more celebration of failure, and a culture that accepts it. That includes building safe places for people to admit they were wrong, like the Loss of Confidence Project.

But it’s clear this cultural change won’t come easily.

“In the end,” Rohrer says, after getting a lot of positive feedback on the project, “we ended up with just a handful of statements.”

We need a balance between convictions and humility

There’s a personal cost to an intellectually humble outlook. For me, at least, it’s anxiety.

When I open myself up to the vastness of my own ignorance, I can’t help but feel a sudden suffocating feeling. I have just one small mind, a tiny, leaky boat upon which to go exploring knowledge in a vast and knotty sea of which I carry no clear map.

Why is it that some people never seem to wrestle with those waters? That they stand on the shore, squint their eyes, and transform that sea into a puddle in their minds and then get awarded for their false certainty? “I don’t know if I can tell you that humility will get you farther than arrogance,” says Tenelle Porter, a University of California Davis psychologist who has studied intellectual humility.

Of course, following humility to an extreme end isn’t enough. You don’t need to be humble about your belief that the world is round. I just think more humility, sprinkled here and there, would be quite nice.

“It’s bad to think of problems like this like a Rubik’s cube: a puzzle that has a neat and satisfying solution that you can put on your desk,” says Michael Lynch, a University of Connecticut philosophy professor. Instead, it’s a problem “you can make progress at a moment in time, and make things better. And that we can do — that we can definitely do.”

For a democracy to flourish, Lynch argues, we need a balance between convictions — our firmly held beliefs — and humility. We need convictions, because “an apathetic electorate is no electorate at all,” he says. And we need humility because we need to listen to one another. Those two things will always be in tension.

The Trump presidency suggests there’s too much conviction and not enough humility in our current culture.

“The personal question, the existential question that faces you and I and every thinking human being, is, ‘How do you maintain an open mind toward others and yet, at the same time, keep your strong moral convictions?’” Lynch says. “That’s an issue for all of us.”

To be intellectually humble doesn’t mean giving up on the ideas we love and believe in. It just means we need to be thoughtful in choosing our convictions, be open to adjusting them, seek out their flaws, and never stop being curious about why we believe what we believe. Again, that’s not easy

#### Fairness- Debate is a game one winner one loser, speech times , tabula rasa judging, concessions etc… all prove it’s an intrinsic good. Skirting negative research and preparations gives the aff an unfair advantage which should be rejected

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Humanism:

#### The affirmative allies with anti-humanism by denying the universal attributes of humanity and the potential for the future to change---it’s coopted by reactionaries.

Brennan, 17—Professor of comparative literature, cultural studies, and English at the University of Minnesota (Timothy, “Introduction,” *For Humanism: Explorations in Theory and Politics*, Introduction, pg 1-7, dml)

To say that humans create is, of course, to say they can. And that means that they are free, have agency and can do what they have not done in the past regardless of, or rather because of, their nature. Logically, then, transformation is possible and the future open. Humanists do not believe humans are the only species that matters, only that it is impossible for any species to think outside the limits of its own being – a view that does not preclude ethical behaviour towards other species or respect for the natural environment. As Ludwig Feuerbach puts it in The Essence of Christianity (1841), ‘If God were an object to the bird, he would be an object to it only as a winged being – the bird knows nothing higher, nothing more blissful than the state of being winged.’1 Following from this, the humanist contends that every human, qua human, shares universal attributes – a vital tenet so that no one can be relegated to a subspecies or denied membership in humanity on the grounds of his or her particularities.

The body of ideas called humanism was never just a set of beliefs but a collection of contrarian intellectual practices. We are talking not only of positions but methods and habits of thinking. This aspect has been largely lost in the post-war flight from humanism so vigorously adduced in the pages of the present volume. It grew out of a body of study we today call the humanities, and the current attacks on the humanities can, to that degree, be seen as evidence of our culture’s mainstream antihumanism.

We should remember that humanism’s early exponents – in China and the Arabic world, not only Europe – all expressed their view in the form of a project of training in the liberal arts (expressed in the West as humanitas or paideia), and so we are talking about a revolution in learning based on the study of books, especially the forgotten wisdom of the past, just as the present volume (we might notice) – For Humanism – is involved in a similar recovery. Despite my just quoting Latin and Greek, the contributions to humanism are universal – a view that is frequently denied today. They can be found in the agnosticism, scepticism towards the supernatural, and emphasis on human choice and agency found within strains of Hinduism, Buddhism, Taoism, Confucianism and Zoroastrianism.

As I have just laid them out, these foundations are obscured today for a number of reasons, and they contribute greatly to the confusion. For one thing, our historical moment is a uniquely disorienting one. Biotechnology obviates the long-standing debate over human nature by threatening to invent a new one according to a managerial plan. Venture capitalists declare openly that if yesterday’s economic game-changer was 0’s and 1’s, today’s are A’s, G’s, T’s and C’s – the bases of DNA. The classic question of what the human being is, then, has been gamed by forces that seek to control it to a degree unknown in any other historical period – picking up where the twentieth century’s innovations in this regard left off: the manipulation of libidinal drives by the commercial media and the merciless incantation of official ‘news’ in the major Western countries which has, many argue, short-circuited mental capacities. Between the managed emotions of overprescribed antidepressants and social media fixations (Twitter, Facebook) that blur the distinction between free time and advertising, how could it be otherwise than that coercion would be widely mistaken for freedom, and submission for resistance? What is Right and what is Left is no longer clear – and that more than any other point defines the current humanism debate.

For Humanism is for that reason very well timed, and also for that reason apparently untimely – as though holding on to ideas with a warm heart and unstifled hopes to prolong a dead (if sorely missed) historical moment of socialist internationalism. Again, our moment is unique. For it is only in the last four decades that attacks on humanism – until then, the standard-issue views of apologists of religious absolutism, Church censors and the reactionary wings of modernism – have been thought politically progressive. In fact, the lineages of antihumanist thought have always been aligned with aristocratic or theocratic privileges; or they assumed the form of apocalyptic amoralism for which the (equally aristocratic) Marquis de Sade is usually the emblem. It was de Sade, in fact, who by way of Georges Bataille helped bring antihumanism into post-war theory and made it a model of failed gods, sexual desire and a mockery of progress.2 It made people associate radical opposition with transgression and the non-normative rather than with social transformation – a realm explored in the illuminatingly revisionist chapter on the politics of gender and sexual desire by David Alderson in the present volume.

What For Humanism returns to, by contrast – these rich if now neglected mid-twentieth-century narratives of dissident humanism in figures like Karel Kosík, Jean-Paul Sartre, Raya Dunayevaska and the Yugoslavian Praxis group – is part of a wider historical arc than the recent form of the debate would have us think. This volume’s genealogies remind us just how much theory in recent decades represents an idiosyncratic detour. It is true, as theory had charged, that humanism may have been enlisted as a slogan of capital in its nineteenth-century colonial form – the technocratic fetish of managerial progress whose ‘dialectic’ Theodor W. Adorno and Max Horkheimer sceptically diagnosed mid-century – but this was overall a co-optation. More typically it was the groundwork of antinomians, visionaries and iconoclasts.3 In this volume, Kevin Anderson describes how on the very heels of proclaiming existentialism a humanism, Jean-Paul Sartre distinguished himself from the ‘liberal and republican humanism’ that was theory’s real and only target. The ledgers of humanism abound, Anderson implies, with just the opposite: struggles against religious dogma, ideas imported from other cultures in order to curb ethnocentrism, and intellectual life brought face to face with politics so that reality might be thought something less to observe than make.

The case against humanism in the post-war period would have us think of humanism in terms of an exclusivist rhetoric of innate qualities and character found in figures like David Hume, Jeremy Bentham and Napoleon III. Historically, though, humanism belongs much more to the maverick secularity of Thales and Anaxagoras, the philological study of Roman law in Varro, the preservation of Oriental learning in the Islamic Golden age (Averroes, Avicenna), the great rediscovery of Egypt in Neoplatonism, the creation by scholasticism of the first European universities, the madrasas of the Maghreb and the Levant, and the triumph of reading in the Italian renaissance of Poggio Bracciolini and Erasmus, the great philological sociologies of ibn Khaldun and later, in an identical spirit, Giambattista Vico. The humanism of the French Revolution and, in its wake, the young-Hegelians, especially Ludwig Feuerbach and Marx, is usually staged as a radical fissure in history or a lamentable march down a dead end historical lane. And yet, left Hegelianism (including Marx) is only the continuation of a spirit of learning, of vernacular inclusiveness and political renovation that had preceded them in Eastern and Western antiquity.

It may be even more of a challenge to the idiosyncratic reigning story of recent decades to recall that the intellectual leaders of anticolonialism after World War II deployed humanist motifs consistently and very consciously. Edward Said’s well-known rallying to the cause of humanism (against the stream of theory) grew out of a broader understanding of the scholarship of George Makdisi on the Arabic contributions to humanism and to the revolutionary solidarities of his close friends Eqbal Ahmad and Mahmoud Darwish. He often illustrates those commitments, in fact, by quoting Aimé Césaire’s Notebook on a Return to my Native Land, where the poet reclaims the essential humanity of actors, black and white, on either side of the colonial divide at the ‘rendezvous of victory’, and bitterly satirises the antihumanist doctrines guiding a colonial enterprise propped up, as he puts it in Discourse on Colonialism, by ‘chattering intellectuals born stinking out of the thigh of Nietzsche’.4

John Dewey’s pragmatism took shape as an effort to reverse the nativism and racial panic of early twentieth-century anti-immigration trends, just as the Brahmo Samaj of Tagore and others in West Bengal set out to secularise the Hindu Right at the dawn of the Indian independence movements. M. N. Roy, the co-founder of the Mexican Communist Party, and a Bengali revolutionary who collaborated with Lenin on the writing of his ‘Theses on the National Question’, spent the final decades of his life building a movement tied to an Institute at Dehradun on behalf of what he called ‘a cultural-educational organization founded with the object of re-educating the educators and young intellectuals of India in spirit and with the ideas of Radical (or Integral) Humanism’.5 By the 1950s, humanism was for Roy the logical, secular, extra-party version of interwar Marxism.

So the very point of departure of antihumanism is politically vexed. To join its forces is to reject much more than hypocritical Eurocentric philosophies of ‘progress’ or imperious universals moulded in the image of Western males. It is rather to assault a centuries-long heritage of resistance and renovation. The symbolism, then, of the appearance of the locus classicus of post-war antihumanist thought, Heidegger’s ‘Letter on Humanism’ (1947), is notable, since it coincided almost exactly with the Universal Declaration of Human Rights (1948) – the most far-reaching practical statement of humanist convictions published in the century, and not coincidentally composed by UN delegates from Egypt, Chile, India and other former colonies. The two texts stand as mid-century antipodes – the former arguing that ‘Man [sic]’ cannot attain his proper ‘dignity’ under humanism since the latter relies on a system of logic and values that prove powerless to capture the plenitude of being; the latter, codifying the universal protections necessary to safeguard human subjects whose particularities vis-à-vis European and American norms had deprived them of the right to well-being, freedom and autonomy. The nature of antihumanism’s complaint, though, is not exhausted by these examples, and becomes more evident in the observation that humanism defined itself as an embrace of learning, literature and the book traditionally associated with philology.6 Since the ‘theory’ invoked in the subtitle of this volume grew out of an extreme position on language as grammatically fixed – to written as opposed to spoken language – we can begin to appreciate the motives of this peculiar philosophical demarche. Heidegger’s representative move in ‘Letter on Humanism’, in another flipping of the script, only appears to protest this tyranny when he appeals to ‘the liberation of language from grammar into a more original essential framework ... reserved for thought and poetic creation’. The freedom he has in mind is not the inventiveness of a vernacular speech making new rules but a freedom from ‘the dictatorship of the public realm’, returning language to ‘the house of being’ – that is, to see the communicative and expressive means on which all debate, discussion and sociality depends as being not about meaning or intention but a kind of medium within which the artist-thinker dwells.7

Heidegger’s famous declaration that language speaks Man rather than the other way around was one of the many ideas interwar phenomenology derived from Nietzsche, although, as Barbara Epstein crucially observes in this volume, figures like Maurice Merleau-Ponty (an important early influence on Said) and Sartre reappropriated aspects of phenomenology for humanist thought. And yet, in the end all modern antihumanism is Nietzschean, expanding on or adapting his philosophy’s central principles that free choice is an illusion; that knowledge, even if it were possible, has no ‘use’; that ethics constrain Man’s life-enhancing instincts; and that ‘truth’ is rhetorical, language a means of artful deception. Lying, states Nietzsche unequivocally, gives humans their evolutionary advantage over other animals. A professional philologist, Nietzsche’s revolt was precisely aimed at his own earlier training in the humanist tradition of letters with which he had grown disaffected. Not learning but art, creative illusion, are the dignity of Man for him; not making life anew but coming to admit what we are: unequal, visceral.

It is not going too far to say that understanding the contemporary recoil from humanism is impossible without becoming familiar with Nietzsche’s thought. Antihumanism derives from him more than from any other source – idea for idea, word for word. It is Bataille who in the late 1940s enshrines Nietzsche, announcing that ‘Nietzsche’s position is the only one apart from communism’,8 and whose fealty goes so far that he considers himself ‘the same as he’. Foucault’s and Deleuze’s later efforts to claim Nietzsche for the radical Left are taken very directly, although without acknowledgement, from Bataille’s earlier experiments in appropriating the language of the Hegelian Left for the purpose of destroying it from within. Bataille redeploys Hegelian terms like ‘totality’, ‘sovereignty’ and ‘negation’ on behalf of a human subject forced to reckon with its instinctive cruelty, its amoralism and its illusory subjectivity. Foucault’s ‘death of the subject’ and Deleuze’s ‘pure immanence’ are both echoes of Bataille’s already perfected gestures.

Antihumanism, nevertheless, passed through various phases.9 Anthropological antihumanism, to take a fascinating and little-known example, was a dominant aspect of culture in the late nineteenth and early twentieth centuries, harmonising with aspects of Nietzsche’s critique. Loudly charging academic humanism with enshrining the ‘positivist, ratiocinating West’ and excluding Africans and Asians from the human as such, an insurgent anthropology arose with a counter-method that was both intellectually appealing and commercially viable. It appeared radical to many at first, producing a large number of popular museum exhibitions and pamphlets: ‘Rather than excluding the colonised other, anthropology would focus explicitly on societies that, all agreed, were radically separate from narratives of Western civilisation. Instead of studying European “cultural peoples” (Kulturvölker), societies defined by their history and civilisation, anthropologists studied the colonised “natural peoples” (Naturvölker).’10

As a populist discourse with the aim of displacing academic mandarins, anthropology promised Germans that they could reinvent themselves along the lines of the country’s new imperial ambitions. The conquest of foreign territories provided antihumanism with its ‘ethnographic performers, artifacts, body parts, and field sites that provided the empirical data’ and so linked the imperial, the natural, and the German in a style of thought that led directly to theories of ‘racial hygiene’.11 One particularly well-known anthropologist, Leo Frobenius, argued that ‘Germans like Africans were people of emotion, intuitive reason, art, poetry, image, and myth’, thereby establishing an antihumanist affinity with the peripheral subaltern that had the great merit of making Germanness unique within the family of Europe.12 A neo-Orientalist theory of absolute cultural and mental otherness, then, could portray itself as an insurrectionary ideology – a minority tendency reclaiming ‘difference’ for use against the establishment.

#### Vote neg for a theoretical alignment with radical humanist traditions.

Spencer, 17—Senior Lecturer in Postcolonial Literatures and Cultures at the University of Manchester (Robert, “Postcolonialism is a Humanism,” *For Humanism: Explorations in Theory and Politics*, Chapter 3, pg 121-126, dml)

Nonetheless it is true that the unrepentant humanism of the field’s founder, Edward Said, is not glossed over quite so embarrassedly these days. Said’s repeated declarations that he was an unswerving humanist used to be met by his postcolonialist successors with a kind of uncomfortable silence. Now the situation is somewhat different. The war in Iraq and its calamitous aftermath no doubt alerted Said’s heirs and interpreters to what Neil Lazarus has called ‘the unremitting actuality and indeed the intensification of imperialist social relations in the times and spaces of the postcolonial world’.7 As a result, those critics have perhaps been induced to look more favourably at Said’s efforts to use humanism as a way of reproving imperialism and of imagining our way beyond it. The war in Iraq, in short, has made starkly visible a rampantly inhuman imperialist project that has obviously not, as our field’s moniker suggests, been drawing to a close but has on the contrary been seeking to expand (or at least prolong) American hegemony, extend corporate power and hijack international institutions of governance. Said’s humanism arraigns Iraq’s assailants in the name of universal principles and a vision of social transformation. The second edition of Bill Ashcroft and Pal Ahluwalia’s book on Said in the Routledge Critical Thinkers series contains a broadly sympathetic, albeit slightly grudging, section on Said’s humanism,8 as does R. Radhakrishnan’s altogether more laudatory dictionary of Said’s key concepts.9

It is well over a decade since Bruce Robbins marked ‘a universalistic and humanistic impulse that has gradually emerged, within cultural studies generally and postcolonial studies in particular, but that was slow to be perceived as such because of the prevailing antihumanism.’10 Notwithstanding this renewed interest in Said’s humanism, I would maintain, however, that humanism’s partial rehabilitation has not gone very far at all. It has not yet affected fundamentally the kind of work that we postcolonialists do. It is one thing to concede that when it comes to, say, the assault on Iraq it is legitimate to talk about rights and duties, about war crimes and crimes against humanity. That is part of our obligations and activities as citizens. It is quite another thing, however, to let such convictions guide or animate fully our professional lives as critics too. My point in this chapter is not that we should all carry a card with the word ‘Humanist’ emblazoned on it, nor that we should begin each argument with a paean of praise to the idea, nor even that we should bother to use the word more often. I suppose I am arguing that in addition to being a critical undertaking postcolonialism ought also to be a moral and a political one as well. This being the case, I want to say, at the risk of sounding facetious, that postcolonial studies should be exercised above all not by crimes against hybridity but by crimes against humanity and by the moral and political aspirations of those movements that seek to withstand such crimes and to overthrow the system that inflicts them. Ours is the effort to understand where colonialism comes from as well as how colonialism can be superseded; ours is the responsibility to make connections between local injustices and then trace these to the general and related injustices of state and class power; ours is also the obligation to give due emphasis to the achievement of texts of various kinds in dramatising those injustices and exploring alternatives. This is another way of saying that, although Said’s humanism is not in such bad odour as hitherto, humanism has barely penetrated and informed the critical work that we do. Because humanism, at worst, conjures up images of men in pith helmets telling the world what to do, or else, at best, comes across as a quaint way of describing the convictions we employ when making political judgements, it has not been allowed to influence the priorities of a discipline that, alas, no longer sees itself, as its predecessors saw themselves, as part of a general movement for emancipation. It is now a trifling affair concerned with the ‘liminal’ spaces opened up by a global system that it either approves of or, more likely, that it despairs of being overturned.

Of course, it is not hard to find exclusionary and ‘metaphysical’ definitions of humanism that, far from being acclamations of universal rights and capacities, are in fact mere smokescreens for self-interest. Too many humanisms have excluded and denigrated certain groups whom they consider to be not (or at least not yet) fully human. This is especially true of the humanist rhetoric mouthed by the agents and spokespeople of colonial power. ‘The Mediterranean is the human norm’, according to the sententious narrator of A Passage to India, and through the Bosphorus and the Pillars of Hercules men ‘approach the monstrous and extraordinary’.11 So blatantly intolerable is this pompous and obnoxious way of thinking (remember it is, of course, not Forster himself speaking here) that Anthony Alessandrini observes that ‘it is becoming increasingly difficult to find anyone within the field of postcolonial studies willing to defend humanism in its most traditional form’.12 Impossible, in fact. What is more, it is of course quite right that this should be so. For the libertarian humanism that I am endeavouring to vindicate is as like the traditional version as a crab’s like an apple. Let nobody labour under the illusion that I am foolish enough to endorse the sort of crass, self-seeking and ultimately racist humanism for which to be black, say, in Aimé Césaire’s celebrated quip, is ‘like being a second-class clerk’: waiting for promotion, ‘en attendant mieux et avec possibilité de monter plus haut’. What one wouldn’t realise from the dismissal of humanism as a kind of unthinking belief in the superiority of white European men, is the sheer variety of humanisms that have come into being in response to such inadequate understandings of the term. In their Critical Humanisms, Martin Halliwell and Andy Mousley demonstrate the extraordinary durability and diversity of the humanist tradition.13 One thinks, in addition to their examples, of the ‘radical humanism’ of the Holocaust survivor Jean Améry,14 Karen Green’s feminist humanism,15 not to mention the variety of socialist humanisms enumerated by Barbara Epstein in this volume. Most of all, I believe our attention ought to be trained on the Marxist humanism of a tradition represented by Theodor Adorno, Ernst Bloch and Herbert Marcuse, and of Jean-Paul Sartre, to whose celebrated 1945 lecture ‘Existentialism is a Humanism’ this chapter’s title is a respectful nod.

My claim here is that the rejection over these last decades of the idea that human subjects are possessed of intrinsic rights and capacities bears out one of Theodor Adorno’s most cutting gibes: among its other functions, ‘philosophy is capable of making people stupid’.16 I therefore propose to describe what I believe are the deleterious consequences for postcolonial theory’s development of its constitutive antihumanism and especially of its neglect of the liberating resources of a specifically Marxist humanism. I hope it is not unfair to observe that the dominant though persistently disputed and by now fairly beleaguered variety of postcolonial criticism shares several identifying marks, or let us say precepts and assumptions, that might with some justice be termed ‘antihumanist’. I am referring less to such sophisticated as well as theoretically and politically distinct figures as Homi Bhabha and Gayatri Spivak, though I shall have a bit more to say in due course about the former, than to the myriad of other critics who draw on an idiom first promulgated by Bhabha and Spivak. I am not endeavouring to tick off, say, Bhabha for being a card-carrying antihumanist, not least because he has written in his preface to the new translation of Frantz Fanon’s The Wretched of the Earth in a surprisingly sympathetic way about humanism.17 Rather, in addition to showing that what Bhabha means by the term could scarcely be further from Fanon’s extremely militant account of a ‘new humanism’, I want to identify a kind of disposition or outlook among most postcolonialists that is not so much stridently antihumanist, though God knows there is quite enough of that, as habitually or routinely and even automatically antihumanist. To be a postcolonialist, it seems, is to leave one’s humanism at the door. To peruse the contents of any issue of the major journals in the field is more often than not to be confronted with theoretical disquisitions and analyses of texts that, whatever virtues of acuity and originality they possess and notwithstanding their informativeness, usually address their readers from a position that is tacitly antihumanist. They champion difference at the expense of equality, deal with narratives of cultural ‘hybridity’ without sufficient regard for the continuing exigencies of conflict and struggle, and choose to abide by the tenets and idiom of post-structuralism to the detriment of the revolutionary language and horizons of the previous generation of anticolonial militants. In so doing, my claim goes, many postcolonial critics have either forfeited or have else been completely oblivious of the very valuable resources of the language of humanism. They therefore leave unexplored the larger realities in which such texts and theories circulate, the world of imperialism, of capitalism (from which imperialism is inseparable) and of the counter-struggles of imperialism’s victims.

The reasons for this aversion to humanism are complex, to put it mildly. They have to do with the discipline’s snug consolidation within (as opposed to within and against) the Anglo-American university system as well as within those countries’ radically neoliberal economic dispensations, dispensations which the world of higher education increasingly and quite willingly serves. Speaking only of the British system in which I work, it is a melancholy duty to have to report that any number of essential academic freedoms and responsibilities have been buried in the last few years beneath an avalanche of corporate waffle and management newspeak. Few of us will need reminding of the consequences of the annexation of British universities by the language and priorities of corporate power: of how large our class sizes have become, of the casualisation of the academic labour market, of funding crises and cost-cutting, of the extortionate price of tuition fees (the intention of which is not to save money but to turn students into indebted and thus pliant consumers), and of the distortion of scholarly research by measuring it against the risibly crude standard of ‘economic contribution’. All of these developments deflect the inhabitants of these embattled institutions from the proper business of advanced education in the humanities, which is the cultivation of an aptitude for asking difficult questions about culture and society.18 Postcolonial studies’ materialist critics have long complained that the most prominent figures in the field, indeed the field itself, has been co-opted by its privileged position within this world of conformity and privilege.19 And yet it would hardly be worth saying such things if universities were not at the same time also places in which it is still possible to foster the ability and the confidence to think knowledgeably, rigorously and above all critically about texts of all kinds and about the realities with which texts deal. My point is that the characteristic emphases of the postcolonial field cannot be understood without reference to its institutional, geographical and economic position. We need to be more self-conscious about that position and more willing to work both within and against it. Now more than ever there is a danger that if postcolonial studies does not present itself consciously as a discipline concerned centrally with questions of critique and liberation, then it will, at worst, end up as a kind of area office within an enfeebled humanities sector. At best, it will become a disgruntled subsidiary of the humanities, dissatisfied with the system of which it forms a part but whose favourite concepts are to that system like so many toy arrows.

To let fall the word ‘revolutionary’ where one might be accustomed to hearing terms like ‘liminality’ is already, therefore, to out oneself as a humanist. This is because the concern with systems and with systemic alternatives is usually seen as the preserve of an older anticolonial past rather than of the postcolonial present. By demonstrating the differences between Marxist humanism on the one hand and postcolonial antihumanism on the other, I hope at least to show that postcolonial theory as it is currently constituted does not possess anything like the system-challenging ambitions of humanism, which seeks to marry critical and theoretical work to the larger context of the struggle to replace the manifestly inhuman imperatives of imperialism and capitalism. This is a quintessentially theoretical question of course, by which I mean that it is a crucial question about the very purpose and context of the critical work that we undertake. We have, in my view, delayed for far too long a rigorous and open discussion of what I see as the very considerable disadvantages of the antihumanist theory that so many of us seem almost automatically to deploy. Imperialism and its transformation is the proper subject of our discipline; that being the case, we must return in a suitably critical and discriminating spirit to the humanist thinkers whose subject this was.

### 1NC

PIC:

We affirm the 1AC absent their decision to follow communicative debate norms.

It solves case and avoids reinforcing the Eurocentric norms they critiqued. If not, it proves the 1AC’s analysis is inconsistent and diluted by competitive incentives.

### 1NC

#### PIC:

#### We affirm the entirety of the 1AC absent their decision to relate to the topic- Any 2AC answer to is a net benefit to the PIC

### 1NC

#### TECH LEADERSHIP DA:

#### US tech leadership is secure, BUT antitrust cedes it.

Abbott 21, JD, MA, Senior Research Fellow at the Mercatus Center focusing on antitrust, formerly served as the Federal Trade Commission’s General Counsel. (Alden, *et al*, 3-10-2021, “Aligning Intellectual Property, Antitrust, and National Security Policy”, *Regulatory Transparency Project of the Federalist Society*, pg. 2-5, <https://regproject.org/wp-content/uploads/Paper-Aligning-Intellectual-Property-Antitrust-and-National-SecurityPolicy.pdf>)

II. The United States Plays a Critical Role in 5G Standards Development

The U.S. government has recognized that “5G is a critical strategic technology [such that] nations that master advanced communications technologies and ubiquitous connectivity will have a long-term economic and military advantage.”8 The U.S. has had a substantial technological edge over our military and intelligence rivals in foundational R&D for 5G and other next-generation technologies. U.S. companies have long been leaders in the development of previous generations of core mobile standards (2G, 3G, 4G, and LTE). This technological leadership has made it possible for U.S. companies to ensure the security and integrity of the hardware and software products that make up the backbone of the U.S. telecommunication systems. This leadership must continue for the U.S. government to more effectively anticipate potential security risks and take the necessary steps to protect national security.9

Despite this history of clear technological leadership, there are causes for concern. First, a very small number of U.S. companies have made the investments in the overwhelming majority of the R&D necessary to develop 5G.10 Historically, U.S. companies have heavily invested in R&D, which has propelled the U.S. into leadership positions in critical standard development organizations working on foundational next-generation technologies like 5G.11 U.S. companies like Qualcomm play a significant and important role in this process through innovation, patenting, and standard setting, but they are not alone in the global community of high-tech companies.12 Backed by their nations’ leadership, Chinese and Korean companies have also invested heavily in developing the core technologies for 5G.13

The willingness of U.S. companies to invest in R&D is threatened, however. The development of 5G is a bit like a race, with the companies who develop the best technology coming out ahead. While U.S. companies are savvy and talented competitors in this race, aggressive and unwarranted use of antitrust law by U.S. regulators, as well as by foreign antitrust authorities, threatens to put obstacles in these companies’ paths and hinder their ability to lead.

III. Overly Aggressive Antitrust Enforcement Hinders American Technological Leadership and Threatens National Security

As companies from around the world develop the technology and standards for 5G mobile devices and networks, American companies are under threat by aggressive antitrust enforcement that ultimately redounds to the benefit of these foreign companies, which are economic competitors in countries that are also military competitors of the U.S. Over the past five years, foreign governments, particularly in Asia, have subjected U.S. companies to antitrust investigations that failed to follow basic norms of the rule of law, such as providing basic due process protections.14 These antitrust investigations were a thinly-disguised effort by these countries to force the transfer of U.S. patented technology to their own domestic companies, or to insulate their domestic companies from American competition. In recent years, Chinese, Korean, and Taiwanese antitrust authorities have brought nearly 30 investigations against 60 foreign companies across a range of industries, including manufacturing, life sciences, and technology.15

Antitrust challenges undermine intellectual property rights by forcing companies to license their products on non-market-based terms. One prominent example in U.S. history is when the Department of Justice wrung a concession from AT&T to license royalty-free the entire portfolio of 8,600 patents held by Bell Labs in a 1956 antitrust consent decree with the company.16 Today, the White House Office of Trade and Manufacturing Policy has observed that “China uses the Antimonopoly Law of the People’s Republic of China not just to foster competition but also to force foreign companies to make concessions such as reduced prices and below-market royalty rates for licensed technology.”17 Companies have also complained about poor policy guidance and procedural protections under China’s competition laws.18 Others have complained about China’s use of its competition laws to promote policy objectives rather than protect competition and advance consumer welfare.19 In one example, companies raised concerns with Article 7 of China’s State Administration of Industry Commerce (SAIC) 2015 Rules on the Prohibition of Conduct Eliminating or Restricting Competition by Abusing Intellectual Property Rights.20 Under this provision, intellectual property constitutes an “essential facility,” which could allow parties to raise abuse of intellectual property rights claims against patent owners for a unilateral refusal to license their patents.21

Predatory antitrust enforcement actions threaten the ability of U.S. companies to continue to be leaders in 5G technological development. China and other nations with similarly restrictive regulatory frameworks can weaken the ability of the United States to compete in global markets by exacting high monetary penalties from U.S. intellectual property owners or forcing the transfer of their intellectual property to domestic commercial rivals. As a penalty for violations of its competition laws, China can impose exorbitant fines that range up to 10% of a foreign company’s entire revenue in the prior year.22 This is not a legal rule observed in the breach; it has already resulted in fines just shy of $1 billion.23

Another way in which courts in China and other foreign countries are harming U.S. companies is through the use of anti-suit injunctions. One example of this is in the recent patent infringement lawsuit brought by InterDigital, an American high-tech company that has developed key technologies in wireless telecommunication, against Chinese company Xiaomi. In June 2020, Xiaomi filed a lawsuit in the Wuhan Intermediate Court in China requesting that the court set global licensing rates for InterDigital’s patents on standardized technologies. In July 2020, InterDigital sued Xiaomi in India for infringement of InterDigital’s Indian patents. The Wuhan Intermediate Court then ordered InterDigital to stop its lawsuit with its request for an injunction in India. The Chinese court further prohibited InterDigital from suing Xiaomi and requesting an injunction or damages in the form of reasonable licensing rates, or even to enforce a previously-issued injunction, in any other country. If InterDigital does not comply with this worldwide injunction against pursuing legal relief for the violation of its patents in any other country, the company faces a significant fine in China. The type of judicial order issued by the Wuhan court is known as an anti-suit injunction and its purpose is to force an intellectual property dispute to play out solely in a Chinese court at the behest of the Chinese government. These court orders demonstrate China’s desire to become the source of 5G innovation and to dictate the licensing terms of the technology, and the anti-suit injunctions hamstring U.S. companies like InterDigital from enforcing their intellectual property rights anywhere in the world.

The unfair use of antitrust enforcement and related legal actions like anti-suit injunctions to weaken U.S. intellectual property rights around the world risks diminishing U.S. global competitiveness in critical technologies like 5G, and further empowers China and others to expand their influence over the evolving 5G technological ecosystem. To the extent the U.S. cedes its dominance in 5G standards development, China will continue its focused efforts to fill that void. Huawei, a China-based company, has increased its R&D spending while growing its share of patents on the standardized technologies comprising 5G.24 The President’s Council on Science and Technology issued a report concluding that Chinese actions in the semiconductor industry, which include a range of policies backed by over $100 billion in government funds, threaten U.S. leadership in the industry and present risks to U.S. national security.25 China’s “Made in China 2025” plan called for China to become a leader in 5G technology, including in the development of the standards for the technology, by 2020.26 The plan expressly favors Chinese domestic producers, calling for raising the domestic content of core components in high-tech industries like 5G to 70% by 2025.27

This issue, however, extends far beyond simply the ability and willingness of U.S. companies to engage in the requisite R&D to participate in the 5G race. Reduced U.S. influence on 5G standard-setting would force the U.S. government to rely on untrusted foreign companies for its 5G product supply. The Department of the Treasury has expressed concern about the “well-known” U.S. national security risks posed by Huawei and other Chinese telecommunications companies.28

#### Revisionist tech leadership causes nuclear war.

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Rather, we should think more broadly about how new technology might affect global politics, and, for this, it is helpful to turn to scholarly international relations theory. The dominant theory of the causes of war in the academy is the “bargaining model of war.” This theory identifies rapid shifts in the balance of power as a primary cause of conflict.

International politics often presents states with conflicts that they can settle through peaceful bargaining, but when bargaining breaks down, war results. Shifts in the balance of power are problematic because they undermine effective bargaining. After all, why agree to a deal today if your bargaining position will be stronger tomorrow? And, a clear understanding of the military balance of power can contribute to peace. (Why start a war you are likely to lose?) But shifts in the balance of power muddy understandings of which states have the advantage.

You may see where this is going. New technologies threaten to create potentially destabilizing shifts in the balance of power.

For decades, stability in Europe and Asia has been supported by US military power. In recent years, however, the balance of power in Asia has begun to shift, as China has increased its military capabilities. Already, Beijing has become more assertive in the region, claiming contested territory in the South China Sea. And the results of Russia’s military modernization have been on full display in its ongoing intervention in Ukraine.

Moreover, China may have the lead over the United States in emerging technologies that could be decisive for the future of military acquisitions and warfare, including 3D printing, hypersonic missiles, quantum computing, 5G wireless connectivity, and artificial intelligence (AI). And Russian President Vladimir Putin is building new unmanned vehicles while ominously declaring, “Whoever leads in AI will rule the world.”

If China or Russia are able to incorporate new technologies into their militaries before the United States, then this could lead to the kind of rapid shift in the balance of power that often causes war.

If Beijing believes emerging technologies provide it with a newfound, local military advantage over the United States, for example, it may be more willing than previously to initiate conflict over Taiwan. And if Putin thinks new tech has strengthened his hand, he may be more tempted to launch a Ukraine-style invasion of a NATO member.

Either scenario could bring these nuclear powers into direct conflict with the United States, and once nuclear armed states are at war, there is an inherent risk of nuclear conflict through limited nuclear war strategies, nuclear brinkmanship, or simple accident or inadvertent escalation.

This framing of the problem leads to a different set of policy implications. The concern is not simply technologies that threaten to undermine nuclear second-strike capabilities directly, but, rather, any technologies that can result in a meaningful shift in the broader balance of power. And the solution is not to preserve second-strike capabilities, but to preserve prevailing power balances more broadly.

## Case

### 1NC Ex Risk

#### Prioritize existential risk prevention---it encompasses AND outweighs other threats.

Dennis Pamlin & Stuart Armstrong 15, Dennis Pamlin, Executive Project Manager Global Risks, Global Challenges Foundation, and Stuart Armstrong, James Martin Research Fellow, Future of Humanity Institute, Oxford Martin School, University of Oxford, February 2015, “Global Challenges: 12 Risks that threaten human civilization: The case for a new risk category,” Global Challenges Foundation, p.30-93, https://api.globalchallenges.org/static/wp-content/uploads/12-Risks-with-infinite-impact.pdf

2. Risks with infinite impact: A new category of risks “Most risk management is really just advanced contingency planning and disciplining yourself to realise that, given enough time, very low probability events not only can happen, but they absolutely will happen.” Lloyd Blankfein, Goldman Sachs CEO, July 2013 1 Risk = Probability × Impact Impacts where civilisation collapses to a state of great suffering and do not recover, or a situation where all human life end, are defined as infinite as the result is irreversible and lasts forever. A new group of global risks This is a report about a limited number of global risks – that can be identified through a scientific and transparent process – with impacts of a magnitude that pose a threat to human civilisation, or even possibly to all human life. With such a focus it may surprise some readers to find that the report’s essential aim is to inspire action and dialogue as well as an increased use of the methodologies used for risk assessment. The real focus is not on the almost unimaginable impacts of the risks the report outlines. Its fundamental purpose is to encourage global collaboration and to use this new category of risk as a driver for innovation. The idea that we face a number of global challenges threatening the very basis of our civilisation at the beginning of the 21st century is well accepted in the scientific community, and is studied at a number of leading universities.2 But there is still no coordinated approach to address this group of challenges and turn them into opportunities for a new generation of global cooperation and the creation of a global governance system capable of addressing the greatest challenges of our time. This report has, to the best of our knowledge, created the first science-based list of global risks with a potentially infinite impact and has made the first attempt to provide an initial overview of the uncertainties related to these risks as well as rough quantifications for the probabilities of these impacts. What is risk? Risk is the potential of losing something of value, weighed against the potential to gain something of value. Every day we make different kinds of risk assessments, in more or less rational ways, when we weigh different options against each other. The basic idea of risk is that an uncertainty exists regarding the outcome and that we must find a way to take the best possible decision based on our understanding of this uncertainty.3 To calculate risk the probability of an outcome is often multiplied by the impact. The impact is in most cases measured in economic terms, but it can also be measured in anything we want to avoid, such as suffering. At the heart of a risk assessment is a probability distribution, often described by a probability density function4; see figure X for a graphic illustration. The slightly tilted bell curve is a common probability distribution, but the shape differs and in reality is seldom as smooth as the example. The total area under the curve always represents 100 percent, i.e. all the possible outcomes fit under the curve. In this case (A) represents the most probable impact. With a much lower probability it will be a close to zero impact, illustrated by (B). In the same way as in case B there is also a low probability that the situation will be very significant, illustrated by (C). Figure 1: Probability density function [FIGURE 1 OMITTED] The impacts (A), (B) and (C) all belong to the same category, ~~normal~~ [common] impacts: the impacts may be more or less serious, but they can be dealt with within the current system. The impacts in this report are however of a special kind. These are impacts where everything will be lost and the situation will not be reversible, i.e challenges with potentially infinite impact. In insurance and finance this kind of risk is called “risk of ruin”, an impact where all capital is lost.5 This impact is however only infinite for the company that is losing the money. From society’s perspective, that is not a special category of risk. In this report the focus is on the “risk of ruin” on a global scale and on a human level, in the worst case this is when we risk the extinction of our own species. On a probability curve the impacts in this report are usually at the very far right with a relatively low probability compared with other impacts, illustrated by (D) in Figure 2. Often they are so far out on the tail of the curve that they are not even included in studies. For each risk in this report the probability of an infinite impact is very low compared to the most likely outcome. Some studies even indicate that not all risks in this report can result in an infinite impact. But a significant number of peer-reviewed reports indicate that those impacts not only can happen, but that their probability is increasing due to unsustainable trends. The assumption for this report is that by creating a better understanding of our scientific knowledge regarding risks with a potentially infinite impact, we can inspire initiatives that can turn these risks into drivers for innovation. Not only could a better understanding of the unique magnitude of these risks help address the risks we face, it could also help to create a path towards more sustainable development. The group of global risks discussed in this report are so different from most of the challenges we face that they are hard to comprehend. But that is also why they can help us to build the collaboration we need and drive the development of further solutions that benefit both people and the planet. As noted above, none of the risks in this report is likely to result directly in an infinite impact, and some are probably even physically incapable of doing so. But all are so significant that they could reach a threshold impact able to create social and ecological instability that could trigger a process which could lead to an infinite impact. For several reasons the potentially infinite impacts of the risks in this report are not as well known as they should be. One reason is the way that extreme impacts are often masked by most of the theories and models used by governments and business today. For example, the probability of extreme impacts is often below what is included in studies and strategies. The tendency to exclude impacts below a probability of five percent is one reason for the relative “invisibility” of infinite impacts. The almost standard use of a 95% confidence interval is one reason why low-probability high-impact events are often ignored.6 Figure 2: Probability density function with tail highlighted [FIGURE 2 OMITTED] Climate change is a good example, where almost all of the focus is on the most likely scenarios and there are few studies that include the low-probability high-impact scenarios. In most reports about climate impacts, the impacts caused by warming beyond five or six degrees Celsius are even omitted from tables and graphs even though the IPCC’s own research indicates that the probability of these impacts are often between one and five percent, and sometimes even higher.7 Other aspects that contribute to this relative invisibility include the fact that extreme impacts are difficult to translate into monetary terms, they have a global scope, and they often require a time-horizon of a century or more. They cannot be understood simply by linear extrapolation of current trends, and they lack historical precedents. There is also the fact that the measures required to significantly reduce the probability of infinite impacts will be radical compared to a business-as-usual scenario with a focus on incremental changes. The exact probability of a specific impact is difficult or impossible to estimate.8 However, the important thing is to establish the current magnitude of the probabilities and compare them with the probabilities for such impacts we cannot accept. A failure to provide any estimate for these risks often results in strategies and priorities defined as though the probability of a totally unacceptable outcome is zero. An approximate number for a best estimate also makes it easier to understand that a great uncertainty means the actual probability can be both much higher and much lower than the best estimate. It should also be stressed that uncertainty is not a weakness in science; it always exists in scientific work. It is a systematic way of understanding the limitations of the methodology, data, etc.9 Uncertainty is not a reason to wait to take action if the impacts are serious. Increased uncertainty is something that risk experts, e.g. insurance experts and security policy experts, interpret as a signal for action. A contrasting challenge is that our cultural references to the threat of infinite impacts have been dominated throughout history by religious groups seeking to scare society without any scientific backing, often as a way to discipline people and implement unpopular measures. It should not have to be said, but this report is obviously fundamentally different as it focuses on scientific evidence from peer-reviewed sources. Infinite impact The concept infinite impact refers to two aspects in particular; the terminology is not meant to imply a literally infinite impact (with all the mathematical subtleties that would imply) but to serve as a reminder that these risks are of a different nature. Ethical These are impacts that threaten the very survival of humanity and life on Earth – and therefore can be seen as being infinitely negative from an ethical perspective. No positive gain can outweigh even a small probability for an infinite negative impact. Such risks require society to ensure that we eliminate these risks by reducing the impact below an infinite impact as a top priority, or at least do everything we can to reduce the probability of these risks. As some of these risks are impossible to eliminate today it is also important to discuss what probability can right now be accepted for risks with a possible infinite impact. Economic Infinite impacts are beyond what most traditional economic models today are able to cope with. The impacts are irreversible in the most fundamental way, so tools like cost-benefit assessment seldom make sense. To use discounting that makes infinite impacts (which could take place 100 years or more from now and affect all future generations) close to invisible in economic assessments, is another example of a challenge with current tools. So while tools like cost-benefit models and discounting can help us in some areas, they are seldom applicable in the context of infinite impacts. New tools are needed to guide the global economy in an age of potential infinite impacts. See chapter 2.2.2 for a more detailed iscussion. Roulette and Russian roulette When probability and normal risks are discussed the example of a casino and roulette is often used. You bet something, then spin the wheel and with a certain probability you win or lose. You can use different odds to discuss different kinds of risk taking. These kinds of thought experiment can be very useful, but when it comes to infinite risks these gaming analogies become problematic. For infinite impact a more appropriate analogy is probably Russian roulette. But instead of “normal” Russian roulette where you only bet your own life you are now also betting everyone you know and everyone you don’t know. Everyone alive will die if you lose. There will be no second chance for anyone as there will be no future generations; humanity will end with your loss. What probability would you accept for different sums of money if you played this version of Russian roulette? Most people would say that it is stupid and – no matter how low the probability is and no matter how big the potential win is – this kind of game should not be played, as it is unethical. Many would also say that no person should be allowed to make such a judgment, as those who are affected do not have a say. You could add that most of those who will lose from it cannot say anything as they are not born and will never exist if you lose. The difference between ordinary roulette and “allhumanity Russian roulette” is one way of illustrating the difference in nature between a “normal” risk that is reversible, and a risk with an infinite impact. An additional challenge in acknowledging the risks outlined in this report is that many of the traditional risks including wars and violence have decreased, even though it might not always looks that way in media.10 So a significant number of experts today spend a substantial amount of time trying to explain that much of what is discussed as dangerous trends might not be as dangerous as we think. For policy makers listening only to experts in traditional risk areas it is therefore easy to get the impression that global risks are becoming less of a problem. The chain of events that could result in infinite impacts in this report also differ from most of the traditional risks, as most of them are not triggered by wilful acts, but accidents/mistakes. Even the probabilities related to nuclear war in this report are to a large degree related to inadvertent escalation. As many of the tools to analyse and address risks have been developed to protect nations and states from attacks, risks involving accidents tend to get less attention. This report emphasises the need for an open and democratic process in addressing global challenges with potentially infinite impact. Hence, this is a scientifically based invitation to discuss how we as a global community can address what could be considered the greatest challenges of our time. The difficulty for individual scientists to communicate a scientific risk approach should however not be underestimated. Scientists who today talk about low-probability impacts, that are serious but still far from infinite, are often accused of pessimism and scaremongering, even if they do nothing but highlight scientific findings.11 To highlight infinite impacts with even lower probability can therefore be something that a scientist who cares about his/her reputation would want to avoid. In the media it is still common to contrast the most probable climate impact with the probability that nothing, or almost nothing, will happen. The fact that almost nothing could happen is not wrong in most cases, but it is unscientific and dangerous if different levels of probability are presented as equal. The tendency to compare the most probable climate impact with the possibility of a low or no impact also results in a situation where low-probability high-impact outcomes are often totally ignored. An honest and scientific approach is to, whenever possible, present the whole probability distribution and pay special attention to unacceptable outcomes. The fact that we have challenges that with some probability might be infinite and therefore fundamentally irreversible is difficult to comprehend, and physiologically they are something our brains are poorly equipped to respond to, according to evolutionary psychologists.12 It is hard for us as individuals to grasp that humanity for the first time in its history now has the capacity to create such catastrophic outcomes. Professor Marianne Frankenhaeuser, former head of the psychology division, Karolinska Institute, Stockholm, put it this way: “Part of the answer is to be found in psychological defence mechanisms. The nuclear threat is collectively denied, because to face it would force us to face some aspects of the world’s situation which we do not want to recognise.” 13 This psychological denial may be one reason why there is a tendency among some stakeholders to confuse “being optimistic” with denying what science is telling us, and ignoring parts of the probability curve.14 Ignoring the fact that there is strong scientific evidence for serious impacts in different areas, and focusing only on selected sources which suggest that the problem may not be so serious, is not optimistic. It is both unscientific and dangerous.15 A scientific approach requires us to base our decisions on the whole probability distribution. Whether it is possible to address the challenge or not is the area where optimism and pessimism can make people look at the same set of data and come to different conclusions. Two things are important to keep in mind: first, that there is always a probability distribution when it comes to risk; second, that there are two different kinds of impacts that are of interest for this report. The probability distribution can have different shapes but in simplified cases the shape tends to look like a slightly modified clock (remember figure 1). In the media it can sound as though experts argue whether an impact, for example a climate impact or a pandemic, will be dangerous or not. But what serious experts discuss is the probability of different oucomes. They can disagree on the shape of the curve or what curves should be studied, but not that a probability curve exists. With climate change this includes discussions about how sensitive the climate is, how much greenhouse gas will be emitted, and what impacts that different warmings will result in. Just as it is important not to ignore challenges with potentially infinite impacts, it is also important not to use them to scare people. Dramatic images and strong language are best avoided whenever possible, as this group of risks require sophisticated strategies that benefit from rational arguments. Throughout history we have seen too many examples when threats of danger have been damagingly used to undermine important values. The history of infinite impacts: The LA-602 document The understanding of infinite impacts is very recent compared with most of our institutions and laws. It is only 70 years ago that Edward Teller, one of the greatest physicists of his time, with his back-of-the-envelope calculations, produced results that differed drastically from all that had gone before. His calculations indicated that the explosion of a nuclear bomb – a creation of some of the brightest minds on the planet, including Teller himself – could result in a chain reaction so powerful that it would ignite the world’s atmosphere, thereby ending human life on Earth.16 Robert Oppenheimer, who led the Manhattan Project to develop the nuclear bomb, halted the project to see whether Teller’s calculations were correct.17 The resulting document, LA- 602: Ignition of the Atmosphere with Nuclear Bombs, concluded that Teller was wrong, But the sheer complexity drove them to end their assessment by writing that “further work on the subject [is] highly desirable”.18 The LA-602 document can be seen as the first scientific global risk report addressing a category of risks where the worst possible impact in all practical senses is infinite.19 Since the atomic bomb more challenges have emerged with potentially infinite impact. Allmost all of these new challenges are linked to the increased knowledge, economic and technical development that has brought so many benefits. For example, climate change is the result of the industrial revolution and development that was, and still is, based heavily on fossil fuel. The increased potential for global pandemics is the result of an integrated global economy where goods and services move quickly around the world, combined with rapid urbanisation and high population density. In parallel with the increased number of risks with possible infinite impact, our capacity to analyse and solve them has greatly increased too. Science and technology today provides us with knowledge and tools that can radically reduce the risks that historically have been behind major extinctions, such as pandemics and asteroids. Recent challenges like climate change, and emerging challenges like synthetic biology and nanotechnology, can to a large degree be addressed by smart use of new technologies, new lifestyles and institutional structures. It will be hard as it will require collaboration of a kind that we have not seen before. It will also require us to create systems that can deal with the problems before they occur. The fact that the same knowledge and tools can be both a problem and a solution is important to understand in order to avoid polarisation. Within a few decades, or even sooner, many of the tools that can help us solve the global challenges of today will come from fields likely to provide us with the most powerful instruments we have ever had – resulting in their own sets of challenges. Synthetic biology, nanotechnology and artificial intelligence (AI) are all rapidly evolving fields with great potential. They may help solve many of today’s main challenges or, if not guided in a benign direction, may result in catastrophic outcomes. The point of departure of this report is the fact that we now have the knowledge, economic resources and technological ability to reduce most of the greatest risks of our time. Conversely, the infinite impacts we face are almost all unintended results of human ingenuity. The reason we are in this situation is that we have made progress in many areas without addressing unintended low-probability high-impact consequences. Creating innovative and resilient systems rather than simply managing risk would let us focus more on opportunities. But the resilience needed require moving away from legacy systems is likely to be disruptive, so an open and transparent discussion is needed regarding the transformative solutions required. Figure 3: Probability density function with tail and threshold highlighted [FIGURE 3 OMITTED] 2.1 Report structure The first part of the report is an introduction where the global risks with potential infinite impact are introduced and defined. This part also includes the methodology for selecting these risks, and presents the twelve risks that meet this definition. Four goals of the report are also presented, under the headings “acknowledge”, “inspire”, “connect” and “deliver”. The second part is an overview of the twelve global risks and key events that illustrate some of the work around the world to address them. For each challenge five important factors that influence the probability or impact are also listed. The risks are divided into four different categories depending on their characteristics. “Current challenges” is the first category and includes the risks that currently threaten humanity due to our economic and technological development - extreme climate change, for example, which depends on how much greenhouse gas we emit. “Exogenic challenges” includes risks where the basic probability of an event is beyond human control, but where the probability and magnitude of the impact can be influenced - asteroid impacts, for example, where the asteroids’ paths are beyond human control but an impact can be moderated by either changing the direction of the asteroid or preparing for an impact. “Emerging challenges” includes areas where technological development and scientific assessment indicate that they could both be a very important contribution to human welfare and help reduce the risks associated with current challenges, but could also result in new infinite impacts.20 AI, nanotechnology and synthetic biology are examples. “Global policy challenge” is a different kind of risk. It is a probable threat arising from future global governance as it resorts to destructive policies, possibly in response to the other challenges listed above. The third part of the report discusses the relationship between the different risks. Action to reduce one risk can increase another, unless their possible links are understood. Many solutions are also able to address multiple risks, so there are significant benefits from understanding how one relates to others. Investigating these correlations could be a start, but correlation is a linear measure and non-linear techniques may be more helpful for assessing the aggregate risk. The fourth part is an overview, the first ever to our knowledge, of the uncertainties and probabilities of global risks with potentially infinite impacts. The numbers are only rough estimates and are meant to be a first step in a dialogue where methodologies are developed and estimates refined. The fifth part presents some of the most important underlying trends that influence the global challenges, which often build up slowly until they reach a threshold and very rapid changes ensue. The sixth and final part presents an overview of possible ways forward. 2.2 Goals Goal 1: Acknowledge That key stakeholders, influencing global challenges, acknowledge the existence of the category of risks that could result in infinite impact. They should also recognice that the list of risks that belong to this category should be revised as new technologies are developed and our knowledge increases. Regardless of the risks included, the category should be given special attention in all processes and decisions of relevance. The report also seeks to demonstrate to all key stakeholders that we have the capacity to reduce, or even eliminate, most of the risks in this category. Establish a category of risks with potentially infinite impact. Before anything significant can happen regarding global risks with potentially infinite impacts, their existence must be acknowledged. Rapid technological development and economic growth have delivered unprecedented material welfare to billions of people in a veritable tide of utopias.21 But we now face the possibility that even tools created with the best of intentions can have a darker side too, a side that may threaten human civilisation, and conceivably the continuation of human life. This is what all decision-makers need to recognise. Rather than succumbing to terror, we need to acknowledge that we can let the prospect inspire and drive us forward. Goal 2: Inspire That policy makers inspire action by explaining how the probabilities and impacts can be reduced and turned into opportunities. Concrete examples of initiatives should be communicated in different networks in order to create ripple effects, with the long-term goal that all key stakeholders should be inspired to turn these risks into opportunities for positive action. Show concrete action that is taking place today. This report seeks to show that it is not only possible to contribute to reducing these risks, but that it is perhaps the most important thing anyone can spend their time on. It does so by combining information about the risks with information about individuals and groups who has made a significant contribution by turning challenges into opportunities. By highlighting concrete examples the report hopes to inspire a new generation of leaders. Goal 3: Connect That leaders in different sectors connect with each other to encourage collaboration. A specific focus on financial and security policy where significant risks combine to demand action beyond the incremental is required. Support new meetings between interested stakeholders. The nature of these risks spans countries and continents; they require action by governments and politicians, but also by companies, academics, NGOs, and many other groups. The magnitude of the possible impacts requires not only leaders to act but above all new models for global cooperation and decision-making to ensure delivery. The need for political leadership is therefore crucial. Even with those risks where many groups are involved, such as climate change and pandemics, very few today address the possibility of infinite impact aspects. Even fewer groups address the links between the different risks. There is also a need to connect different levels of work, so that local, regional, national and international efforts can support each other when it comes to risks with potentially infinite impacts. Goal 4: Deliver That concrete strategies are developed that allow key stakeholders to identify, quantify and address global challenges as well as gather support for concrete steps towards a wellfunctioning global governance system. This would include tools and initiatives that can help identify, quantify and reduce risks with potentially infinite impacts. Identify and implement strategies and initiatives. Reports can acknowledge, inspire and connect, but only people can deliver actual results. The main focus of the report is to show that actual initiatives need to be taken that deliver actual results. Only when the probability of an infinite impact becomes acceptably low, very close to zero, and/or when the maximum impact is significantly reduced, should we talk about real progress. In order to deliver results it is important to remember that global governance to tackle these risks is the way we organise society in order to address our greatest challenges. It is not a question of establishing a “world government”, it is about the way we organise ourselves on all levels, from the local to the global. The report is a first step and should be seen as an invitation to all responsible parties that can affect the probability and impact of risks with potentially infinite impacts. But its success will ultimately be measured only on how it contributes to concrete results. 2.3 Global challenges and infinite impact This chapter first introduces the concept of infinite impact. It then describes the methodology used to identify challenges with an infinite impact. It then presents risks with potentially infinite impact that the methodology results in. 2.3.1 Definition of infinite impact The specific criterion for including a risk in this report is that well-sourced science shows the challenge can have the following consequences: 22 1. Infinite impact: When civilisation collapses to a state of great suffering and does not recover, or a situation where all human life ends. The existence of such threats is well attested by science.23 2. Infinite impact threshold – an impact that can trigger a chain of events that could result first in a civilisation collapse, and then later result in an infinite impact. Such thresholds are especially important to recognise in a complex and interconnected society where resilience is decreasing.24 A collapse of civilisation is defined as a drastic decrease in human population size and political/economic/social complexity, globally for an extended time.25 The above definition means the list of challenges is not static. When new challenges emerge, or current ones fade away, the list will change. An additional criterion for including risks in this report is “human influence”. Only risks where humans can influence either the probability, the impact, or both, are included. For most risks both impact and probability can be affected, for example with nuclear war, where the number/size of weapons influences the impact and tensions between countries affects the probability. Other risks, such as a supervolcano, are included as it is possible to affect the impact through various mitigation methods, even if we currently cannot affect the probability. Risks that are susceptible to human influence are indirectly linked, because efforts to address one of them may increase or decrease the likelihood of another. 2.3.2 Why use “infinite impact” as a concept? The concept of infinity was chosen as it reflects many of the challenges, especially in economic theory, to addressing these risks as well as the need to question much of our current way of thinking. The concept of a category of risks based on their extreme impact is meant to provide a tool to distinguish one particular kind of risk from others. The benefit of this new concept should be assessed based on two things. First, does the category exist, and second, is the concept helpful in addressing these risks? The report has found ample evidence that there are risks with an impact that can end human civilisation and even all human life. The report further concludes that a new category of risk is not only meaningful but also timely. We live in a society where global risks with potentially infinite impacts increase in both number and probability according to multiple studies. Looking ahead, many emerging technologies which will certainly provide beneficial results, might also result in an increased probability of infinite impacts.26 Over the last few years a greater understanding of low probability or unknown probability events has helped more people to understand the importance of looking beyond the most probable scenarios. Concepts like “black swans” and “perfect storms” are now part of mainstream policy and business language.27 Greater understanding of the technology and science of complex systems has also resulted in a new understanding of potentially disruptive events. Humans now have such an impact on the planet that the term “the anthropocene” is being used, even by mainstream media like The Economist.28 The term was introduced in the 90s by the Nobel Prize winner Paul Crutzen to describe how humans are now the dominant force changing the Earth’s ecosystems.29 The idea to establish a well defined category of risks that focus on risks with a potentially infinite impact that can be used as a practical tool by policy makers is partly inspired by Nick Bostrom’s philosophical work and his introduction of a risk taxonomy that includes an academic category called “existential risks”.30 Introducing a category with risks that have a potentially infinite impact is not meant to be a mathematical definition; infinity is a thorny mathematical concept and nothing in reality can be infinite.31 It is meant to illustrate a singularity, when humanity is threatened, when many of the tools used to approach most challenges today become problematic, meaningless, or even counterproductive. The concept of an infinite impact highlights a unique situation where humanity itself is threatened and the very idea of value and price collapses from a human perspective, as the price of the last humans also can be seen to be infinite. This is not to say that those traditional tools cannot still be useful, but with infinite impacts we need to add an additional set of analytical tools. Life Value The following estimates have been applied to the value of life in the US. The estimates are either for one year of additional life or for the statistical value of a single life. – $50,000 per year of quality life (international standard most private and government-run health insurance plans worldwide use to determine whether to cover a new medical procedure) – $129,000 per year of quality life (based on analysis of kidney dialysis procedures by Stefanos Zenios and colleagues at Stanford Graduate School of Business) – $7.4 million (Environmental Protection Agency) – $7.9 million (Food and Drug Administration) – $6 million (Transportation Department) – $28 million (Richard Posner based on the willingness to pay for avoiding a plane crash) Source: Wikipedia: Value of life http://en.wikipedia.org/wiki/Value\_of\_life US EPA: Frequently Asked Questions on Mortality Risk Valuation http://yosemite.epa.gov/EE%5Cepa%5Ceed.nsf/webpages/MortalityRiskValuation.html Posner, Richard A. Catastrophe: risk and response. Oxford University Press, 2004 Some of the risks, including nuclear war, climate change and pandemics, are often included in current risk overviews, but in many cases their possible infinite impacts are excluded. The impacts which are included are in most cases still very serious, but only the more probable parts of the probability distributions are included, and the last part of the long tail – where the infinite impact is found – is excluded.32 Most risk reports do not differentiate between challenges with a limited impact and those with a potential for infinite impact. This is dangerous, as it can mean resources are spent in ways that increase the probability of an infinite impact. Ethical aspects of infinite impact The basic ethical aspect of infinite impact is this: a very small group alive today can take decisions that will fundamentally affect all future generations. “All future generations” is not a concept that is often discussed, and for good reason. All through human history we have had no tools with a measurable global impact for more than a few generations. Only in the last few decades has our potential impact reached a level where all future generations can be affected, for the simple reason that we now have the technological capacity to end human civilisation. If we count human history from the time when we began to practice settled agriculture, that gives us about 12,000 years.33 If we make a moderate assumption that humanity will live for at least 50 million more years34 our 12,000-year history so far represents 1/4200, or 0.024%, of our potential history. So our generation has the option of risking everything and annulling 99.976% of our potential history. Comparing 0.024% with the days of a person living to 100 years from the day of conception, this would equal less than nine days and is the first stage of human embryogenesis, the germinal stage.35 Two additional arguments to treat potentially infinite impacts as a separate category are: 36 1. An approach to infinite impacts cannot be one of trial-and-error, because there is no opportunity to learn from errors. The reactive approach – see what happens, limit damage, and learn from experience – is unworkable. Instead society must be proactive. This requires foresight to foresee new types of threat and willingness to take decisive preventative action and to bear the costs (moral and economic) of such actions. 2. We cannot necessarily rely on the institutions, morality, social attitudes or national security policies that developed from our experience of other sorts of risk. Infinite impacts are in a different category. Institutions and individuals may find it hard to take these risks seriously simply because they lie outside our experience. Our collective fear-response will probably be ill-calibrated to the magnitude of threat. Economic aspects of infinite impact and discounting In today’s society a monetary value is sometimes ascribed to human life. Some experts use this method to estimate risk by assigning a monetary value to human extinction.37 We have to remember that the monetary values placed on a human life in most cases are not meant to suggest that we have actually assigned a specific value to a life. Assigning a value to a human life is a tool used in a society with a limited supply of resources or infrastructure (ambulances, perhaps) or skills. In such a society it is impossible to save every life, so some trade-off must be made.38 The US Environmental Protection Agency explains its use like this: “The EPA does not place a dollar value on individual lives. Rather, when conducting a benefit-cost analysis of new environmental policies, the Agency uses estimates of how much people are willing to pay for small reductions in their risks of dying from adverse health conditions that may be caused by environmental pollution.” 39 The fact that monetary values for human lives can help to define priorities when it comes to smaller risks does not mean that they are suitable for quite different uses. Applying a monetary value to the whole human race makes little sense to most people, and from an economic perspective it makes no sense. Money helps us to prioritise, but with no humans there would be no economy and no need for priorities. Ignoring, or discounting, future generations is actually the only way to avoid astronomical numbers for impacts that may seriously affect every generation to come. In Catastrophe: Risk and Response, Richard Posner provides a cost estimate, based on the assumption that a human life is worth $50,000, resulting in a $300 tn cost for the whole of humanity, assuming a population of six billion. He then doubles the population number to include the value of all future generations, ending up with $600 tn, while acknowledging that “without discounting, the present value of the benefits of risk-avoidance measures would often approach infinity for the type of catastrophic risk with which this book is concerned.” 40 Discounting for risks that include the possibility of an infinite impact differs from risk discounting for less serious impacts. For example the Stern Review41 prompted a discussion between its chief author, Nicholas Stern, and William Nordhaus,42 each of whom argued for different discount levels using different arguments. But neither discussed a possible infinite climate impact. An overview of the discussion by David Evans of Oxford Brookes University highlighted some of the differing assumptions.43 Two things make infinite impacts special from a discounting perspective. First, there is no way that future generations can compensate for the impact, as they will not exist. Second, the impact is something that is beyond an individual preference, as society will no longer exist. Discounting is undertaken to allocate resources in the most productive way. In cases that do not include infinite impacts, discounting “reflects the fact that there are many high-yield investments that would improve the quality of life for future generations. The discount rate should be set so that our investable funds are devoted to the most productive uses.” 44 When there is a potentially infinite impact, the focus is no longer on what investments have the best rate of return, it is about avoiding the ultimate end. While many economists shy away from infinite impacts, those exploring the potentially extreme impacts of global challenges often assume infinite numbers to make their point. Nordhaus for example writes that “the sum of undiscounted anxieties would be infinite (i.e. equal to 1 + 1 +1 + … = ∞). In this situation, most of us would dissolve in a sea of anxiety about all the things that could go wrong for distant generations from asteroids, wars, out-of-control robots, fat tails, smart dust and other disasters.” 45 It is interesting that Nordhaus himself provides very good graphs that show why the most important factor when determining actions is a possible threshold (see below Figure 4 and 5). Nordhaus was discussing climate change, but the role of thresholds is similar for most infinite impacts. The first figure is based on traditional economic approaches which assume that Nature has no thresholds; the second graph illustrates what happens with the curve when a threshold exists. As Nordhaus also notes, it is hard to establish thresholds, but if they are significant all other assumptions become secondary. The challenge that Nordhaus does not address, and which is important especially with climate change, is that thresholds become invisible in economic calculations if they occur far into the future, even if it is current actions that unbalance the system and eventually push it over the threshold.46 Note that these dramatic illustrations rest on assumptions that the thresholds are still relatively benign, not moving us beyond tipping points which result in an accelerated release of methane that could result in a temperature increase of more than 8 °C, possibly producing infinite impacts.47 Calculating illustrative numbers By including the welfare of future generations, something that is important when their very existence is threatened, economic discounting becomes difficult. In this chapter, some illustrative numbers are provided to indicate the order of magnitude of the values that calculations provide when traditional calculations also include future generations. These illustrative calculations are only illustrative as the timespans that must be used make all traditional assumptions questionable to say the least. Still, as an indicator for why infinite impact might be a good approximation they might help. As a species that can manipulate our environment it could be argued that the time the human race will be around, if we do not kill ourselves, can be estimated to be between 1-10 million years – the typical time period for the biological evolution of a successful species48 – and one billion years, the inhabitable time of Earth.49 [FIGURE 4 OMITTED] [FIGURE 5 OMITTED] If we assume – 50 million years for the future of humanity as our reference, – an average life expectancy of 100 years50, and – a global population of 6 billion people51 – all conservative estimate – , we have half a million generations ahead of us with a total of 3 quadrillion individuals. Assuming a value of $50,000 per life, the cost of losing them would then be $1.5 ×1020, or $150 quintillion. This is a very low estimate, and Posner suggests that maybe the cost of a life should be “written up $28 million” for catastrophic risks52. Posner’s calculations where only one future generation is included result in a cost of $336 quadrillion. If we include all future generations with the same value, $28 million, the result is a total cost of $86 sextillion, or $86 × 1021. This $86 sextillion is obviously a very rough number (using one billion years instead of 50 million would for example require us to multiply the results by 20), but again it is the magnitude that is interesting. As a reference there are about 1011 to 1012 stars in our galaxy, and perhaps something like the same number of galaxies. With this simple calculation you get 1022 to 1024, or 10 to 1,000 sextillion, stars in the universe to put the cost of infinite impacts when including future generations in perspective.53 These numbers can be multiplied many times if a more philosophical and technology-optimistic scenario is assumed for how many lives we should include in future generations. The following quote is from an article by Nick Bostrom in Global Policy Journal: “However, the relevant figure is not how many people could live on Earth but how many descendants we could have in total. One lower bound of the number of biological human life-years in the future accessible universe (based on current cosmological estimates) is 1034 years. Another estimate, which assumes that future minds will be mainly implemented in computational hardware instead of biological neuronal wetware, produces a lower bound of 1054 human-brain-emulation subjective life-years.” 54 Likewise the value of a life, $28 million, a value that is based on an assessment of how individuals chose when it comes to flying, can be seen as much too small. This value is based on how much we value our own lives on the margin, and it is reasonable to assume that the value would be higher than only a multiplication of our own value if we also considered the risk of losing our family, everyone we know, as well as everyone else on the planet. In the same way as the cost increases when a certain product is in short supply, the cost of the last humans could be assumed to be very high, if not infinite. Obviously, the very idea to put a price on the survival of humanity can be questioned for good reasons, but if we still want to use a number, $28 million per life should at least be considered as a significant underestimation. For those that are reluctant or unable to use infinity in calculations and are in need of a number for their formulas, $86 sextillion could be a good initial start for the cost of infinite impacts. But it is important to note that this number might be orders of magnitude smaller than an estimate which actually took into account a more correct estimation of the number of people that should be included in future generations as well as the price that should be assigned to the loss of the last humans. 2.3.3 Infinite impact threshold (IIT) As we address very complex systems, such as human civilisation and global ecosystems, a concept as important as infinite impact in this report is that of infinity impact threshold. This is the impact level that can trigger a chain of events that results in the end of human civilisation. The infinite impact threshold (IIT) concept represents the idea that long before an actual infinite impact is reached there is a tipping point where it (with some probability) is no longer possible to reverse events. So instead of focusing only on the ultimate impact it is important to estimate what level of impact the infinity threshold entails. The IIT is defined as an impact that can trigger a chain of events that could result first in a civilisation collapse, and then later result in an infinite impact. Such thresholds are especially important to recognise in a complex and interconnected society where resilience is decreasing. Social and ecological systems are complex, and in most complex systems there are thresholds where positive feedback loops become self-reinforcing. In a system where resilience is too low, feedback loops can result in a total system collapse. These thresholds are very difficult to estimate and in most cases it is possible only to estimate their order of magnitude. As David Orrell and Patrick McSharry wrote in A Systems Approach to Forecasting: “Complex systems have emergent properties, qualities that cannot be predicted in advance from knowledge of systems components alone”. According to complexity scientist Stephen Wolfram’s principle of computational irreducibility, the only way to predict the evolution of such a system is to run the system itself: “There is no simple set of equations that can look into its future.” 55 Orrell and McSharry also noted that “in orthodox economics, the reductionist approach means that the economy is seen as consisting of individual, independent agents who act to maximise their own utility. It assumes that prices are driven to a state of near-equilibrium by the ‘invisible hand’ of the economy. Deviations from this state are assumed to be random and independent, so the price fluctuations are often modelled using the normal distribution or other distributions with thin tails and finite variance.” The drawbacks of an approach using the normal distribution, or other distributions with thin tails and finite variance, become obvious when the unexpected happens as in the recent credit crunch, when existing models totally failed to capture the true risks of the economy. As an employee of Lehman Brothers put it on August 11, 2007: “Events that models predicted would happen only once in 10,000 years happened every day for three days.” 56 [FIGURE 6 OMITTED] The exact level for an infinite impact threshold should not be the focus, but rather the fact that such thresholds exists and that an order of magnitude should be estimated.57 During the process of writing the report, experts suggested that a relatively quick death of two billion people could be used as a tentative number until more research is available.58 With current trends undermining ecological and social resilience it should be noted that the threshold level is likely to become lower as time progress. 2.3.4 Global F-N curves and ALARP In the context of global risks with potentially infinite impact, the possibility of establishing global F-N curves is worth exploring. One of the most common and flexible frameworks used for risk criteria divides risks into three bands: 59 1. Upper: an unacceptable/ intolerable region, where risks are intolerable except in extraordinary circumstances and risk reduction measures are essential. 2. Middle: an ALARP (“as low as reasonably practicable”) region, where risk reduction measures are desirable but may not be implemented if their cost is disproportionate to the benefit achieved. 3. Lower: a broadly acceptable/ negligible region, where no further risk reduction measures are needed. The bands are expressed by F-N curves. When the frequency of events which cause at least N fatalities is plotted against the number N on log–log scales, the result is called an F-N curve.60 If the frequency scale is replaced by annual probability, then the resultant curve is called an f-N curve. The concept for the middle band when using F-N curves is ALARP. It is a term often used in the area of safety-critical and safety-involved systems.62 The ALARP principle is that the residual risk should be as low as reasonably practicable. The upper band, the unacceptable/ intolerable region, is usually the area above the ALARP area (see figure 8) By using F-N curves it is also possible to establish absolute impact levels that are never acceptable, regardless of probability (Figure 7. Based on an actual F-n Curve showing an absolute impact level that is defined as unacceptable). This has been done in some cases for local projects. The infinite threshold could be used to create an impact limit on global F-N curves used for global challenges in the future. Such an approach would help governments, companies and researchers when they develop new technical solutions and when investing in resilience. Instead of reducing risk, such an approach encourages the building of systems which cannot have negative impacts above a certain level. Pros – Clearly shows relationship between frequency and size of accident – Allows judgement on relative importance of different sizes of accident – Slope steeper than -1 provides explicit consideration of multiple fatality aversion and favours concepts with lower potential for large fatality events – Allows company to manage overall risk exposure from portfolio of all existing and future facilities Cons – Cumulative expression makes it difficult to interpret, especially by non-risk specialists – Can be awkard to derive – May be difficult to use if criterion is exceeded in one area but otherwise is well below – Much debate about criterion lines Figure 7: Example of F-n curve showing different levels of risk 61 Figure 9: Pros and cons of F-N curves 63 46 Global Challenges – Twelve risks that threaten human civilisation – The case for a new category of risks 2.3 Global challenges and infinite impact practical guidance that can provide defined group of risks 2.3.5 A name for a clearly 10 100 1000 10000 10 10 10 10 10 10 10 10-2 -3 -4 -5 -6 -7 -8 -9 Number of Fatalities (N) Frequency (F) of Accidents with N or More Fatalities (Per Year) ALARP region Unacceptable Acceptable Today no established methodology exists that provides a constantly updated list of risks that threaten human civilisation, or even all human life. Given that such a category can help society to better understand and act to avoid such risks, and better understand the relation between these risks, it can be argued that a name for this category would be helpful.65 To name something that refers to the end of humanity is in itself a challenge, as the very idea is so far from our usual references and to many the intuitive feeling will be to dismiss any such thing. The concept used in this report is “infinity”. The reson for this is that many of the challenges relate to discussed. In one way the name is not very important so long as people understand the impacts and risks associated with it. Still, a name is symbolic and can either help or make it more difficult to get support to establish the new category. The work to establish a list of risks with infinite impact evolved from “existential risk”, the philosophical concept that inspired much of the work to establish a clearly defined group of risks. The reason for not using the concept “existential risk and impact” for this category, beside the fact that existential impact is also used in academic contexts to refer to a personal impact, is that the infinite category is a smaller subset of “existential risk” and this new category is meant to be used as a tool, not a scientific concept. Not only should the impacts in the category potentially result in the end of all human life, it should be possible to affect the probability and/or impact of that risk. There must also exist an agreed methodology, such as the one suggested in this report, that decides what risks belong and not belong on the list. Another concept that the category relates to is “global catastrophic risk” as it is one of the most used concepts among academics interested in infinite impacts. However it is vague enough to be used to refer to impacts from a few thousand deaths to the end of human civilisation. Already in use but not clearly defined, it includes both the academic concept existential risks and the category of risks with infinite impacts. macroeconomics and its challenges in relation to the kind of impacts that the risks in this report focus on. Further, the name clearly highlights the unique nature without any normative judgements. Still, infinity is an abstract concept and it might not be best communicate the unique group of risks that it covers to all stakeholders. In the same way as it can be hard to use singularity to describe a black hole, it can be difficult to use infinity to describe a certain risk. If people can accept that it is only from a specific perspective that the infinity concept is relevant it could be used beyond the areas of macroeconomics. Two other concepts that also have been considered during the process of writing this report are “xrisks” and “human risk of ruin”. Xrisk has the advantage, and disadvantage, of not really saying anything at all about the risk. The positive aspect is that the name can be associated with the general concept of extinction and the philosophical concept of existential risk as both have the letter x in them. The disadvantage is the x often represents the unknown and can therefore relate to any risk. There is nothing in the name that directly relates to the kind of impacts that the category covers, so it is easy to interpret the term as just unknown risks. Human risk of ruin has the advantage of having a direct link to a concept, risk of ruin, that relates to a very specific state where all is lost. Risk of ruin is a concept in use in gambling, insurance, and finance that can all give very important contributions to the work with this new category of risk. The resemblance to an existing concept that is well established could be both a strength and a liability. Below is an overview of the process when different names were Figure 8: Example of F-n curve showing an absolute impact level that is defined as unacceptable/ infinite. i.e no level of probability is acceptable above a certain level of impact, in this case 1000 dead 64 Global Challenges – Twelve risks that threaten human civilisation – The case for a new category of risks 47 2.3 Global challenges and infinite impact 3. 2. 1. 9. Unacceptable risks in different combinations, e.g. unacceptable global risks – This is probably not appropriate for two main reasons. First, it is a normative statement and the category aims to be scientific; whether these risks are unacceptable or not is up to the citizens of the world to decide. Second, the idea of risk is that it is a combination of probability times impact. If a risk is unacceptable is therefore also usually related to how easy it is to avoid. Even if a risk is small, due to relatively low probability and relatively low impact, but is very easy to address, it can be seen as unacceptable, in the same way a large risk can be seen as acceptable if it would require significant resources to reduce. There will not be a perfect concept and the question is what concept can find the best balance between being easy to understand, acceptable where policy decisions needs to be made and also acceptable for all key groups that are relevant for work in these area. During the process to find a name for this category inspiration has been found in the process when new concepts have been introduced; from irrational numbers and genocide to sustainable development and the Human Development Index. So far “infinite risk” can be seen as the least bad concept in some areas and “xrisks” and “human risk of ruin” the least bad in others. The purpose of this report is to establish a methodology to identify a very specific group of risks as well as continue to a process where these risks will be addressed in a systematic and appropriate way. The issue of naming this group of risks will be left to others. The important is that the category gets the attention it deserves. The three concepts are very different. Global catastrophic risk is possibly the most used concept in contexts where infinite impacts are included, but it is without any clear definition. Existential risk is an academic concept used by a much smaller group and with particular focus on future technologies. The category in this report is a tool to help decision makers develop strategies that help reduce the probability that humanity will end when it can be avoided. The relation between the three concepts can be illustrated with three circles. The large circle (1) represents global catastrophic risks, the middle one (2) existential risks and the small circle (3) the list of twelve risks in this report, i.e. risks where there are peer reviewed academic studies that estimate the probability of an infinite impact and where there are known ways to reduce the risk. A list that could be called infinite risks, xrisks, or human risk of ruin. Other concepts that are related to infinite impacts that could potentially be used to describe the same category if the above suggestions are not seen as acceptable concepts are presented below, together with the main reason why these concepts were not chosen for this report. 1. Risk of ruin – is a concept in gambling, insurance and finance relating to the likelihood of losing all one’s capital or affecting one’s bankroll beyond the point of recovery. It is used to describe individual companies rather than systems.66 2. Extinction risk – is used in biology for any species that is threatened. The concept is also used in memory/cognition research. It is a very dramatic term, to be used with care. These factors make it probably unsuitable for use by stakeholders accustomed to traditional risk assessment. 3. Astronomical risk – is seldom used scientifically, but when it is used it is often used for asteroids and is probably best reserved for them.67 4. Apocalyptic risk – could have been suitable, as the original meaning is apocálypsis, from the Greek ἀπό and καλύπτω meaning ‘un-covering’. It is sometime used, but in a more general sense, to mean significant risks.68 But through history and today it is mainly used for a religious end of time scenario. Its strong links to unscientific doom-mongers make it probably unsuitable for a scientific concept. 5. End-of-the-world risk - belongs to the irrational doomsday narratives and so is probably unsuitable for scientific risk assessments. 6. Extreme risk – is vague enough to describe anything beyond the normal, so it is probably unsuitable for risk assessments of this magnitude. 7. Unique risk – is even vaguer, as every risk is unique in some way. Probably best avoided in risk assessments. 8. Collapse risk – is based on Jared Diamond’s thinking.69 There are many different kinds of collapse and only a few result in infinite impact. 48 Global Challenges – Twelve risks that threaten human civilisation – The case for a new category of risks 2.3 Global challenges and infinite impact Estimations of impact Only literature where there is some estimation of impact that indicates the possibility of an infinite impact is included. Leading organisations’ priorities In order to increase the probability of covering all relevant risks an overview of leading organisations' work was conducted. This list was then compared with the initial list and subjected to the same filter regarding the possibility to affect the probability or impact. Possibility of addressing the risk Possibility of addressing the risk: From the risks gathered from literature and organisations, only those where the probability or impact can be affected by human actions are included. Expert review Qualitative assessment: Expert review in order to increase the probability of covering all relevant global risks. List of risks Result: List of risks with potentially infinite impacts. Relevant literature Identification of credible sources: search relevant literature in academic literature included in World of Knowledge and Google Scholar. 1 2 3 4 5 6 This chapter presents the methodology used to identify global risks with potentially infinite impact. Methodology overview In order to establish a list of global risks with potentially infinite impact a methodological triangulation was used, consisting of: – A quantitative assessment of relevant literature. – A strategic selection of relevant organisations and their priorities. – A qualitative assessment with the help of expert workshops. 2.4 Methodology 70 Global Challenges – Twelve risks that threaten human civilisation – The case for a new category of risks 49 2.4 Methodology The scientific review of literature was led by Seth Baum, Executive Director of the Global Catastrophic Risk Institute72 and research scientist at the Center for Research on Environmental Decisions, Columbia University.73 The methodology for including global risks with a potentially infinite impact is based on a scientific review of key literature, with focus on peer-reviewed academic journals, using keyword search of both World of Knowledge74 and Google Scholar75 combined with existing literature overviews in the area of global challenges. This also included a snowball methodology where references in the leading studies and books were used to identify other scientific studies and books. In order to select words for a literature search to identify infinite impacts, a process was established to identify words in the scientific literature connected to global challenges with potentially infinite impacts. Some words generate a lot of misses, i.e. publications that use the term but are not the focus of this report. For example “existential risk” is used in business; “human extinction” is used in memory/cognition. Some search terms produced relatively few hits. For example “global catastrophic risk” is not used much. Other words are only used by people within a specific research community: few use “existential risk” in our sense unless they are using Nick Bostrom’s work. The term “global catastrophe” was identified as a phrase that referred almost exclusively to extremely negative impacts on humans, by a diversity of researchers, not just people in one research community. A list of 178 relevant books and reports was established based on what other studies have referred to, and/or which are seen as landmark studies by groups interviewed during the process. They were selected for a closer examination regarding the challenges they include.76 The full bibliography, even with its focus on publications of general interest, is still rather long. So it is helpful to have a shorter list focused on the highlights; the most important publications based on how often they are quoted, how wellspread the content (methodology, lists, etc.) is and how often key organisations use them. The publications included must meet at least one of the following criteria: – Historical significance. This includes being the first publication to introduce certain key concepts, or other early discussions of global challenges. Publications of historical significance are important for showing the intellectual history of global challenges. Understanding how the state of the art research got to where it is today can also help us understand where it might go in the future. – Influential in developing the field. This includes publications that are highly cited77 and those that have motivated significant additional research. They are not necessarily the first publications to introduce the concepts they discuss, but for whatever reason they will have proved important in advancing research. – State of the art. This includes publications developing new concepts at the forefront of global challenges research as well as those providing the best discussions of important established concepts. Reading these publications would bring a researcher up to speed with current research on global challenges. So they are important for the quality of their ideas. – Covers multiple global challenges (at least two). Publications that discuss a variety of global challenges are of particular importance because they aid in identifying and comparing the various challenges. This process is essential for research on global risks to identify boundaries and research priorities. In order to identify which global challenges are most commonly discussed, key surveys were identified and coded. First, a list of publications that survey at least three global challenges was compiled, and they were then scanned to find which challenges they discussed. The publications that survey many global challenges were identified from the full bibliography. Publications from both the academic and popular literature were considered. Emphasis was placed on publications of repute or other significance.78 To qualify as a survey of global challenges, the publication had to provide an explicit list of challenges or to be of sufficient length and breadth for it to discuss a variety of challenges. Many of the publications are books or book-length collections of articles published in book form or as special issues of scholarly journals. Some individual articles were also included because they discussed a significant breadth of challenges. A total of 40 global challenge survey publications were identified. For authors with multiple entries (Bostrom with three and WEF with ten) each challenge was counted only once to avoid bias. review of key literature 71 2.4.1 A scientific 50 Global Challenges – Twelve risks that threaten human civilisation – The case for a new category of risks 2.4 Methodology 0 5 10 15 20 25 Climate Change Nuclear War Pandemic Biodiversity loss Asteroid / Comet / Meteor Volcano Genetic Engineering High Energy Physics Nanotech Resource Depletion Artificial Intelligence Chemical Pollution Ecological Catastrophe Biogeochem Government Failure Poverty System Failure Astronomic Explosion LULCC Biological Weapons Chemical Weapons Extraterrestrial Reject Procreation Computer Failure EM Pulse New Technology Ozone Depletion Dysgenics Ocean Acidification Interstellar Cloud Atmosphere Aerosols Phase Transition Simulation Unknown 21 18 17 15 14 14 13 13 13 13 11 11 11 8 8 8 8 7 7 5 5 5 5 4 4 4 4 3 3 2 1 1 1 1 In terms of authorship and audience, there are 17 academic publications, 9 popular publications, 1 government report, 3 publications written by academics for popular audiences. In terms of format, there are 15 books, 5 edited collections, 7 articles, 3 of miscellaneous format. Of the 40 publications identified, 22 were available at the time of coding. In addition, 10 Global Risks Reports from the World Economic Forum were coded and then gathered under one heading: “WEF Global Risk Report 2005-2014”. A list of 34 global challenges was developed based on the challenges mentioned in the publications. A spreadsheet containing the challenges and the publications was created to record mentions of specific challenges in each publication to be coded. Then each publication was scanned in its entirety for mentions of global challenges. Scanning by this method was necessary because many of the publications did not contain explicit lists of global challenges, and the ones that did often mentioned additional challenges separately from their lists. So it was not required that a global challenge be mentioned in a list for it to be counted – it only had to be mentioned somewhere in the publication as a challenge. Assessing whether a particular portion of text counts as a global challenge and which category it fits in sometimes requires some interpretation. This is inevitable for most types of textual analysis, or, more generally, for the coding of qualitative data. The need for interpretation in this coding was heightened by the fact that the publications often were not written with the purpose of surveying the breadth of global challenges, and even the publications that were intended as surveys did not use consistent definitions of global challenges. The coding presented here erred on the side of greater inclusivity: if a portion of text was in the vicinity of a global challenge, then it was coded as one. For example, some publications discussed risks associated with nuclear weapons in a general sense without specifically mentioning the possibility of large-scale nuclear war. These discussions were coded as mentions of nuclear war, even though they could also refer to single usages of nuclear weapons that would not rate as a global challenge. This more inclusive approach is warranted because many of the publications were not focused exclusively on global challenges. If they were focused on them, it is likely that they would have included these risks in their global challenge form (e.g., nuclear war), given that they were already discussing something related (e.g., nuclear weapons). Below are the results from the overview of the surveys. Figure 9: Number of times global challenges are included in surveys of global challenges Global Challenges – Twelve risks that threaten human civilisation – The case for a new category of risks 51 2.4 Methodology Climate Change Nuclear War Pandemic Biodiversity loss Asteroid / Comet / Meteor Volcano Genetic Engineering High Energy Physics Nanotech Resource Depletion Artificial Intelligence Chemical Pollution Ecological Catastrophe 21 18 17 15 14 14 13 13 13 13 11 11 11 0 25 20 15 10 5 dung beetle star trek zinc oxalate human extinction 0 200 400 600 800 1000 It should be noted that the literature that includes multiple global challenges with potentially infinite impact is very small, given the fact that it is about the survival of the human race. Experts in the field of global challenges, like Nick Bostrom, have urged policymakers and donors to focus more on the global challenges with infinite impacts and have used dramatic rhetoric to illustrate how little research is being done on them compared with other areas. However, it is important to note that many more studies exist that focus on individual global risks, but often without including low-probability high-impact outcomes.80 How much work actually exists on human extinction infinite impact is therefore difficult to assess. The list of risks found in the scientific literature was checked against a review of what challenges key organisations working on global challenges include in their material and on their webpages. This was done to ensure that no important risk was excluded from the list. The coding of key organisations paralleled the coding of key survey publications. Organisations were identified via the global catastrophic risk organisation directory published by the Global Catastrophic Risk Institute.82 They were selected from the directory if they worked on a variety of global challenges – at least three, and ideally more. The reason for focusing on those that work on multiple challenges is to understand which challenges they consider important and why. In contrast, organisations that focus on only one or two challenges may not Figure 10: The global challenges included ten times or more in surveys of global challenges on global challenges 81 organisations working 2.4.2 A review of Figure 11: Number of academic papers on various topics (listed in Scopus, August 2012) From the paper “Existential Risk Prevention as Global Priority” 79 52 Global Challenges – Twelve risks that threaten human civilisation – The case for a new category of risks 2.4 Methodology Climate Change Nuclear War Pandemic Resource Depletion Biological Weapons Computer Failure Government Failure Nanotech Chemical Weapons Artificial Intelligence Genetic Engineering System Failure Biodiversity loss Ecological Failure Poverty Volcano Asteroid / Comet / Meteor Astronomic Explosion Biogeochem Chemical Pollution Extraterrestrial High Energy Physics New Technology Ozone Depletion Atmospheric Aerosols Dysgenics EM Pulse Interstellar Cloud LULCC Ocean Acidification Phase Transition Reject Procreation Simulation Unknown 13 13 12 9 8 7 7 7 6 5 4 4 2 2 2 2 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 4 8 12 2 6 10 14 be able to adjust their focus according to which challenges they consider the most important. The organisation coding used the same coding scheme developed for coding survey publications. References to specific global challenges were obtained from organisations’ websites. Many have web pages which list the topics they work on. Where possible, references to global challenges were pulled from these pages. Additional references to these challenges were identified by browsing other web pages, including recent publications. While it is possible that some of these organisations have worked on global challenges not mentioned on the web pages that were examined, overall the main challenges that they have worked on have probably been identified and coded. So the results should give a reasonably accurate picture of what global challenges these organisations are working on. Organisations working with global challenges were initially selected on the basis of the literature overview. A snowball sampling was conducted based on the list of organisations identified, according to whether they claimed to work on global challenges and/or their web page contained information about “existential risk”, “global catastrophic risk”,“human extinction” or “greatest global challenges”. Cross-references between organisations and input during the workshops were also used to identify organisations. An initial list of 180 organisations which work with global challenges was established. Based on the production of relevant literature, which other organisations referred to the organisation, and/or are seen as influential by groups interviewed during the process, a short-list of organisations were selected for a closer examination regarding the challenges they work with. Then those working with multiple challenges were selected, resulting in a list of 19 organisations.83 Below is the overview of the results from the overview of key organisations working with multiple global challenges. The organisations working on global challenges vary widely in: 1. What they count as a global challenge 2. How systematically they identify global challenges; and 3. Their emphasis on the most important global challenges For most organisations working with global challenges there are no explanations for the methodology used to select the challenges. Only a few thought leaders, like Tower Watson and their Extreme Risk Report 2013, have a framework for the challenges and estimates of possible impacts. Figure 12: Global challenges that key organisations work with Global Challenges – Twelve risks that threaten human civilisation – The case for a new category of risks 53 2.4 Methodology Climate Change Nuclear War Pandemic Resource Depletion Biological Weapons Computer Failure Government Failure Nanotech Chemical Weapons Artificial Intelligence Genetic Engeneering System Failure Atmospheric Aerosols 13 13 12 9 8 7 7 7 6 5 4 4 0 4 8 12 2 6 10 14 In most cases there is neither a definition of the impact, nor a definition of the probability. The report that focuses on global risk which is probably best known is the WEF Global Risk Report. The WEF’s risk work, with many other groups’, is probably best described as belonging to the category of risk perception rather than risk assessment, where experts are asked to estimate risks, but without any clear definition of probability or impact. The more serious organisations, like the WEF, also clearly define what they do as discussing perception of risk, not a scientific assessment of the actual risk. The WEF describes its perception methodology as follows: “This approach can highlight areas that are of most concern to different stakeholders, and potentially galvanise shared efforts to address them.” 85 The question which people are asked to answer is: “What occurrence causes significant negative impact for several countries and industries?” 86 The respondents are then asked to provide a number on two scales from 1-4, one for impact and another for likelihood (within 10 years).87 It is then up to the respondent to define what 1-4 means, so the major value of the report is to track the changes in perception over the years. Such perception approaches are obviously very interesting and, as the WEF states, can influence actual probability as the readers’ decisions will be influenced by how different challenges are perceived. Still, it is important to remember that the report does not provide an assessment of the actual probability (0-100%) or an assessment of the impact (and not the impact on human suffering, as many respondents likely define risk in monetary terms for their own company or country). An overview of WEF reports from the last ten years indicates that the challenges that likely could happen when applying a five year horizon, like the first signs of climate change, governmental failure and traditional pandemic, are identified. On the other hand, challenges which have very big impacts but lower probability, like extreme climate change, nanotechnology, major volcanoes, AI, and asteroids, tend to get less, or no, attention. An important question to explore is whether a focus on the smaller but still serious impacts of global challenges can result in an increased probability of infinite impacts. For example, there are reasons to believe that a focus on incremental adaptation instead of significant mitigation could be a problem for climate change as it could result in high-carbon lock-in.88 Other research indicates that focus on commercially relevant smaller pandemics could result in actions that make a major pandemic more likely. It is argued that this could happen, for example, by encouraging increased trade of goods while investing in equipment that scans for the type of pandemics that are known. Such a system can reduce the probability for known pandemics while at the same time resulting in an increased probability for new and more serious pandemics.89 Figure 13: The top 12 global challenges that key organisations work with 2.4.3 Workshops global risks 2.5 The list of Two workshops were arranged where the selection of challenges was discussed, one with risk experts in Oxford at the Future of Humanity Institute and the other in London with experts from the financial sector. See Appendix 2 for agenda and participants. In both workshops the list of global challenges was discussed to see if any additional challenges should be included, or if there were reasons to exclude some from the list. No challenge was excluded at the workshops, but one was added. Although little research exists yet that is able to verify the potential impacts, the participants agreed to include Global System Collapse as a risk with possible infinite impact. There was agreement that further research is needed to clarify exactly what parts of the economic and political system could collapse and result in a potentially infinite outcome. The conclusion was that enough research exists to include such a collapse on the list. Based on the risks identified in the literature review and in the review of organisations and applying the criteria for potentially infinite impact, these risks were identified: 1. Extreme Climate Change 2. Nuclear War 3. Global Pandemic 4. Ecological Catastrophe 5. Global System Collapse 6. Major Asteroid Impact 7. Supervolcano 8. Synthetic Biology 9. Nanotechnology 10. Artificial Intelligence (AI) 11. Unknown Consequences 12. Future Bad Global Governance This is an initial list. Additional risks will be added as new scientific studies become available, and some will be removed if steps are taken to reduce their probability90 and/or impact so that they no longer meet the criteria. Four categories of global challenges The challenges included in this report belong to four categories. The first, current challenges, includes those where decisions today can result directly in infinite impacts. They are included even if the time between action and impact might be decades, as with climate change. The second category is exogenous challenges, those where decisions do not – currently – influence probability, but can influence impact. The third category is emerging challenges, those where technology and science are not advanced enough to pose a severe threat today, but where the challenges will probably soon be able to have an infinite impact. The technologies included in emerging challenges, including synthetic biology, nanotechnology and artificial intelligence (AI), will be critical to finding solutions to infinite impacts. Including these technologies should not be seen as an attempt to arrest them. If anything, the development of sustainable solutions should be accelerated. But it is equally important to create guidelines and frameworks to avoid their misuse, whether intentional or accidental. The fourth category, future global policy challenges, is of a different kind. It includes challenges related to the consequences of an inferior or destructive global governance system. This is especially important as well-intended actions to reduce global challenges could lead to future global governance systems with destructive impact. The first category, current challenges, includes: 1. Extreme Climate Change 2. Nuclear War 3. Global Pandemic 4. Ecological Catastrophe 5. Global System Collapse The second category, exogenous challenges, covers: 6. Major Asteroid Impact 7. Supervolcano Those in the third category, emerging challenges, are: 8. Synthetic Biology 9. Nanotechnology 10. Artificial Intelligence (AI) 11. Unknown Consequences The fourth category, global policy challenges, is: 12. Future Bad Global Governance not included 2.5.1 Risks Many risks could severely damage humanity but have not been included in this report. They were excluded for one or more of three reasons: 1. Limited impact. Many challenges can have significant local negative effects, without approaching the “2 billion negatively affected” criterion - tsunamis, for example, and chemical pollution. 2. No effective countermeasures. The report focuses on promoting effective interventions and so ignores challenges where nothing useful can be done to prevent or mitigate the impact, as with nearby gamma-ray bursts. 3. Included in other challenges. Many challenges are already covered by others, or have a damage profile so similar that there seemed no need to have a separate category. Population growth, for one, is an underlying driver significant for climate change and eco-system catastrophe, but without direct large-scale impacts. The challenges mentioned in the reviewed literature and organisations which are not included in this report often refer to economic damage such as “fiscal crises” or “unemployment”. While such impacts could have far-reaching consequences they are obviously of another magnitude than those included here. Some of the risks that were suggested and/or which exist in books and reports about global risks were rejected according to the criteria above. They include: 91 1. Astronomical explosion/nearby gamma-ray burst or supernova.92 These seem to be events of extremely low probability and which are unlikely to be survivable. Milder versions of them (where the source is sufficiently far away) may be considered in a subsequent report. ͢ Not included due to: No effective countermeasures 2. False vacuum collapse. If our universe is in a false vacuum and it collapses at any point, the collapse would expand at the speed of light destroying all organised structures in the universe.93 This would not be survivable. ͢ Not included due to: No effective countermeasures 3. Chemical pollution. Increasingly, there is particular concern about three types of chemicals: those that persist in the environment and accumulate in the bodies of wildlife and people, endocrine disruptors that can interfere with hormones, and chemicals that cause cancer or damage DNA. ͢ Not included due to: Limited impact 4. Dangerous physics experiments creating black holes/strangelets including high energy physics. These risks are of low probability94 and have been subsumed under “Uncertain Risks”. ͢ Not included due to: Included in other challenges 5. Destructive solar flares. Though solar flares or coronal mass ejections could cause great economic damage to our technological civilisation,95 they would not lead directly to mass casualties unless the system lacks basic resilience. They have been subsumed in the Global System Collapse category. ͢ Not included due to: Limited impact/included in other challenges 6. Moral collapse of humanity. Humanity may develop along a path that we would currently find morally repellent. The consequences of this are not clear-cut, and depend on value judgements that would be contentious and unshared.96 Some of these risks (such as global totalitarianism or enduring poverty) were included in the Governance Disasters category. ͢ Not included due to: included in other challenges 7. Resource depletion/LULCC/ Biodiversity loss. It has often been argued that declining resources will cause increased conflict.97 Nevertheless such conflicts would not be sufficient in themselves to threaten humanity on a large scale, without a “ System Collapse” or “Governance Disasters”. ͢ Not included due to: included in other challenge

### 1NC Turn

#### Growth is sustainable – Solves Climate Change

Henderson 20, John and Natty McArthur University Professor @ Harvard (Rebecca, May/June Issue, “The Unlikely Environmentalists: How the Private Sector Can Combat Climate Change,” Foreign Affairs, https://www.foreignaffairs.com/articles/world/2020-04-13/unlikely-environmentalists)

There’s a reason climate change is often described as a “wicked problem.” Fully decarbonizing the economy will require not only completely transforming the global energy infrastructure, at a cost of many trillions of dollars, but also retrofitting all of the world’s buildings, remaking the planet’s agricultural practices, and revolutionizing transportation systems. It is difficult to see how this can be accomplished without some kind of global carbon tax or regulatory regime. But putting such a system in place is proving to be enormously difficult. The 2015 Paris agreement on climate change was a good first step, but many countries show little sign of meeting the commitments they made as part of that agreement, and the United States’ withdrawal from the process has presented a significant barrier to further progress. Given the slowing global economy and the slide toward populism and nationalism in much of the world, the prospects for any kind of comprehensive global accord seem increasingly remote. So far, at least, the public sector is failing to confront the problem.

But the private sector has begun to step in to fill the vacuum. In January, Larry Fink, the CEO of BlackRock, the largest asset manager in the world, declared that “climate risk is investment risk” and announced that going forward BlackRock would ask every firm in its portfolio to disclose its carbon emissions. BlackRock has roughly $7 trillion under management and is one of the largest shareholders in nearly every publicly traded firm in the world. So companies around the world paid attention when Fink went on to say that BlackRock would consider voting against boards whose firms “do not make sufficient progress” in addressing climate-related risks and would cease to invest altogether in some fossil fuel projects.

Fink is not alone. Many of the world’s largest asset owners are coming to the conclusion that climate change is the most important risk to the long-term health of their portfolios. More than a third of global invested capital—about $19 trillion—is controlled by the world’s 100 largest asset owners. Nearly two-thirds of this money is in pension funds; the remaining third is in sovereign wealth funds. These funds are now so large that they are sometimes referred to as “universal owners” or “universal investors” since, in effect, they hold the entire market. For that reason, they cannot diversify away from the risk of climate change—a risk that Mark Carney, who until earlier this year was the governor of the Bank of England, suggested could result in an abrupt financial collapse, potentially wiping out as much as $20 trillion of assets. To avert that kind of calamity, major asset owners are starting to push the companies in their portfolios to address climate change.

This trend is not driven by altruism or a deep commitment to the environment: it’s a function of economic interests. For the world’s largest asset owners, climate change is not an externality—it is a profound threat to their long-term returns. It will, after all, be significantly harder to make money in a world where most of the major ports are underwater, harvests are failing on a routine basis, and hundreds of millions of people are on the move.

As more and more major asset owners come to this realization, it is creating increasingly strong incentives for them to cooperate with one another in support of large-scale decarbonization. Together, they are pressing the firms in their portfolios to set concrete targets for emission reductions and to make progress toward meeting those targets, potentially solving the problem posed by firms’ unwillingness to cut their emissions unless they can be assured that their competitors will follow suit. Someone, however, will need to monitor that progress and sanction firms that lag behind—a role that would be best filled by government regulators. The need for such public-sector involvement will likely increase private-sector support for the policy changes required to drastically reduce carbon emissions. In this way, private-sector pressure may serve as the force that finally breaks the political logjam that has long blocked the public action needed to solve the climate crisis.

MONEY TALKS

One of the most promising examples of what this might look like in practice is Climate Action 100+, a nonprofit affiliation of more than 300 investors who collectively control nearly half of the world’s invested capital. The group was founded in 2017 with the goal of persuading the world’s 100 largest private-sector carbon emitters to “cut the financial risk associated with catastrophe” by putting in place board-level processes to assess their climate-related risks and oversee plans for dealing with them, pledging to clearly disclose those risks, and taking action to reduce greenhouse gas emissions across their value chains rapidly enough to help meet the Paris agreement’s goal of limiting the increase in the global average temperature to well below two degrees Celsius.

In December 2018, a group of investors belonging to Climate Action 100+ published a letter in the Financial Times listing some specific steps they were demanding of companies in which they invest, including “the rapid elimination of coal use by utilities in EU and OECD [Organization for Economic Cooperation and Development] countries by no later than 2030.” Six months later, investors from the consortium pushed the oil giant Shell to announce short-term targets for limiting its greenhouse gas emissions and persuaded BP to support a shareholder resolution that binds the oil company to disclose the carbon intensity of its products, the methodology it uses to consider the climate impact of new investments, and its plans for setting and measuring emission targets. More than half of the 40 oil and gas companies with which the group has engaged have set long-term quantitative targets for reducing their emissions. And the group has helped persuade the shipping giant Maersk and two of the world’s largest mining companies, ArcelorMittal and Thyssenkrupp, to commit to becoming carbon neutral by 2050.

These kinds of commitments are sometimes dismissed as mere greenwashing: public relations stunts designed to buy time. And sometimes they are. But they might also help catalyze an economic transformation that could play a major role in arresting climate change.

Of course, large asset holders are not the only players who shape a company’s incentives: employees and consumers do, as well, and they are increasingly insisting that firms go green—and rewarding them when they do. For example, after the consumer goods giant Unilever announced that it planned to cut its carbon footprint in half and double its revenue at the same time—and then followed through by transforming its operations, brand by brand—the firm joined Facebook, Google, and Microsoft on LinkedIn’s list of the ten most desirable employers in the world. Sales of Unilever’s “sustainable living” brands—which include Ben & Jerry’s, Dove, and Vaseline and which Unilever claims “contribute to achieving the company’s ambition of halving its environmental footprint”—are growing 69 percent faster than the rest of the business and providing 75 percent of the company’s growth.

Shifting public attitudes about climate change and public policies intended to combat it have also created clear business opportunities. Solar and wind energy are both multibillion-dollar businesses. The market for plant-based alternatives to meat is exploding. And global recycling could generate close to $400 billion in the next five years.

RISKY BUSINESS

But embracing the innovation that is required to exploit new opportunities is often risky and expensive. The venture capital industry lost at least $10 billion between 2005 and 2011 investing in clean energy technology. An electric utility that commits to phasing out coal plants might reap the benefits of declining solar and wind energy costs, but it could also misjudge the market and significantly increase its costs. An automobile company that invests in developing electric vehicles might leap ahead of its competitors, but it could also risk losing out to more cautious rivals.

Universal investors can help mitigate those risks by funneling capital to firms that are willing to make the first move. This can be transformational in itself, since companies that decide to embrace new opportunities can often persuade an entire industry to follow them. Walmart’s massive investments in energy saving and waste reduction, for example, have helped persuade many other companies to take similar steps. Since 2010, the price of battery storage has fallen by at least 73 percent, a change driven largely by the electric vehicle company Tesla’s significant investments in the technology, which spurred the company’s competitors to invest more than $90 billion in the development of electric vehicles.

Major asset holders can also push companies to commit to aggressive targets for decarbonizing their business models and insist that they report on their progress. In this way, universal investors may be able to force every firm in an industry to act, solving the collective action problem inherent in tackling climate change. Firms don’t naturally act collectively—for all kinds of reasons, including antitrust law. But when there exists a clear business case for doing so and cooperation can be credibly enforced, voluntary cooperation can be an effective means of creating or preserving public goods. Nearly half of the world’s inshore fisheries are managed through some form of cooperative agreement. Most of the rules governing international trade are designed and enforced by the International Chamber of Commerce, a voluntary association founded in 1919.

Some of the world’s largest firms are increasingly exploring whether these kinds of voluntary agreements might be an effective way to reduce emissions. For example, after Unilever came under pressure from activists to stop using palm oil, the cultivation of which contributes to deforestation, Paul Polman, who was then the company’s CEO, was able to persuade many of his fellow consumer goods CEOs that continuing to purchase conventionally produced palm oil presented a significant threat to their own brands. Partly as a result, more than 60 percent of the world’s traded palm oil is now covered by sustainability commitments. Similar agreements with respect to soy and beef have greatly slowed rates of deforestation in the Amazon River basin. And companies in industries as diverse as airlines, food, retail, apparel, travel, hospitality, construction, health care, and high technology have begun to coordinate to reduce carbon emissions across supply chains, so that no single firm is placed at a disadvantage by going green.

Such arrangements produce a wealth of knowledge about what effective decarbonization might look like on the ground. As one might expect, however, they are often unstable and difficult to enforce, since no mechanism exists through which to punish firms that drag their feet or refuse to conform. Here, universal investors might be able to make a significant difference by acting as enforcers. If BlackRock, for example, follows through on its threat to vote against the boards of companies that do not adequately disclose their climate emissions, every major firm in every industry will be forced to report—in an auditable, replicable way—the degree to which it is meeting its commitments. And if the world’s major investors then vote against the boards of those companies that are falling behind, investors could catalyze the transformation of entire industries.

THE EARTH LOBBY

Arresting climate change will still require government action, of course, and the changes afoot in finance and the corporate world could ease the path. As firms commit to reducing their carbon emissions, they are increasingly recognizing that the most effective way to ensure that they are not undercut by lagging companies is to press for regulation. Together, they are creating a constituency for effective climate policy.

In 2017, for example, when U.S. President Donald Trump declared that he was going to withdraw the United States from the Paris agreement, the CEOs of more than 50 U.S. companies, including Apple, Gap, Google, HP, and Levi Strauss, published an open letter urging him to rethink the decision. When Trump stuck to his plan, Elon Musk, the CEO of Tesla, and Bob Iger, then the CEO of Disney, resigned from some of the president’s advisory councils in protest. More than 2,000 companies have joined a collaborative effort called “We Are Still In,” a group working to ensure that the United States meets its commitments under the agreement despite the administration’s withdrawal. The group includes not only businesses but also states, cities, religious organizations, and universities. Together, they represent 68 percent of U.S. GDP, 65 percent of the U.S. population, and the source of more than half of all U.S. carbon emissions. Such action independent of the federal government could make a big difference. According to America’s Pledge, a nongovernmental organization that tracks local progress toward emission reductions, the “full achievement of already on-the-books policies from state and local actors—paired with rapidly shifting economics in the power sector—would reduce emissions 19 percent below 2005 levels by 2025 and 25 percent below 2005 levels by 2030.” This would be a significant step toward the approximately 50 percent reduction in emissions that the UN’s Intergovernmental Panel on Climate Change estimates is necessary to avoid the most dangerous potential outcomes of climate change.

These efforts and others like them also have the potential to change the nature of the political conversation around climate change. In an increasingly partisan world, firms occupy a unique position. According to the 2019 Edelman Trust Barometer, an annual survey measuring credibility and trust, business is now the world’s most trusted institution, and 71 percent of employees around the world agree that “it is critically important” for the CEOs of their companies “to respond to challenging times.” A broad-based movement among the world’s biggest companies to tackle climate change could help legitimate the idea that climate change is a real danger, that acting to avert it could be a major driver of innovation and economic growth, and that appropriate public policy could be enormously helpful.

Such a movement could also put increasing pressure on companies that resist decarbonizing. One of the reasons that climate regulation has stalled in the United States is that a small minority of firms have invested billions of dollars in actively lobbying against it. If their peers start to push for regulation and highlight the dangers inherent in continuing with business as usual, those laggards will be compelled to change their behavior. One day soon, flooding the political process with money to defend the burning of fossil fuels could be seen as an unacceptable reputational risk—or even as morally indefensible.

For many years, experts have assumed that the fastest and most efficient route to global decarbonization is coordinated state action. But as the world’s political institutions have come under pressure, such action has become increasingly elusive. Against this background, the growing understanding that climate change presents a profound threat to the long-term returns of the world’s largest asset owners provides some reason for hope. As investors push for change and the realization dawns in more and more boardrooms that the benefits of climate action will outweigh the costs, it is possible that leading-edge firms could trigger a cascade of reinforcing reforms, transforming the economics of individual industries and creating a significant constituency for political action. For decades, when it came to addressing climate change, large asset holders and big companies acted more as obstacles than as catalysts. Those days may soon be over.

#### Warming is existential

Ng ’19 [Yew-Kwang; May 2019; Professor of Economics at Nanyang Technology University, Fellow of the Academy of Social Sciences in Australia and Member of the Advisory Board at the Global Priorities Institute at Oxford University, Ph.D. in Economics from Sydney University; Global Policy, “Keynote: Global Extinction and Animal Welfare: Two Priorities for Effective Altruism,” vol. 10, no. 2, p. 258-266; RP]

Catastrophic climate change

Though by no means certain, CCC causing global extinction is possible due to interrelated factors of non‐linearity, cascading effects, positive feedbacks, multiplicative factors, critical thresholds and tipping points (e.g. Barnosky and Hadly, 2016; Belaia et al., 2017; Buldyrev et al., 2010; Grainger, 2017; Hansen and Sato, 2012; IPCC 2014; Kareiva and Carranza, 2018; Osmond and Klausmeier, 2017; Rothman, 2017; Schuur et al., 2015; Sims and Finnoff, 2016; Van Aalst, 2006).7

A possibly imminent tipping point could be in the form of ‘an abrupt ice sheet collapse [that] could cause a rapid sea level rise’ (Baum et al., 2011, p. 399). There are many avenues for positive feedback in global warming, including:

* the replacement of an ice sea by a liquid ocean surface from melting reduces the reflection and increases the absorption of sunlight, leading to faster warming;
* the drying of forests from warming increases forest fires and the release of more carbon; and
* higher ocean temperatures may lead to the release of methane trapped under the ocean floor, producing runaway global warming.

Though there are also avenues for negative feedback, the scientific consensus is for an overall net positive feedback (Roe and Baker, 2007). Thus, the Global Challenges Foundation (2017, p. 25) concludes, ‘The world is currently completely unprepared to envisage, and even less deal with, the consequences of CCC’.

The threat of sea‐level rising from global warming is well known, but there are also other likely and more imminent threats to the survivability of mankind and other living things. For example, Sherwood and Huber (2010) emphasize the adaptability limit to climate change due to heat stress from high environmental wet‐bulb temperature. They show that ‘even modest global warming could … expose large fractions of the [world] population to unprecedented heat stress’ p. 9552 and that with substantial global warming, ‘the area of land rendered uninhabitable by heat stress would dwarf that affected by rising sea level’ p. 9555, making extinction much more likely and the relatively moderate damages estimated by most integrated assessment models unreliably low.

While imminent extinction is very unlikely and may not come for a long time even under business as usual, the main point is that we cannot rule it out. Annan and Hargreaves (2011, pp. 434–435) may be right that there is ‘an upper 95 per cent probability limit for S [temperature increase] … to lie close to 4°C, and certainly well below 6°C’. However, probabilities of 5 per cent, 0.5 per cent, 0.05 per cent or even 0.005 per cent of excessive warming and the resulting extinction probabilities cannot be ruled out and are unacceptable. Even if there is only a 1 per cent probability that there is a time bomb in the airplane, you probably want to change your flight. Extinction of the whole world is more important to avoid by literally a trillion times.

#### Global- Supply chains are good: Stop war and ending them hurts other countries the most

Wolf ‘20

(Martin Wolf is chief economics commentator at the Financial Times, London. “The dangerous war on supply chains” June 23, 2020. https://www.ft.com/content/e27b0c0c-1893-479b-9ea3-27a81c2506c9)**AB**

“One of the things that this crisis has taught us, sir, is that we are dangerously overdependent on a global supply chain for our medicines, like penicillin; our medical supplies, like masks; and our medical equipment, like ventilators.” Thus, did Peter Navarro, an influential adviser of US president Donald Trump, draw lessons from the Covid-19 crisis for American trade policy. The dangerous war on supply chains Protectionism in a crisis only concentrates risk domestically and diminishes economies of scale This view is seductive to protectionists. But it is wrong. The lesson from the crisis is to be better prepared. Self-sufficiency in “essential products” would not be a good way to achieve this. On the contrary, it would be a costly error. Attacks on cross-border supply chains should not be viewed in isolation. The latest forecasts from the World Trade Organization suggest that the collapse in trade now could be far bigger than in response to the 2008 financial crisis. It would be very damaging if policymakers responded to the steep decline in their countries’ exports by curbing imports. Yet that is what forced “reshoring” of supply chains means. It would be yet another assault on liberal trade. (See charts.) Covid-19 brought forth a wave of export restrictions instead. The products covered by these prohibitions and restrictions vary. But most of them focused on medical supplies (face masks and shields, for example) and pharmaceuticals and medical equipment (ventilators, for example). These restrictions are legal. But that does not make them wise. In a collection of essays on Covid-19 and Trade Policy, Richard Baldwin of the Graduate Institute in Geneva and Simon Evenett of St Gallen ask: “Should governments react to the health, economic, and trade crises by turning inward?” The answer is: No. “Turning inward won’t help today’s fight against Covid-19 . . . Trade is not the problem; it is part of the solution.” Remember that the problem was not with trade, but rather with a lack of supply. Export restrictions merely reallocate the shortages, by shifting them on to countries with the least capacity. A natural response to this experience is for every country to try to be self-sufficient in every product that might turn out to be relevant. That is what Mr Navarro suggests the US should do. Yet businesses would then lose economies of scale, as global markets fragmented. Their capacity to invest in innovation would be reduced. Only the largest and most advanced economies could plausibly seek self-sufficiency in such a wide range of technologies. For all others, this would be a dead end. More relevant, self-sufficiency is not at all a guarantee of greater security. In his chapter in the book edited by Profs Baldwin and Evenett, Sébastien Miroudot of the OECD distinguishes helpfully between “resilience” and “robustness”. The former refers to the ability to return to normal operations after a disruption; the latter to the ability to maintain operations during a crisis. In a pandemic, the latter is probably the more relevant. It is necessary to have access to essential supplies in a pandemic, though it is also necessary to be able to restore production quickly if some of it is disrupted. The obvious way to achieve robustness is to diversify suppliers across multiple locations. Producing in one’s own country is not a guarantee of robustness. Any given location might be affected by a pandemic, hurricane, earthquake, flood, strikes, civil unrest or even war. To put every egg in one basket, even the domestic one, is risky. Robustness in supply can thus be achieved through a mixture of a multiplicity of suppliers with holding stocks of essential products. The possibility of importing increases the potential number of suppliers and possibly the access to surplus stocks, too. Protection, however, concentrates risk domestically, reduces the diversity of potential suppliers and diminishes the pressure of competition and economies of scale. So far, global supply chains in health products have turned out to be robust. Mr Miroudot notes the ability of South Korea to supply Covid-19 test kits globally. He argues that its ability to expand supply quickly “requires international networks, skilled supply chain managers, reactivity, and agility. This type of experience simply does not come from local production and activities shielded from competition.” So what would a sensible policy look like? There would be national and global efforts to identify essential products in the event of various emergencies. There would then be monitoring of relevant supply chains and inventories, both domestic and global. To achieve this, one would need respected and well-funded national and global bodies working alongside private industry. This should be viewed as a fundamental security concern. The pandemic has, after all, posed a vastly greater threat to security than the military threats governments have been spending trillions of dollars to contain. In the course of such an effort, countries might seek to identify potential vulnerability to supplies from particular partners. Mutual vulnerability can be a source of stability. But countries might regard some sources as too risky. Yet a shift of supply back home need not be the response. Other possibilities exist. Trade is a vital part of the global response to a pandemic, including the creation and distribution of the vaccine we need. Trade must also remain a large part of the global economy more broadly. The ability to trade freely augments the diversity, and even reliability, of supply. It also creates a big opportunity. Covid-19 may indeed reverse the integration of production of past decades. We will regret it greatly if it does.

### 1NC---State Counterlogistics

#### Activism against logistics is possible, good, and can use the state, but it requires engaging and understanding the details of the system to form strategies of diversion at the individual and macro level

Quet 18

(Mathieu, CEPED at Paris Descartes University – IRD and CSSP at Jawaharlal Nehru University, “Pharmaceutical Capitalism and its Logistics: Access to Hepatitis C Treatment,” Theory, Culture & Society, Volume 35, Issue 2, March 2018, Snider)

Greg Jefferys’ story illustrates the modalities of individual engagement with logistical capitalism. One might note that as soon as he went back to Australia he started receiving emails from people from around the world so that his individual act acquired a collective importance. It invites us to look at engagement with circulation not only as an individual gesture but as a broader collective practice of critique and contestation of certain forms of organization. This practice of critique can be analyzed at different levels. Here I will discuss two: the level of self-organized patients’ groups and the level of the state. The first level of opposition and conflict that can be presented here is the level of civil society, through the experience of ‘buyers’ clubs’. The principle of a buyers’ club is to organize parallel imports between countries, understanding different levels of pricing or accessibility to medicines. This activity, being mostly based upon health access activism, generates little or no profit for those involved, yet every treatment channeled this way constitutes a loss for the patent owner. Of course the pharmaceutical companies are aware of the financial risk raised by tiered pricing and geographical restrictions. Therefore, they also tolerate this as part of their strategy – and yet the line between ‘some leakage’ and ‘large leaks’ is not easily drawn. The executive vice president for corporate and medical affairs of Gilead declared: ‘Some leakage is a given, our goal isn’t to stop it 100 percent; if we wanted that, we’d do it the draconian way and not be in the country at all. But we do want to stop large leaks.’12 Interestingly, this practice is not new: it had been developed in the 1990s and early 2000s, particularly with anti-HIV treatment, for reasons of cost or availability (Nguyen, 2010; Egrot, 2014; Taverne and Egrot, 2014). It has subsequently been practiced in different ways: from Brazil or India to sub-Saharan Africa and from Europe to sub-Saharan Africa, most notably. It has been common practice in the networks of AIDS activism, as this remark from an Indian AIDS activist illustrates: ‘Since hepatitis C came, this thing [buyers’ clubs] comes up. But I have been doing this for the last 10 to 15 years!’ (AIDS activist 1, interview). However, in the case of anti-hepatitis C medicines, several aspects indicate the novelty or renewal of this practice. First, the use of the internet has offered the possibility to create networks of buyers and distributors very easily. As another activist involved in a buyers’ club in India explained to me: ‘this is the beauty of internet. We are people from different continents, taking part in the same project. We have met only once but we managed to set up a very efficient organization’ (AIDS activist 2, interview). It has offered the possibility of connecting many people to buyers’ clubs without their having to actually move to another country. Greg Jefferys is, for instance, offering through his blog to connect patients to his contacts in India in order to get cheaper medicines. He also emphasizes the fact that many people are contacting him from all over the world. The second aspect of this renewal is the pressure applied by anti-hepatitis C groups on their governments, with the threat of resorting to buyers’ clubs, given the huge differences in price and the selection processes put in place by national health insurances. For instance in France, the group SOS He´patites threatened the Ministry of Health in an open letter to resort to parallel imports if nothing was done in the shortest time possible: We made tests showing no difficulty to import generic treatment for individuals. We therefore imported such treatments. SOS He´patites is available for questions regarding further analysis. We are well aware that importing medicines is regulated by the law, and we know the risks of counterfeiting. This is your responsibility.13 The third aspect of this renewal was mentioned by an activist during an interview and shows that the fight for access to medicines is also pushed by newly emerging strategies: I think a lot of activists who are part of anti-HIV movements got institutionalized. They get so stuck on ‘quality issues’ that they cannot move. But new people are coming who have no idea about all these rules, and they say: ‘OK the medicines are available let’s go and get them’. And that’s what I really like about Hep C because a lot of us in the HIV movement are always waiting for the drugs to be prequalified by MSF or WHO before even offering to try to get it for persons who are dying. With Hep C these questions, the fear of quality and rules have disappeared and the new activists don’t conform to rules, because we have no time and we have to make choices now. (AIDS activist 2, interview) The last important point of renewal concerns growing interest in the question of importing only the active principle ingredients (and not the finished product) in order to compound the medicine by oneself. Greg Jefferys explains: Up until December 2015 [before the availability of Indian generics] a lot of people did take the Hep C API treatment option and imported APIs from China, mostly from Mesochem, a large company that specializes in making the APIs for all kinds of drugs, including Hep C medicines. Mesochem made the pure active ingredients; 99.9% pure Sofosbuvir and Ledipasvir and Daclatasvir.14 For these reasons, the organization of buyers’ clubs in the case of hepatitis C treatment gives ‘diversion’ as a mode of political engagement a particular and somehow new meaning. One central issue raised by the people involved in buyers’ clubs is that of diverting logistics. One activist told me he started sending Indian generic sofosbuvir abroad in September 2015. At the time of the interview in May 2016 he was sending about 100 treatments a month to patients around the world: in European countries, in South America, in Central Asia and so forth. He first mentioned very clearly the importance of logistical knowledge in such an activity: What helped me in running the buyers’ club is the work I have been doing in my former organization on the logistics of medicines, the knowledge I got there. And that helped me to go out and assist other patients too. (AIDS activist 3, interview) Most of the time he spent on the issue was dedicated to finding out: 1) how to organize the transit and deposit of money; 2) how a treatment could cross the borders of a country: For instance if you are asking from Serbia it can be difficult. But if you have a friend in Romania it’s easier: I can send the medicines there. Many Serbian people have friends in Romania, then they can come to Romania and go back. Because the custom officers will not allow the medicines alone to get in Serbia, even with a prescription. So I see with the Serbian patients if they have friends that can help them in Romania and then I send the packages. Getting the medicines to a given country also implies the ability of first getting them out of India, and therefore organizing shipments in order not to raise the customs’ interest: From where I am based now, we are getting from three ports. It goes through different customs officers and that is a very good point. I also segregated my parcels via different transporters in order to make them less visible. Most importantly, this logistical activity is definitely considered as a way of overcoming the restrictions imposed by the pharmaceutical firms and the governments: I told my family: ‘bear very clearly in mind that I am not dealing with narcotics. These are completely legal drugs. What we are fighting is the geographical restrictions which have been laid down by the Big Pharma. ...I know there are grey areas through which I’m working but it has to be done. Someone has to take the sword in his hands. It’s not possible to sit back and relax and to let the companies or the capitalists make the rules and regulations on who survives and who doesn’t.’ Patients abroad also become involved in these logistic issues, therefore participating in a collective movement

. As my interlocutor explained: ‘My contacts are other people. For instance, in the UK, one hepatitis C patient came to know me via another friend and now he is arranging with other people from his country. It is similar in other countries.’ One can mention here the case of C, a French patient who received the treatment before the French government declared there would be universal access – a declaration followed in the first time only by an improvement in access and not by full coverage, as noted by Chabrol et al. (2017). C was 15 in 2013 when she was diagnosed with hepatitis C. She had to wait for two and a half years before getting the treatment, and she got weaker and very depressed. But she followed a lot of Hep C advocacy groups via multiple online forums. She learned about Greg Jefferys’ experience and decided to take it upon herself to obtain the medicines. First, her parents had to be convinced – since they were not keen on infringing the law and were cautious about the quality of medicines bought from abroad in an illegal way. Once C convinced them, she contacted someone via a forum and this person sent her the first part of the treatment from someone based in England. Only two-thirds of the treatment were available at the time, and so a few weeks later she travelled to Paris with her father and boyfriend to get the remainder of the treatment, from another person whose contact she got via a buyers’ club and who was a French national coming back to France after a journey to India (Hep C patient, interview). In this short story, diversion logistics are far from simple: medicines move in segments and follow different routes, and people have to be able to move to benefit from them. However, what remains is the idea that simultaneously these erratic trajectories recompose access conditions within the context of enclosed markets. The story of Greg Jefferys and the case of buyers’ clubs illustrate stimulating ways of engaging with logistic regimes. They underline the importance of locating protest within supply chains and distribution routes as an answer to the limitations imposed by the regimes. In this sense, trajectories matter as much as access per se. However, one should not overstate such individual or collective actions and thus underplay the importance of the state, which exists as another crucial level of critical engagement against the logistic regime. At the state level, we have seen earlier that Gilead had imposed prices given its strong position on the market. In a way, statism and capitalism cooperate together.

# 2NC

### 2NC-Util /Mag and Probability

#### Behavioral psychology proves we underestimate extinction.

Ord 20 – Toby Ord, Philosopher at Oxford University. [The Precipice: Existential Risk and the Future of Humanity, Hachette Book Group]//BPS

Behavioral psychology has identified two more reasons why we neglect existential risk, rooted in the heuristics and biases we use as shortcuts for making decisions in a complex world.62 The first of these is the availability heuristic. This is a tendency for people to estimate the likelihood of events based on their ability to recall examples. This stirs strong feelings about avoiding repeats of recent tragedies (especially those that are vivid or widely reported). But it means we often underweight events which are rare enough that they haven’t occurred in our lifetimes, or which are without precedent. Even when experts estimate a significant probability for an unprecedented event, we have great difficulty believing it until we see it.

For many risks, the availability heuristic is a decent guide, allowing us to build up methods for managing the risk through trial and error. But with existential risks it fails completely. For by their very nature, we never have any experience of existential catastrophe before it is too late. If only seeing is believing, we will step blindly over the precipice.

Our need for vividness also governs our altruistic impulses. As a society, we are good at acute compassion for those in peril—for the victims of a disaster we can see in the news reports. We may not always act, but we certainly feel it. We sit up, our hearts in our throats: fearing for their safety, mourning for their loss. But what we require is a more expansive compassion; a more imaginative compassion; one that acts over the long term, recognizing the humanity of people in distant times as well as distant places.

We also suffer from a bias known as scope neglect. This is a lack of sensitivity to the scale of a benefit or harm. We have trouble caring ten times more about something when it is ten times as important. And once the stakes get to a certain point, our concern can saturate.63 For example, we tend to treat nuclear war as an utter disaster, so we fail to distinguish nuclear wars between nations with a handful of nuclear weapons (in which millions would die) from a nuclear confrontation with thousands of nuclear weapons (in which a thousand times as many people would die, and our entire future may be destroyed). Since existential risk derives its key moral importance from the size of what is at stake, scope neglect leads us to seriously underweight its importance.

### 2NC- AT: Individuation

#### Racial capitalism doesn’t describe global capital---scaling up US-centric classifications is exceptionalism

Go 21, Professor of Sociology and Faculty Affiliate in Asian Studies @ Boston University. He has held Visiting Fellowships and Professorships @ the London School of Economics, Pompeu Fabra University in Barcelona, University of Lucerne in Switzerland, and the Third World Studies Centerin the Philippines. (Julian, "Three Tensions in the Theory of Racial Capitalism", *Sociological Theory*, Volume: 39 issue: 1, <https://doi.org/10.1177/0735275120979822)---language> edited

Of course, whether “race” preexisted capitalism does not alter the larger argument of the racial capitalism approach, which is that racial differentiation and capitalism are mutually supportive. Still, the tension in Robinson’s work manifests the deeper issue of whether “racial” capitalism refers to race or other identities. This issue permeates Walzer’s (2020) recent criticism of the racial capitalism concept. Walzer points to examples such as Russia and China, where capitalism does not rely on racial differences but rather on ethnic and religious differentiation. “It may be that Muslims are among the most exploited workers in Russia,” he wrote, “but they are mostly Caucasian (some of them the original Caucasians), so we would have to talk about religious capitalism—where Orthodox Christians, not white people, are the privileged group.” On this basis, Walzer rejected the racial capitalism concept as limited at best and analytically [worsening] ~~debilitating~~ at worse.

Skeptics of Walzer have offered a rebuke: his argument misses the global dimensions of capitalism. At issue is not whether racial stratification articulates with capitalism within any single country but whether it permeates the world-capitalist system. Proponents of this argument could readily assemble evidence to show that, on a global scale, the vast majority of the world’s proletariat, subproletariat, and dispossessed—whether cultivating grapes or coffee on the farms of the Americas, cleaning up office floors in London, or making clothes in the sweatshops of New Delhi—are, to borrow DuBois’s (1935) phrase, “yellow, brown and black.” Against Walzer, this would retain the main claim of the racial capitalism approach that race and capitalism are intertwined.

Yet this scaling upward of capitalism to a global level brings its own complications. It carries the danger of what Bourdieu and Wacquant (1999) called “the cunning of imperialist [racialist] reason”: an analytic operation by which U.S.-centered scholars impose presumably U.S.-centric classifications (in this case, “race”) onto the rest of the world, thereby imposing racial classifications into contexts where they might not be operative. We would be obliged, for instance, to impose racial classifications onto Latin American contexts such as Brazil, where the salience of racial classifications is debatable (Loveman 1999; Wimmer 2015). In short, if we are to insist on the global character of racial capitalism, we must assume that analysts’ racial classifications are global as well. They may very well be, but racial capitalism’s founding texts, and more recent discussions, have not sufficiently problematized this tension.2

Can this tension be resolved? One way to do so is to raise the possibility that the racial capitalism concept works best for groups that have been undoubtedly racialized, such as members of the African diaspora in North America.3 Racial capitalism would thus refer mainly to the black ex-slave population, which has suffered some of the clearest and most virulent forms of racism. This might explain why the literature on racial capitalism has focused on African Americans and transatlantic slavery rather than other groups elsewhere in the world. Yet this seeming resolution would significantly reduce the scope of the racial capitalism concept. Racial capitalism would no longer depict a global system.

#### Capitalism solves– aggregate data

Arie 18 (Benjamin, writer for Conservative Tribune, 6/27/18, “Extreme Poverty Has Dropped From 94% of World Pop. to 9.6% Thanks to Capitalism”, https://www.westernjournal.com/ct/extreme-poverty-has-dropped-from-94-of-world-pop-to-9-6-thanks-to-capitalism/, AZG)

Capitalism improves people’s lives and has changed the world for the better — but you won’t find many leftists admitting it any time soon. Instead, free-market economics are often blamed for causing the world’s ills, instead of curing them. Take one look at how close openly socialist Bernie Sanders came to being the Democrats’ nominee in the last presidential election to see that capitalism is bizarrely demonized instead of celebrated. It’s the same story in many European countries, while even our neighbors in Mexico appear poised to elect a far-left and socialist-leaning candidate as president on July 1. “The rich are getting richer, and the poor are getting poorer,” is the claim of anti-capitalists everywhere. But is it true? Not according to the facts. It turns out that worldwide poverty is declining at an incredible rate, and Western-style capitalism is the main reason. “The speed of poverty alleviation in the last 25 years has been historically unprecedented,” explained the Foundation for Economic Education, a pro-freedom think tank. “Not only is the proportion of people in poverty at a record low, but, in spite of adding 2 billion to the planet’s population, the overall number of people living in extreme poverty has fallen, too,” FEE continued. The numbers speak for themselves. “In 1820, 94 percent of the world’s population lived in extreme poverty,” pointed out Alexander Hammond, a researcher for HumanProgress.org. “In 1990, this figure was 34.8 percent, and in 2015, just 9.6 percent.” We think of the 1800s as “olden times,” but in the large scheme of history and human events, it really wasn’t that long ago. Most of human history, if we’re being honest, was marked by poverty and suffering by the vast majority of people on Earth. Lifespans were short and existence was brutal. Death, frustration, and sadness was the norm, not the exception. Just 200 years ago, almost all of the world’s population was resigned to live in poverty with no way out. There were a handful of elites — mainly the aristocracy — who were able to live relatively well, but even that “luxury” living was rough and uncomfortable by our modern standards. Then something changed — capitalism spurred advancement, and it wasn’t limited to just the elite. “In the last quarter century, more than 1.25 billion people escaped extreme poverty. That equates to over 138,000 people being lifted out of poverty every day,” FEE explained. “If it takes you five minutes to read this article, another 480 people will have escaped the shackles of extreme of poverty by the time you finish.” “In order to help the poorest, consider the impact free-market capitalism has had in the last 200 years in alleviating extreme poverty,” the foundation continued. “The Industrial Revolution turned the once-impoverished Western countries into abundant societies. The new age of globalization, which started around 1980, saw the developing world enter the global economy and resulted in the largest escape from poverty ever recorded.” To put it simply, the rich may be getting richer … but the poor are also getting richer. The foundation pointed to India as a prime example of how Western principles and capitalism are accelerating people out of poverty at a rate that is historically unprecedented. “Since its economic liberalization reforms in 1991, India’s average income has increased by 7.5 percent per year,” FEE explained. “That means that average income has more than tripled over the last quarter century. As wealth increased, the poverty rate in India declined by almost 24 percent.” “It is the people at the very bottom of the social strata who are getting richer faster,” the foundation summarized. At a time when it’s in vogue to bash capitalism and embrace disastrous socialism, it’s important to step back and look at the bigger picture. Life is getting dramatically, measurably better in almost every part of the world, and Western capitalist principles are at the center of that renaissance.

### 2NC- AT: Financialization

#### Financialization is heavily regulated now and won’t collapse the economy

Barr ’17 (Michael S. Barr; Professor of Law, Faculty Director of Finance, and Professor of Public Policy @ the University of Michigan, nonresident senior fellow at the Center for American Profess, JD @ Yale, “Financial Reform: Making the System Safer and Fairer,” 4 January 2017, http://www.rsfjournal.org/doi/full/10.7758/RSF.2017.3.1.01)

OVERVIEW OF REFORMS

In the United States, passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (“Dodd-Frank”) ushered in comprehensive reform in key areas: enlarging the regulatory perimeter by creating the authority to regulate financial firms that pose a threat to financial stability, without regard to their corporate form; enacting a resolution authority to deal with the potential collapse of these major firms in the event of a crisis, without feeding a panic or putting taxpayers on the hook; attacking regulatory arbitrage, restricting risky activities, and beefing up banking supervision; requiring central clearing and exchange trading of standardized derivatives, and capital, margin and transparency throughout the market; improving investor protections; and establishing a new Consumer Financial Protection Bureau to look out for the interests of American households.

Today, major financial firms are subject to higher prudential standards, including higher capital and liquidity requirements, stress tests, and resolution planning through “living wills.” By forcing firms to internalize more of the costs that they impose on the system, they will be incentivized to shrink and reduce their complexity, leverage, and interconnections. Should such a firm fail, there will be a bigger capital buffer to absorb losses. To stem a panic, the Dodd-Frank Act permits the Federal Deposit Insurance Corporation (FDIC) to resolve the largest and most interconnected financial companies without exposing the system to a sudden, disorderly failure that puts the economy at risk.

On the global level, the international community has put forward new rules on capital, so that there are bigger buffers in the system in the event of failures. Capital will be measured in a more conservative way, and capital levels are going up significantly. Systemically important firms will hold even higher levels of capital. There are new rules on liquidity and a global leverage limit. Derivatives reforms are proceeding, as are new approaches to dealing with the risks from repo and securities financing transactions.

Yet much more work remains to be done, and the financial sector did not leave the battlefield after their defeats in 2010. Far from it. The brutal fight over financial reform rages on, and there is serious risk that a collective amnesia about the causes and consequences of the financial crisis appears to be descending on global financial capitals that will further weaken the resolve for reform (See, for example, Coffee 2011, 2012).

### 2NC- Warming

#### Yes decoupling – study

Pao 18 (Hsiao-Tien Pao, PhD, Department of Management Science, National Chiao Tung University; Chun-Chih Chen, PhD, Department of Management Science, National Chiao Tung University; “Decoupling strategies: CO emissions, energy resources, and economic growth in 2 the Group of Twenty”, Journal of Cleaner Production, September 2018, DOI: 10.1016/j.jclepro.2018.09.190) \*Brackets added which provide the full version of each of these abbreviations: Hydro = hydropower; CKC = carbon kuznets curve; Ren = new renewable energy consumption; FF = fossil fuels energy consumption; 3Es = environment, energy, and economy, Nuc = nuclear energy consumption, TCE = total clean energy consumption, EG = economic growth

This study selects the G20 as a representative sample of global economic development to assess the CKC [carbon Kuznets curve], the 3Es dynamics, substitutability between Ren [new renewable energy consumption]/Hydro [hydropower] /Nuc [nuclear energy consumption] and FF [fossil fuels energy consumption], and thus to propose decoupling strategies for sustainable development. We extend the literature on the emission-growth nexus in the case of G20 to the 3Es dynamics by examining the rule of Ren [new renewable energy consumption]/Hydro [hydropower] /Nuc [nuclear energy consumption] and FF [fossil fuels energy consumption]. The descriptive statistical analysis suggests the absolute decoupling effect seems to have occurred with the drop in related environmental pressure and the continuation of economic growth. Within a panel EEO model framework, the per capita TCE [total clean energy consumption] /FF [fossil fuels energy consumption] elasticity of demand for carbon emissions is -0.021/1.04. The existence of the CKC [carbon kuznets curve] is consistent with the results of the descriptive statistical analysis. The results of panel VECM models support the Hydroled and Nuc-led growth hypotheses and the feedback hypothesis between EG [economic growth] and Ren [new renewable energy consumption]/FF and suggest the potential substitutability/symbiosis between Ren/Hydro and FF as evidenced by the negative/positive bidirectional causal relationship between them. Also, note that the use of nuclear energy is a key means of dealing with carbon emissions as evidenced by the positive unidirectional causal relationship running from emissions to Nuc [nuclear energy consumption].

Based on the growing global awareness of environmental protection, these interdependencies between 3Es are not surprising. That provides the main directions of each in the design of energy and energy conservation policies to ensure a diversified, sustainable energy consumption mix and a decoupling of environmental pressure from EG [economic growth]. Policymakers can introduce a wide range of complementary strategies for renewable energy and nuclear energy to improve energy efficiency and safety, reduce CO2 intensity, maintain stable economic growth, and implement the 2030 sustainable development agenda, thus lead the world to absolute decoupling. Absolute decoupling is the only way to achieve a truly sustainable future.

#### Degrowth worse

Papandreou 15

Andreas, January 2015 (“The Great Recession and the transition to a low-carbon economy”, <http://fessud.eu/wp-content/uploads/2015/01/The-Great-Recession-and-the-transition-to-a-low-carbon-economy-Working-paper-88.pdf>, Accessed 3/15/19)//DG

7. Conclusions

With the Great Recession the public concern and the political will for climate action took a serious blow. The drop seems precipitous from the heights of public concern and political momentum in face of the multiple and interrelated water-food-energy-climate crises appearing in the run up to Lehman's collapse. The confluence of these separate but clearly linked threats provided hope that the necessary political will for bold action was materialising. Yet along with the Great Recession precipitated by the burst in the subprime bubble these earlier very tangible threats appeared to deflate in importance in the public's mind. This is reflected both in polls and in governments' words and deeds and in the near collapse of UN climate talks. Food prices and fossil fuel prices did initially drop (though much less than may have been expected) as did global greenhouse gas emissions. Attention turned squarely to addressing the financial crisis and rising unemployment. Several years have gone by since the start of the Great Recession and while formally the US is out of the recession there is only very recently an uptick in public concernxl in the US for climate change which is likely to be related to recent extreme weather events (summer wildfires and Hurricane Sandy) and continuing evidence of accelerating climate volatility. It may also reflect the recovery underway. In the UK, a strong climate action advocate, the change in priorities is palpable with the recent discussion prompted by Ed Miliband's promise to freeze energy bills for 20 months. Regarding this new debate about energy prices in the UK an FT editorial captures the new mood: "Bold undertakings to reduce emissions were popular when they were announced at the height of the boom. Yet that moment of Malthusian anxiety was also one of economic cheer, and little attention was paid to sacrifices that expensive energy entails" (Editorial 2013). One might have hoped that the lost political time might be made up by a fall in greenhouse gas emissions due to lower economic activity but in striking contrast to previous economic crises, while CO2 emissions dipped briefly in 2009 the high growth in 2010 swamped these initial gains. While the downturn helped the developed economies meet their emission targets, the growing dominance of emission growth in the emerging markets and especially China and India pushed global emissions to record highs.

Data on clean energy developments provided some smidgeons of hope. Renewable power and electric-hybrid vehicles showed some continued dynamism. China and Japan strengthened renewable policy and targets while Europe scaled back. Policy uncertainty and falling equipment cost negatively impacted renewable investments. The problems and the decreasing investor confidence were reflected in the dramatic fall in clean energy share values in 2008. The dramatic drop in PV module prices created corporate distress but also signalled the move from a 'niche' market to take off phase. While clean energy maintained some momentum, largely propelled by pre recession policies, the brown energy news has been bad. More money is still being invested in new fossil-fuel generating capacity (coal, gas) compared to renewables. Coal has become the main source of electricity generation by far with China and India driving the demand growth. Coal demand in Europe also rose as coal prices fell and EU ETS carbon prices plummeted temporarily putting strains on meeting emission targets. While economic slowdowns are generally linked to drops in CO2 emissions they can also shift the energy mix away from clean energy. This would be a particularly worrying threat if it affects long term investments.

The collapse of the EU carbon market was partly an expected market adjustment to the recession though the extent of the collapse would seem to be more related to the uncertainty about carbon market governance and climate policy resolve. This weakening of political resolve, evidenced in the difficulties of passing amendments in the EU parliament that would help support the carbon price is the greater concern. It undermines the constancy in regulatory goals that is needed by clean energy investors, it partially maligns the perceived effectiveness of carbon pricing policies, and it signals faltering leadership of the EU.

Though it might be expected that climate policy (or concern for climate change) and unemployment are inversely related, climate risk is linked to global accumulation of GHGs and any rebound in brown economic activity will only exacerbate the problem. In this vein, one of the more positive impacts of the Great Recession was a call for Green Economic development or Green Keynesianism. Though in many ways Green Economic growth is a repackaging of the broad concept of sustainable development, the new element (or emphasis) was to see the financial crisis as an opportunity for fiscal stimulus directed at accelerating the transition to sustainable energy; a kind of Green Keynesianism. This growing literature may help provide important policy insights about ways to combat recessions and downturns while maintaining and strengthening a shift to a low carbon economy. Much as the Great Depression eventually brought about an economic and political response in the form of the New Deal, the Great Recession could give rise to a New Green Deal. Understandably, many climate economists and international organizations, concerned with losing momentum, pointed to this 'double dividend' of economic recovery and generating jobs while laying the foundations for the clean energy revolution. In 2009 some governments heeded the calls and ensured that at least a significant portion of stimulus packages were directed toward sustainable energy activities. This initial intervention has run its course and since then government expenditure on clean energy continues to fall. Given the enormity of the transformation in energy systems required the initial green fiscal boost does not appear to be a strong enough impetus but this may depend on whether it eventually leads to a more permanent mindset towards large scale clean energy infrastructure investments. It will also depend on a broader debate on the nature of government intervention and sustainable energy. The debate on government intervention per se has certainly already shifted ground, as the mainstream market fundamentalist paradigm has been wounded on several fronts, including the role of banking, deregulation of finance and globalization of finance. This shift has been too little and too slow, and there are few indications that the lessons of green growth or green Keynesianism are bringing about the needed change in climate policy. Despite the depth and immediacy of the Great Recession the reforms remain far from adequate to bring about a sustained recovery or to reduce the risk of recurrence. That adequate reforms are not undertaken in the financial system even when the crisis is at its most intense phase does not bode well for undertaking the far more extensive overhaul required for low carbon energy revolution. Crises are painful and often destructive. They can be the outcome of underlying transitions afoot that strain the existing institutions and mindsets. They can be precursors to fundamental change in the spirit of creative destruction. They present societies with opportunities for new pathways as they unleash a rebalancing of conflicting political and economic interests. The world crisis derives from the Ancient Greek word κρίσις, meaning the power of good judgment. Many found signs of hope in the multiple crises (financial, economic and environmental), especially in the phase just prior to the Great Recession. A look at past techno-economic paradigm shifts might suggest that we are confronting a breaking point of resistance to institutional changes that will usher in new technologies with a matching socio-economic framework conducive to a green wave of renewable energy, resource efficiency and information communication technology. There are problems, however, with drawing parallels to past techno-economic shifts when considering the required transition to sustainable energy societies. Socio-technical transitions take long periods to unfold and there is no a priori reason why the timing of any underlying transition related to the present crisis will meet the very tight time frame for a sustainability transition. The window of opportunity for avoiding dangerous levels of GHG accumulations is closing fast especially given the long term lock-in associated with energy investments. Though political forces were often involved in past socio-technical transitions, they were driven by economic interests exploiting technical advances to provide services attractive to consumers and industry. Political forces aligned with these when they recognized gains for consumers and industry that translate into votes. Unlike past transitions, a transition to sustainable energy systems, except by luck, must be a largely policy driven transition. It cannot rely on the market pull of superior quality of energy services. The technology itself must be guided in a specific low carbon direction, rather than simply being the outcome of economic and national competition. Unlike past transitions that began in one country and spread to others, it has to take place on a global scale guided by policy in the major economies of the world. Most worrying, is that the time frame available is much shorter than any previous energy transition. In short, while there may be some sings of hope from developments on the clean energy front they do not add up to the kind of momentum that we should be seeing even in times of economic distress (perhaps especially in times of distress if one abides by some forms of Green Keynesianism). The peak of policy momentum was at the height of the global financial bubble when energy security appeared to align with climate action as a way to address the multiple crises associated with a 'booming' global economy. Climate action could be more easily sold to a public worried that it's lifestyle was threatened by high energy prices, food prices and extreme weather events. This narrative was lost in the recession and it's hard to see how the policy momentum will be regained without it being part of a future bubble which would not be a solution anyway.

It is instructive to consider the three scenarios used in Bloomberg New Energy Finance to project future growth in renewable energyxli. The Traditional Territory (TT) scenario assumes a subdued world economy with a real cumulative annual growth rate (CAGR) of 2.2%. Fossil fuels become cheap due to the expanding production of shale gas. Environmental concerns are moderate and mostly appeased by more use of gas. Trusted technologies of gas, coal and energy draw most investments. Support for new energy technologies weaken while grid investments focus on maintaining the existing centralized infrastructure. The New Normal (NN) assumes some hangover from the crisis but with higher rate of growth (2.7%). Fuel prices rise as demand for energy from developing countries outstrip supply. Environmental concerns remain stable but carbon prices rise as EU and Australian policies remain intact. Existing clean energy policies continue till 2020 and are replaced by carbon prices in key countries. Investment in grid accommodates moderate new distributed technologies. The Barrier Busting scenario assumes full economic recover following trend of past 20 years with high fossil prices, heightened environmental concern and stronger policies with stronger investment in grid technologies (Tuner 2013).

Among these scenarios the subdued world economy one appears to be the most threatening in terms of climate change. Based on some of the anecdotal information presented in this paper the Great Recession seems to have done more harm than good for the transition to sustainable energy systems. Given the centrality of policy guidance in this transition, the greatest damage seems to come from the shifting government priorities. The real objective must be for governments to induce the first policy guided unprecedented speedy socio technical revolution that provides a way out of recessions (present and future) and is robust to the winds of economic and political change. A tall order indeed but this is how it must be.

#### Global supply chains are sustainable and dynamic- they are adapting and key to solve warming- Businesses without

Pierce ‘19

* More efficient calculations
* Sustainable/renewable non-plastic packaging
* Transparency/Effective management
* Fossil fuel vehicles/ transition to clean cars
* Optimal refigeration energy

(Cassie Pierce, Senior Director | Supply Chain | Planning & Procurement @orthofix. “How the Global Supply Chain is Doing its Part to Fix Climate Change” 11/12/19. https://climatelaunchpad.org/how-the-global-supply-chain-is-doing-its-part-to-fix-climate-change/)**AB**

A growing concern for sustainability has transformed how companies are designing their products and marketing them to an increasingly green public. But these initiatives are just the start, as many have also begun making adjustments behind the scenes with regards to their supply chain — and rightly so, given that a McKinsey report reveals that it is responsible for 90% of a company’s environmental impact. With this in mind, here’s how today’s businesses have been adding to the growing cause for sustainability, starting with their supply chains. Planning More Efficiently A simple miscalculation between supply and demand often leads to the overproduction of certain materials, which results in a lot of wasted energy and resources. The power of machine learning and predictive analytics can help with more accurate forecasting, so that companies—especially ones constantly replenishing stocks, like Amazon—can help procure the right amount of supply to meet the market’s demand. Encouraging Transparency Supply chain managers need to monitor how their suppliers are extracting and producing raw materials to ensure that they’re following sustainability policies in their country or region. For instance, the new EU directive requires companies to report their sustainability performances, since they’re needed in the risk analyses and investment decisions by investors, banks, and pension fund managers. In this regard, the International Resource Panel recently developed an online tool that allows countries to see possible hubs for unsustainable practises within their area, so they can take the necessary steps to address them. Improving Packaging Every day, massive amounts of energy are used in the production of traditional packaging materials such plastic, paper, and foam, which are quickly discarded once they arrive at a consumer’s doorstep or a company’s stock room. In response, more sustainable packaging is now being created out of recycled waste material to reduce the consumption of resources. They’re usually compostable, recyclable, and versatile enough to use for most items including—but not limited to—food, electronics, and clothes. Speaking of food, one of our participants, RefillaBowl, has even found a way to make takeaways more sustainable and solve the single-use problem of ordering food. Using Alternative Fuels Cars and other fuel-powered vehicles, like planes and ships, are the biggest contributors to smog and air pollution around the world. This is why a lot of companies are slowly switching to alternative fuel sources such as water and electricity to lessen the amount of greenhouse gases businesses contribute to the atmosphere. In fact, there are even organisations such as AM Group whose main purpose is to research, design, and manufacture clean energy alternatives and products. On the other hand, electric-powered vehicles are another type of cleantech initiative, or an investment philosophy companies use to up their profits while minimising negative effects on the environment. According to Start-U-up founder Ron Bloemers’ speech at the 2019 MELT Innovation Forum, global cleantech markets are expected to rise between 2020 to 2050 for economic reasons alone. Optimising Driving In line with efforts to switch to alternative fuels, logistics providers are also looking to optimise the way they transport goods from one point to another. Today’s company carriers are usually equipped with GPS tracking software to determine the shortest and most fuel-efficient paths for each delivery. Moreover, a feature on Verizon Connect explains how instilling better driving habits saves a lot of fuel, too. Actions such as harsh braking and sharp acceleration all increase fuel consumption and, in turn, carbon emissions, which careful driving can prevent. Reducing the amount of unnecessary cargo they bring, such as empty boxes, is also another step. Reducing Refrigeration Reducing electricity use has always been a priority for any company from both sustainability and profitability perspectives. And in supply chain management, electric consumption is an important factor in warehousing, especially for food and other businesses dealing with perishable commodities. A report by Supply Chain Dive reports on how refrigeration is one category that consumes a large percentage of energy consumption across all commercial buildings, second only to lighting. One solution is the use of Thermal Energy Storages, which balances temperature and refrigeration run time to maximise energy reduction. Glassolina has actually done something like this for greenhouses, where they have created translucent wood plastic composites to reduce buildings CO2 emissions. A similar solution can help companies reduce energy consumption and their carbon footprint while still protecting food and other perishable goods. These initiatives, big and small, contribute to larger and much-needed environmental reforms. Although there is still much to be done towards minimising the supply chain industry’s environmental impact, these practices are paving the way towards a greener and more sustainable future.

#### The economy is sustainable - new solutions

Bosch 19 (Stephan Bosch, PhD, Institute of Geography, University of Augsburg; Matthias Schmidt, PhD, Institute of Geography, Chair for Human Geography, University of Augsburg; “Is the post-fossil era necessarily post-capitalistic? – The robustness and capabilities of green capitalism”, Ecological Economics, 161, 270–279. doi:10.1016/j.ecolecon.2019.04.001)

6. Conclusion

In this paper, we argued that capitalism is not only much more robust than presumed by its critics, but moreover features promising capabilities with regard to solving the environmental crisis.

At the beginning, we elucidated that capitalism is able to prevail even given the end of fossil energy carriers and to maintain its productivity also within a regenerative energy system. Innovative concepts of storage, direct current transmission, and smart grids play a core role herein. Moreover, we were able to show that crisis is an essential element of the capitalist social order, with critical situations even being able to provide the necessary preconditions for the economy's transformation towards sustainability. Innovation is an essential ingredient of this process. We argued that precisely the preconditions given in competitive capitalism generate innovations. Therefore, in our view, the decisive social advantage of a competition-oriented capitalist system is this: as expressed by Schumpeter's concept of creative destruction, it offers maximum incentive for entrepreneurial initiatives. According to the theory of economic development, this incentive cannot be given within the socialist markets or degrowth-oriented societies favoured, but not more specifically detailed, by Harris (2013) and Kallis (2011). Yet this stimulus is crucial as it is accompanied by greater innovational strength, thus providing more auspicious preconditions for groundbreaking innovations, e.g. regarding aspects of technology, education, vocational training, research, social infrastructure, medicine, and nature protection (Schumpeter, 1994; Iversen, 2005; Wangler, 2013). However, we again want to point out the numerous social problems of the deployment of renewable energies (e.g. Aitken, 2010), especially concerning large-scale infrastructure projects (e.g. Avila, 2018).

In the context of competitive capitalism as described by Schumpeter, the promising capabilities of green capitalism were presented in detail. Nevertheless, the predominant criticism of capitalism scarcely assumes the Schumpeterian concept of ‘creative destruction’. Rather, it focuses on a much later stage of evolution of the economic system, in which the socio-economic disparities as a result of economic, but also of other factors have manifested themselves distinctly and with great complexity (cf. trustified capitalism). The pure criticism of capitalism thus seems to us to be too superficial as an explanatory model, which relies on arguments that disregard precisely those fertile approaches to surmounting the energetic and environmental crisis that presently arise from numerous processes of creative destruction. The cradle-to-cradle approach illustrated above is only one example of a concept that, by means of innovation, abandons the old and establishes the new. Yet we also think that competition and the market alone will not suffice to concertedly solve the global environmental crisis. This calls for political action that, by creating suitable institutional frame conditions, succeeds in pooling society's forces with regard to the ecological questions of our time, thus specifically promoting innovation.

We demonstrated that the usefulness of state measures always also depends on the respective specific national and economic context. An objection to capitalist social orders in general disregards this diversity of contexts and is at risk of overlooking important determinants of crisis management. The decisive difference in the various capitalist systems' innovative strength lies in the degree to which the cooperation of the major market players – state, enterprises, science, and civil society – is institutionalised. This implies that a central part falls to the state in embedding the actions of the most important players into appropriate institutional structures. Only thereby will it be possible to shoulder the heavy load of material, costs, work, and coordination required for the energy system's transformation. A non-committal state runs the risk of failing this task. E.g., Solomon and Krishna (2011) showed that the intended transformation of the energy system in the USA after the oil crisis was unsuccessful due to the lack of suitable preconditions for innovation in niche markets. Moreover, Ćetković and Buzogány (2016) found that in liberal manifestations of capitalism, the deficiency of political and institutional instruments inhibits the necessary orchestration of activities on the part of state, industry, and financial sector.

In sum, even though fossil fuels and the capitalist system based upon them have given rise to the environmental crisis, surmounting the crisis does not necessarily call for surmounting market-based approaches; rather, market economies based on regenerative energy systems that are competition-oriented and guided by state measures may develop great ecological and socio-economic effectivity.

#### Clean disruption solves – zero-emissions by 2030.

Seba 14 - MBA @ Stanford, lecturer in distribution and clean energy @ Stanford (Tony, “Clean Disruption of energy and transportation: How silicon valley will make oil, nuclear, natural gas, coal, electric utilities and conventional cars obsolete by 2030,” pg. 2-17)

The Stone Age did not end because humankind ran out of stones. It ended because rocks were disrupted by a superior technology: bronze. Stones didn't just disappear. They just became obsolete for tool-making purposes in the Bronze Age. The horse and carriage era did not end because we ran out of horses. It ended because horse transportation was disrupted by a superior technology, the internal combustion engine, and a new, disruptive 20th century business model. Horses didn't just disappear. They became obso ete for the purposes of mass transportation. The age of centralized, command-and-control, extraction-resource-based energy sources (oil, gas, coal and nuclear) will not end because we run out of petroleum, natural gas, coal, or uranium. It will end because these energy sources, the business models they employ, and the products that sustain them will be disrupted by superior technologies, product architectures, and business models. Compelling new technologies such as solar, wind, electric vehicles, and autonomous (self-driving) cars will disrupt and sweep away the energy industry as we know it. The same Silicon Valley ecosystem that created bit-based technologies that have disrupted atom-based industries is now creating bit- and electron-based technologies that will disrupt atom-based energy industries.

Clean Disruption of Energy and Transportation.

The industrial era of energy and transportation is giving way to an information technology and knowledge-based energy and transportation era. The combination of bit-based and electron-based technologies will put an end to conventional atom-based energy and transportation industries. The disruption will be a clean one and have the following characteristics:

1. Technology-based disruption.

The clean disruption is about digital (bit) and clean energy (electron) technologies disrupting resource-based (atom-based) industries. Clean energy (solar and wind) is free. Clean transportation is electric and uses clean energy derived from the sun and wind. The key to the disruption of energy lies in the exponential cost and performance improvement of technologies that convert, manage, store, and share clean energy. The clean disruption is also about software and business model innovation.

2. Flipping the architecture of energy.

Just as the Internet and the cell phone turned the architecture of information upside-down, the clean disruption will create an energy architecture that is different from the one we know today. The new energy architecture will be distributed, mobile, intelligent, and participatory. It will overturn the existing energy architecture, which is centralized, command-and-control oriented, secretive, and extractive. The conventional energy model is about Big Banks financing Big Energy to build Big Power Plants or refineries in a few selected places. The new architecture is about everyone financing everyone to build smaller, distributed power plants everywhere.

3. Abundant, cheap, and participatory energy.

The clean disruption will be about abundant, cheap, and participatory energy. The existing energy business model is based on scarcity, depletion, and command-and-control monopolies. The clean disruption is similar to the information technology revolution that overturned the old publishing and information model and made information abundant, participatory, and essentially free.

4. Clean disruption is inevitable.

The clean disruption of energy and transportation is inevitable when you consider the exponential cost improvement of disrupting technologies; the creation of new business models; the democratization of generation, finance, and access; and the exponential market growth.

5. Clean disruption will be swift.

It will be over by 2030. Maybe before. Oil, natural gas (methane), coal, and uranium will simply become obsolete for the purposes of generating significant amounts of electricity and powering the automobile. These energy sources will still have uses. For example, uranium will be used to make nuclear weapons and natural gas will be used for cooking and producing fertilizer. Obsolescence and clean disruption will not put an end to incumbent industries. We still have vinyl records, sailboats and jukeboxes. These niche market products will survive, but energy and transportation will not be the multi-trillion dollar energy heavyweights that they are today.

In twenty years we'll wonder how we put up with the horrendous consequences of the incumbent, conventional, $8 trillion-a-year energy industry. If Nikola Tesla and Thomas Alva Edison rose from the dead, they would recognize the industry that they helped build a century ago and they would be disappointed at how little it has changed. Today's versions of Tesla and Edison are creating technologies, products, and business models that will dismantle the extractive, centralized, dirty- energy age in which we live. The first wave of energy disruption has already begun with distributed solar and wind generation. It won't be long before the next wave crashes over the remains of the first one. Transportation is a $4 trillion industry globally. The transportation industry is inextricably linked with energy. As this book explains, the internal combustion engine automobile will soon be disrupted, an event which will, in turn, send disruptive shockwaves through the oil industry. The first wave of disruption of the century-old automotive industry is well underway with electric vehicles. The second disruptive wave, the self-driving car, will hit before the first wave is finished crashing. Transportation will never be the same again. This book is about how a new technology-based infrastructure and a set of products and services governed by the economics that have made Silicon Valley a source of market disruption over the last generation will disrupt energy industries that have barely evolved over the past hundred years.

### 2NC – War

#### Capitalist peace theory is true.

**Gartzke 7** (Eric, associate professor of political science @ Columbia and a member of the Saltzman Institute of War and Peace Studies, Jan. 2007, "The Capitalist Peace," Midwest Political Science Association, http://www.jstor.org/stable/pdf/4122913.pdf?refreqid=excelsior%3A6da465ba14ba238f87e23e8cf4f9b5fa)//KEN

The discovery that democracies seldom fight each other has led, quite reasonably, to the conclusion that democ- racy causes peace, at least within the community of liberal polities. Explanations abound, but a consensus account of the dyadic democratic peace has been surprisingly slow to materialize. I offer a theory of liberal peace based on capitalism and common interstate interests. Economic development, capital market integration, and the compatibility of foreign policy preferences supplant the effect of democ- racy in standard statistical tests of the democratic peace. In fact, after controlling for regional heterogeneity, any one of these three variables is sufficient to account for effects previously attributed to regime type in standard samples of wars, militarized interstate disputes (MIDs), and fatal disputes.' If war is a product of incompatible interests and failed or abortive bargaining, peace ensues when states lack dif- ferences worthy of costly conflict, or when circumstances favor successful diplomacy. Realists and others argue that state interests are inherently incompatible, but this need be so only if state interests are narrowly defined or when conquest promises tangible benefits. Peace can result from at least three attributes of mature capitalist economies. First, the historic impetus to territorial expansion is tempered by the rising importance of intellectual and financial capital, factors that are more expediently enticed than conquered. Land does little to increase the worth of the advanced economies while resource competition is more cheaply pursued through markets than by means of military occupation. At the same time, development actually increases the ability of states to project power when incompatible policy objectives exist. Development affects who states fight (and what they fight over) more than the overall frequency of warfare. Second, substantial overlap in the foreign policy goals of developed nations in the post-World War II period further limits the scope and scale of conflict. Lacking territorial tensions, consensus about how to order the international system has allowed liberal states to cooperate and to accommodate minor differences. Whether this affinity among liberal states will persist in the next century is a question open to debate. Finally, the rise of global capital markets creates a new mechanism for competition and communication for states that might otherwise be forced to fight. Separately, these processes influence patterns of warfare in the modern world. Together, they explain the absence of war among states in the developed world and account for the dyadic observation of the democratic peace.

#### increased costs deter war --- robust data confirms interdependence

**Dafoe and Kelsey 14** (Allan Dafoe – Assistant Professor of Political Science at Yale, and Nina Kelsey – Research Associate in International Economics at Berkeley, “Observing the capitalist peace: Examining market-mediated signaling and other mechanisms,” Journal of Peace Research 51(5):619-633)

Countries with liberal political and economic systems rarely use military force against each other. This anomalous peace has been most prominently attributed to the ‘democratic peace’ – the apparent tendency for democratic countries to avoid militarized conflict with each other (Maoz & Russett, 1993; Ray, 1995; Dafoe, Oneal & Russett, 2013).More recently, however, scholars have proposed that the liberal peace could be partly (Russett & Oneal, 2001) or primarily (Gartzke, 2007; but see Dafoe, 2011) attributed to liberal economic factors, such as commercial and financial interdependence. In particular, Erik Gartzke, Quan Li & Charles Boehmer (2001), henceforth referred to as GLB, have demonstrated that measures of capital openness have a substantial and statistically significant association with peaceful dyadic relations. Gartzke (2007) confirms that this association is robust to a large variety of model specifications. To explain this correlation, GLB propose that countries with open capital markets are more able to credibly signal their resolve through the bearing of greater economic costs prior to the outbreak of militarized conflict. This explanation is novel and plausible, and resonates with the rationalist view of asymmetric information as a cause of conflict (Fearon, 1995). Moreover, it implies clear testable predictions on evidential domains different from those examined by GLB. In this article we exploit this opportunity by constructing a confirmatory test of GLB’s theory of market-mediated signaling. We first develop an innovative quantitative case selection technique to identify crucial cases where the mechanism of market-mediated signaling should be most easily observed. Specifically, we employ quantitative data and the statistical models used to support the theory we are probing to create an impartial and transparentmeans of selecting cases in which the theory – as specified by the theory’s creators –makes its most confident predictions. We implement three different case selection rules to select cases that optimize on two criteria: (1) maximizing the inferential leverage of our cases, and (2) minimizing selection bias. We examine these cases for a necessary implication of market-mediated signaling: that key participants drew a connection between conflictual events and adverse market movements. Such an inference is a necessary step in the process by which market-mediated costs can signal resolve. For evidence of this we examine news media, government documents, memoirs, historical works, and other sources. We additionally examine other sources, such as market data, for evidence that economic costs were caused by escalatory events. Based on this analysis, we assess the evidence for GLB’s theory of market mediated costly signaling. Our article then considers a more complex heterogeneous effects version of market-mediated signaling in which unspecified scope conditions are required for the mechanism to operate. Our design has the feature of selecting cases in which scope conditions are most likely to be absent. This allows us to perform an exploratory analysis of these cases, looking for possible scope conditions. We also consider alternative potential mechanisms. Our cases are reviewed in more detail in the online appendix.1 To summarize our results, our confirmatory test finds that while market-mediated signaling may be operative in the most serious disputes, it was largely absent in the less serious disputes that characterize most of the sample of militarized interstate disputes (MIDs). This suggests either that other mechanisms account for the correlation between capital openness and peace, or that the scope conditions for market-mediated signaling are restrictive. Of the signals that we observed, strategic market-mediated signals were relatively more important than automatic market-mediated signals in the most serious conflicts. We identify a number of potential scope conditions, such as that (1) the conflict must be driven by bargaining failure arising from uncertainty and (2) the economic costs need to escalate gradually and need to be substantial, but less than the expected military costs of conflict. Finally, there were a number of other explanations that seemed present in the cases we examined and could account for the capitalist peace: capital openness is associated with greater anticipated economic costs of conflict; capital openness leads third parties to have a greater stake in the conflict and therefore be more willing to intervene; a dyadic acceptance of the status quo could promote both peace and capital openness; and countries seeking to institutionalize a regional peace might instrumentally harness the pacifying effects of liberal markets.

#### Free trade promotes peace---solves war.

Adorney 13, \*Julian, a Young Voices contributor. He’s written for FEE, Playboy, National Review, The Federalist, and blogs at [The Empathetic Libertarian](https://slack-redir.net/link?url=https%3A%2F%2Ftheempatheticlibertarian.com%2F); (October 15th, 2013, “Want Peace? Promote Free Trade”, https://fee.org/articles/want-peace-promote-free-trade)

Frédéric Bastiat famously claimed that “if goods don’t cross borders, soldiers will."

Bastiat argued that free trade between countries could reduce international conflict because trade forges connections between nations and gives each country an incentive to avoid war with its trading partners. If every nation were an economic island, the lack of positive interaction created by trade could leave more room for conflict. Two hundred years after Bastiat, libertarians take this idea as gospel. Unfortunately, not everyone does. But as recent research shows, the historical evidence confirms Bastiat’s famous claim.

To Trade or to Raid

In “[Peace through Trade or Free Trade?](http://jcr.sagepub.com/content/48/4/547.abstract)” professor Patrick J. McDonald, from the University of Texas at Austin, empirically tested whether greater levels of protectionism in a country (tariffs, quotas, etc.) would increase the probability of international conflict in that nation. He used a tool called dyads to analyze every country’s international relations from 1960 until 2000. A dyad is the interaction between one country and another country: German and French relations would be one dyad, German and Russian relations would be a second, French and Australian relations would be a third. He further broke this down into dyad-years; the relations between Germany and France in 1965 would be one dyad-year, the relations between France and Australia in 1973 would be a second, and so on.

Using these dyad-years, McDonald analyzed the behavior of every country in the world for the past 40 years. His analysis showed a negative correlation between free trade and conflict: The more freely a country trades, the fewer wars it engages in. Countries that engage in free trade are less likely to invade and less likely to be invaded.

The Causal Arrow

Of course, this finding might be a matter of confusing correlation for causation. Maybe countries engaging in free trade fight less often for some other reason, like the fact that they tend also to be more democratic. Democratic countries make war less often than empires do. But McDonald controls for these variables. Controlling for a state’s political structure is important, because democracies and republics tend to fight less than authoritarian regimes.

McDonald also controlled for a country’s economic growth, because countries in a recession are more likely to go to war than those in a boom, often in order to distract their people from their economic woes. McDonald even controlled for factors like geographic proximity: It’s easier for Germany and France to fight each other than it is for the United States and China, because troops in the former group only have to cross a shared border.

The takeaway from McDonald’s analysis is that protectionism can actually lead to conflict. McDonald found that a country in the bottom 10 percent for protectionism (meaning it is less protectionist than 90 percent of other countries) is 70 percent less likely to engage in a new conflict (either as invader or as target) than one in the top 10 percent for protectionism.

Protectionism and War

Why does protectionism lead to conflict, and why does free trade help to prevent it?  The answers, though well-known to classical liberals, are worth mentioning.

First, trade creates international goodwill. If Chinese and American businessmen trade on a regular basis, both sides benefit. And mutual benefit disposes people to look for the good in each other. Exchange of goods also promotes an exchange of cultures. For decades, Americans saw China as a mysterious country with strange, even hostile values. But in the 21st century, trade between our nations has increased markedly, and both countries know each other a little better now. iPod-wielding Chinese teenagers are like American teenagers, for example. They’re not terribly mysterious. Likewise, the Chinese understand democracy and American consumerism more than they once did. The countries may not find overlap in all of each other’s values, but trade has helped us to at least understand each other.

Trade helps to humanize the people that you trade with. And it’s tougher to want to go to war with your human trading partners than with a country you see only as lines on a map.

Second, trade gives nations an economic incentive to avoid war. If Nation X sells its best steel to Nation Y, and its businessmen reap plenty of profits in exchange, then businessmen on both sides are going to oppose war. This was actually the case with Germany and France right before World War I. Germany sold steel to France, and German businessmen were firmly opposed to war. They only grudgingly came to support it when German ministers told them that the war would only last a few short months. German steel had a strong incentive to oppose war, and if the situation had progressed a little differently—or if the German government had been a little more realistic about the timeline of the war—that incentive might have kept Germany out of World War I.

Third, protectionism promotes hostility. This is why free trade, not just aggregate trade (which could be accompanied by high tariffs and quotas), leads to peace. If the United States imposes a tariff on Japanese automobiles, that tariff hurts Japanese businesses. It creates hostility in Japan toward the United States. Japan might even retaliate with a tariff on U.S. steel, hurting U.S. steel makers and angering our government, which would retaliate with another tariff. Both countries now have an excuse to leverage nationalist feelings to gain support at home; that makes outright war with the other country an easier sell, should it come to that.

In socioeconomic academic circles, this is called the Richardson process of reciprocal and increasing hostilities; the United States harms Japan, which retaliates, causing the United States to retaliate again. History shows that the Richardson process can easily be applied to protectionism. For instance, in the 1930s, industrialized nations raised tariffs and trade barriers; countries eschewed multilateralism and turned inward. These decisions led to rising hostilities, which helped set World War II in motion.

These factors help explain why free trade leads to peace, and protectionism leads to more conflict.

Free Trade and Peace

One final note: McDonald’s analysis shows that taking a country from the top 10 percent for protectionism to the bottom 10 percent will reduce the probability of future conflict by 70 percent. He performed the same analysis for the democracy of a country and showed that taking a country from the top 10 percent (very democratic) to the bottom 10 percent (not democratic) would only reduce conflict by 30 percent.

#### Nuclear war

Henricksen 17, emeritus senior fellow at the Hoover Institution (Thomas, “Post-American World Order,” *Hoover Institution*, <http://www.hoover.org/research/post-american-world-order>)

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.

#### Supply chains are resilient and prevent war- The alternative is protectionism

Rosenburg ‘20

(Robert Rosenberg is a Nonresident Fellow with Stimson’s Security and Trade Efficiency Platform (STEP). Rob is a recognized leader in the global trade facilitation and security space, advising both domestic and international agencies. “Great power competition and global supply chains” August 19, 2020. [https://www.stimson.org/2020/great-power-competition-and-global-supply-chains/)**AB**](https://www.stimson.org/2020/great-power-competition-and-global-supply-chains/)AB)

Many have used this moment to call for America to bring production home to protect us from future disruptions. Others have declared this as the catalyst for decoupling U.S. supply chains from China. Democratic presidential candidate Joe Biden released a campaign document outlining his plan to onshore key areas of production with massive government contracts, while President Trump has long threatened and used economic policy to pressure companies. Despite this rhetoric, powerful economic forces, entrenched relationships, and concentrated manufacturing and skill bases make basic trade relations difficult to shift. Interconnected supply chains further serve as a shared infrastructure that promotes stability based on common economic interests. They have also provided tremendous growth for the global economy and have helped lift millions out of poverty. Benefits that we should not undo. Blind protectionist policies cannot bring home every American factory, nor can they secure our supply chains against renewed great power competition. However, the U.S. can use its resources to encourage more reliability, diversity, and resilience in the supply chains critical to our national security. This will ensure that America does not face disruptions to these strategic goods in the future, whether from a global pandemic or escalating geopolitical tensions. To achieve this, the U.S. must take action to address near term vulnerabilities. However, it must also use a concerted, long-term approach in its investment decisions to take a strategic outlook that involves both domestic and international partners to rebalance and diversify our supply chains. To prioritize resources, a risk analysis approach to America’s supply chains can help inform policymakers in these decisions.

# 1NR

# 1NR---Round 6

## T---USFG

### 1NR---C/I

#### Defining the USFG as an assemblage does not mean that it does not require government action—It just means the government is composed of a variety of parts that assemble together to make up the government.

Vanhanen 10 , Janne Vanhanen PhD in Philosophy from Univ of Helsinki, ENCOUNTERS WITH THE VIRTUAL The Experience of Art in Gilles Deleuze’s Philosophy , https://helda.helsinki.fi/bitstream/handle/10138/19376/encounte.pdf?sequence=1

To characterise the mode of being of the assemblage, Deleuze and Guattari distinguish two axes in it: material and expressive components, and processes that can be either stabilising (territorializing) or destabilising (deterritorializing). The material and expressive components can be roughly categorised as falling under the axis between “machinic assemblage of bodies” (affective materiality) and “collective assemblage of enunciation” (language, semiotics, “incorporeal transformations”).371 This can be schematised as follows: ASSEMBLAGE Material components (“states of bodies”) Territorializing processes Deterritorializing processes Expressive components (“incorporeal transformations”) An assemblage is, then, “an intermingling of bodies”, material and semiotic, which undergoes processes of strengthening or disassembling its current identity.372 An archetypal example of an assemblage would, thus, seem to be a social formation of some kind, such as a political party or an institution of state.373 These clearly consist of material conditions (workers, material assets, et cetera) and expressive components (rules and regulations, statements, symbolisations, et cetera) and they undergo phases of stabilisation and change. A forceful instance of this is the juridical system. It is composed of buildings, clerks, officials and judges, as well as semiotic components such as laws, conducts and practices. It effects corporeal transformations, producing prisoners and enclosing them in special quarters and, in addition, incorporeal transformations such as declaring people guilty or not guilty. Yet, despite the examples traversing the social field, it must be kept in mind that Deleuze and Guattari nominate every single thing as an assemblage. The world is constituted of affects: parts within parts, affecting one another. Phenomena-as-assemblages exist as “boxes” within boxes, or a set of Russian dolls, qualified according to spatio-temporal scale and perspective. There are components great and small, mountains and molecules, and likewise assemblages. I am an assemblage of myriads of parts: physico-chemical, biological, cultural, technical. The parts I consist of are assemblages, too, on their respective levels. The hands that I type this text with consist of formations of flesh, sinew, bones, nerves, arteries and so forth. They have an individual history as “my” hands, and a structural history of the assemblage of human hand evolving through generations of ancestors, as the hand is a deterritorialized paw. My fingertips, pressing the keys, are made of biological cells, which, in turn, consist of molecules which are aggregates of atoms. We can continue into the sub-atomic level and never encounter the foundational stratum of reality which would act as a strictly determining foundation for the “higher” levels.374 Likewise, there are many assemblages of which I am a part of. My family, my university department, my neighbourhood, my nationality, humankind, the whole animal kingdom, planetary organic matter, Earth, the stellar system, Milky Way, the local system of galaxies and so forth into massive scale cosmic structures. At any level of consideration we are dealing with populations, 375 not species, and with relations of parts to a (relative) whole. And, as mentioned above, there is also the question of emergence where different entities and attributes emerge not causally but statistically out of smaller-scale parts, without the larger-scale entities being reducible to their constitutive parts, as well as the wider assemblages affecting their components. As DeLanda phrases it, the world is composed of “nested” sets of individuals of different spatial and temporal scales.376

#### Resolved means to express by formal vote

--prefer it, it’s in the context of the resolution

Webster’s 98

(Webster’s Revised Unabridged Dictionary, dictionary.com)

Resolved**:¶** 5. To express, as an opinion or determination, by resolution and vote; to declare or decide by a formal vote; -- followed by a clause; as, the house resolved (or, it was resolved by the house) that no money should be apropriated (or, to appropriate no money).

#### USFG is the three branches

The Free Dictionary 4 (Thefreedictionary.com, April 6 2004, DA 6/21/11,)

The executive and legislative and judicial branches of the federal government of the United States

#### Expand means change the law

Hatter 90 (HATTER, District Judge. Opinion in In re Eastport Associates, 114 BR 686 - Dist. Court, CD California 1990. Google scholar caselaw. Date accessed 7/12/21)

Second, Eastport asserts that the presumption against retroactivity does not apply because the amendment was intended only as a clarification of existing law. Where an amendment to a statute is remedial in nature and merely serves to clarify existing law, no question of retroactivity is involved and the law will be applied to pending cases. City of Redlands v. Sorensen, 176 Cal.App.3d 202, 211, 221 Cal.Rptr. 728, 732 (1985). The evidence in this case, however, does not support the conclusion that the amendment to section 66452.6(f) was simply a clarification of preexisting law. The Legislative Counsel's Digest specifically states that "[t]he bill would expand the definition of development moratorium." Senate Bill 186, Stats.1988, ch. 1330, at 3375 (emphasis added). Since the Legislative Counsel is a state official required by law to analyze pending legislation, it is reasonable to presume that the Legislature amended the statute with the intent and meaning expressed in the Counsel's digest. People v. Martinez, 194 Cal. App.3d 15, 22, 239 Cal.Rptr. 272, 276 (1987). By its ordinary meaning, the term "expand" indicates a change in the law, rather than a restatement of existing law. In light of the Counsel's comment, Eastport's argument is unpersuasive.

### 1NR---TVA

### **A topical version of the affirmative is that the United States federal government should prohibit seed patents by at least expanding the scope of the Sherman Act.**

#### **Federal antitrust has jurisdiction over seed patents.**

Luce 7 (Peter, J.D. candidate 2008, Tulane University School of Law; B.S., Georgetown University, “Monsanto Co. v. Scruggs: Has Federal Circuit Biotechnology Patent Scope Jurisprudence Gone to Seed?,” 2007, <https://journals.tulane.edu/TIP/article/view/2531>, DOA: 11-14-2021) //Snowball

Scruggs admitted to replanting the seed, but argued that Monsanto’s patents were technically invalid and that, alternatively, the patents only covered the synthetic traits and not the entire seed or the resulting plants.10 Scruggs therefore argued that Monsanto’s license restrictions violated federal and state antitrust laws and amounted to patent misuse because the license terms impermissibly broadened the scope of Monsanto’s patent rights.11 The trial court granted Monsanto’s summary judgment motions in favor of the patent infringement claims and against Scruggs’ antitrust and patent-misuse defenses.12 The trial court then issued a permanent injunction against Scruggs and entered final judgment.13

Scruggs appealed, again claiming that Monsanto’s patents do not cover the crops ~~he~~ grew from the modified seeds ~~he~~ purchased, that Monsanto’s patent rights were exhausted after the initial sale of the seeds to Scruggs, and that Scruggs had an implied license to use the technology from the purchase of the seeds from the seed producers.14 After vacating and remanding the permanent injunction order against Scruggs for additional scrutiny mandated by a recent United States Supreme Court ruling,15 the Federal Circuit reviewed the case de novo and held that (1) patents on embedded synthetic genetic traits read on not only the trait, but the seed in which the trait is embedded, the plants produced from the seed, and all subsequent generations of seeds; (2) the traditional “first sale” patent exhaustion doctrine does not extinguish a patent holder’s rights in seed harvested subsequent to the initial planting of genetically altered seed because no unrestricted sale of the seed has yet occurred; (3) a prohibition on replanting seeds containing patented traits is within the scope of a patent holder’s rights; and (4) patent misuse does not occur unless the act of tying the purchase of a patented product to another relevant product has demonstrable anticompetitive effects. Monsanto Co. v. Scruggs, 459 F.3d 1328, 1335, 1340-41 (Fed. Cir. 2006).

II. BACKGROUND

The United States Constitution grants Congress the power “[t]o promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive right to their . . . Discoveries.”16 Accordingly, United States patent law grants a patent holder “the Right to exclude others from making, using, offering for sale, or selling the invention” as long as the patent is in force.17 A patent is, in essence, the grant of a legal monopoly amounting to almost complete control over the invention.18 In fact, no patent owner “shall be . . . deemed guilty of misuse or illegal extension of the patent right by reason of ~~his~~ having . . . refused to license or use any rights to the patent.”19 Types of restrictions that have been deemed within the scope of the patent grant include limited use licensing, royalty charges, and limitation of the use of the invention to specific purposes or areas of use.20 Patent specifications must describe the invention “in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same” and must “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as ~~his~~ invention.”2

An individual is said to infringe on a patent when ~~he~~ “without authority makes, uses, offers to sell, or sells any patented invention.”22 In order for a court to find infringement, at least one of the claims listed in the patent must read on the accused product.23 Whether a claim reads on an allegedly infringing product is a question of proper claim construction, and is a matter of law to be determined by the court.24 Possible affirmative defenses to patent infringement include noninfringement, unenforceability, invalidity of the patent, patent misuse, patent exhaustion, and the existence of an implied license to use the patented technology.25 A patent may be challenged as invalid if, for example, it fails to meet the written description and enablement requirements set out in 35 U.S.C. § 112.26 The doctrine of patent misuse, however, implicates actions by the holder of a valid patent that attempt to impose conditions on licensees and purchasers of the invention that “impermissibly broaden[] the scope of the patent grant with anticompetitive effect.”27 The doctrine of patent exhaustion comes into play when a patent holder sells an invention to a purchaser in an unrestricted sale.28 When a patent holder has sold an invention “without any conditions . . . the rule is well established that the patentee must be understood to have parted . . . with all ~~his~~ exclusive right, and that ~~he~~ ceases to have any interest whatever” in the invention.29 Finally, a purchaser can be said to have an implied license to use a patented invention if “the circumstances of the sale . . . ‘plainly indicate that the grant of a license should be inferred.’”30

Given the express purpose of patent law to encourage innovation in furtherance of the public good, and given the breadth of monopoly rights conferred on patent holders, federal antitrust law serves as an essential backstop to competition-stifling practices that result from the abuse of patents.31 Under the Sherman Act, “[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade . . . is declared to be illegal.”32 In addition, it is a felony to “monopolize, or attempt to monopolize, or combine or conspire . . . to monopolize any part of the trade or commerce among the several States.”33 Illegal monopolization occurs when a party gains or maintains monopoly power in a market through anticompetitive means.34

#### Another TVA is the USFG should break up Amazon using antitrust law.

#### Breaking up Amazon offers immediate gains for black and indigenous communities

**House Judiciary Committee 20** , (10/1/2020, “PROPOSALS TO STRENGTHEN THE ANTITRUST LAWS AND RESTORE COMPETITION ONLINE,” *Congress.gov*, <https://www.congress.gov/event/116th-congress/house-event/LC65929/text?s=1&r=38> Date Accessed 11/14/2021)

So let me give two quick examples highlighted by the work of this subcommittee. If we take Amazon, for example, we've seen in the hearings of this subcommittee over these last few months how Amazon has leveraged its dominance over online retail transactions to undercut its competitors, to engage in predatory pricing, and to stifle innovation. This impact is not just on the economy and on growth, it also has a particularly hard-felt impact on black, brown indigenous communities when you think about the impacts on small businesses, for example. That market dominance has then, in turn, also enabled Amazon to pressure State and local governments for more favorable regulatory treatment and subsidies and to avoid the kinds of liabilities for its workplace safety, particularly at a time where we see black and brown essential workers facing astronomically high injury rates double the industry average, and where Amazon warehouses have themselves become hot spots for COVID transmission.

# 2NR

## ! Defense

### BioD

#### No extinction from biodiversity loss, and intervening actors solve.

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While there are data that relate local reductions in species richness to altered ecosystem function, these results do not point to substantial existential risks. The data are small-scale experiments in which plant productivity, or nutrient retention is reduced as species number declines locally (Vellend, 2017), or are local observations of increased variability in fisheries yield when stock diversity is lost (Schindler et al., 2010). Those are not existential risks. To make the link even more tenuous, there is little evidence that biodiversity is even declining at local scales (Vellend et al 2017; Vellend et al., 2013). Total planetary biodiversity may be in decline, but local and regional biodiversity is often staying the same because species from elsewhere replace local losses, albeit homogenizing the world in the process. Although the majority of conservation scientists are likely to flinch at this conclusion, there is growing skepticism regarding the strength of evidence linking trends in biodiversity loss to an existential risk for humans (Maier, 2012; Vellend, 2014). Obviously if all biodiversity disappeared civilization would end—but no one is forecasting the loss of all species. It seems plausible that the loss of 90% of the world’s species could also be apocalyptic, but not one is predicting that degree of biodiversity loss either. Tragic, but plausible is the possibility our planet suffering a loss of as many as half of its species. If global biodiversity were halved, but at the same time locally the number of species stayed relatively stable, what would be the mechanism for an end-of-civilization or even end of human prosperity scenario? Extinctions and biodiversity loss are ethical and spiritual losses, but perhaps not an existential risk. What about the remaining eight planetary boundaries? Stratospheric ozone depletion is one—but thanks to the Montreal Protocol ozone depletion is being reversed (Hand, 2016). Disruptions of the nitrogen cycle and of the phosphorous cycle have also been proposed as representing potential planetary boundaries (one boundary for nitrogen and one boundary for phosphorous). There are compelling data linking excesses in these nutrients to environmental damage. For example, over-application of fertilizer in Midwestern USA has led to dead zones in the Gulf of Mexico. Similarly, excessive nitrogen has polluted groundwater in California to such an extent that it is unsuitable for drinking and some rural communities are forced to drink bottled water. However, these impacts are local. At the same time that there is too much N loading in the US, there is a need for more N in Africa as a way of increasing agricultural yields (Mueller et al., 2012). While the disruption of nitrogen and phosphorous cycles clearly perturb local ecosystems, end-of-the-world scenarios seem a bit far-fetched. Another hypothesized planetary boundary entails the conversion of natural habitats to agricultural land. The mechanism by which too much agricultural land could cause a crisis is unclear—unless it is because land conversion causes so much biodiversity loss that is species extinctions that are the proximate cause of an eco-catastrophe. Excessive chemical pollution and excessive atmospheric aerosol loading have each been suggested as planetary boundaries as well. In the case of these pollution boundaries, there are well-documented mechanisms by which surpassing some concentration of a pollutant inflicts severe human health hazards. There is abundant evidence linking chemical and aerosol pollution to higher mortality and lower reproductive success in humans, which in turn could cause a major die-off. It is perhaps appropriate then that when Hollywood envisions an unlivable world, it often invokes a story of humans poisoning themselves. That said, it is doubtful that we will poison ourselves towards extinction. Data show that as nations develop and increase their wealth, they tend to clean up their air and water and reduce environmental pollution (Flörke et al., 2013; Hao & Wang, 2005). In addition, as economies become more circular (see Mathews & Tan, 2016), environmental damage due to waste products is likely to decline. The key point is that the pollutants associated with the planetary boundaries are so widely recognized, and the consequences of local toxic events are so immediate, that it is reasonable to expect national governments to act before we suffer a planetary ecocatastrophe.

### Disease

#### No extinction from disease.

Barratt 17, PhD in Pure Mathematics, Lecturer in Mathematics at Oxford, Research Associate at the Future of Humanity Institute. (Owen Cotton-Barratt et al, “Existential Risk: Diplomacy and Governance”, pg. 9, <https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf>)

1.1.3 Engineered pandemics

For most of human history, natural pandemics have posed the greatest risk of mass global fatalities.37 However, there are some reasons to believe that natural pandemics are very unlikely to cause human extinction. Analysis of the International Union for Conservation of Nature (IUCN) red list database has shown that of the 833 recorded plant and animal species extinctions known to have occurred since 1500, less than 4% (31 species) were ascribed to infectious disease.38 None of the mammals and amphibians on this list were globally dispersed, and other factors aside from infectious disease also contributed to their extinction. It therefore seems that our own species, which is very numerous, globally dispersed, and capable of a rational response to problems, is very unlikely to be killed off by a natural pandemic.

One underlying explanation for this is that highly lethal pathogens can kill their hosts before they have a chance to spread, so there is a selective pressure for pathogens not to be highly lethal. Therefore, pathogens are likely to co-evolve with their hosts rather than kill all possible hosts.39