# 1NC

## Offs

### 1

#### Interp and Violation: The affirmative must only defend that member nations of the WTO ought to reduce intellectual property protections for medicines and may only garner offense from the hypothetical implementation of the plan – they don’t.

#### "Resolved" requires a policy.

Merriam Webster '18 (Merriam Webster; 2018 Edition; Online dictionary and legal resource; Merriam Webster, "resolve," <https://www.merriam-webster.com/dictionary/resolve;> RP)  
: a legal or official determination especially: a legislative declaration

#### Member nations of the WTO are the 164 countries

https://www.wto.org/english/thewto\_e/whatis\_e/tif\_e/org6\_e.htm

#### Medicines prevent, diagnose, or treat disease and injury

**MRS 20** [(MAINE REVENUE SERVICE SALES, FUEL & SPECIAL TAX DIVISION) “A REFERENCE GUIDE TO THE SALES AND USE TAX LAW” <https://www.maine.gov/revenue/sites/maine.gov.revenue/files/inline-files/Reference%20Guide%202020.pdf> December 2020] SS

[Medicines](https://www.lawinsider.com/dictionary/medicines) means antibiotics, analgesics, antipyretics, stimulants, sedatives, antitoxins, anesthetics, antipruritics, hormones, antihistamines, certain “dermal fillers” (such as BoTox®), injectable contrast agents, vitamins, oxygen, vaccines and other substances that are used in the prevention, diagnosis or treatment of disease or injury and that either (1) require a prescription in order to be purchased or administered to the retail consumer or patient; or (2) are sold in packaging.

#### Intellectual property includes four things

Brewer 19 [(Trevor, advises clients on business structuring and sale transactions, regulatory compliance, third-party contracts, liability protection and general matters facing small business owners. His focus extends beyond legal advice and includes business strategy and wealth preservation.) “WHAT ARE THE FOUR BASIC TYPES OF INTELLECTUAL PROPERTY RIGHTS?” Brewer Long, 5/16/19. <https://brewerlong.com/information/business-law/four-types-of-intellectual-property/>] RR

There are four types of intellectual property rights and protections (although multiple types of intellectual property itself). Securing the correct protection for your property is important, which is why consulting with a lawyer is a must. The four categories of intellectual property protections include:

TRADE SECRETS

Trade secrets refer to specific, private information that is important to a business because it gives the business a competitive advantage in its marketplace. If a trade secret is acquired by another company, it could harm the original holder.

Examples of trade secrets include recipes for certain foods and beverages (like Mrs. Fields’ cookies or Sprite), new inventions, software, processes, and even different marketing strategies.

When a person or business holds a trade secret protection, others cannot copy or steal the idea. In order to establish information as a “trade secret,” and to incur the legal protections associated with trade secrets, businesses must actively behave in a manner that demonstrates their desire to protect the information.

Trade secrets are protected without official registration; however, an owner of a trade secret whose rights are breached–i.e. someone steals their trade secret–may ask a court to ask against that individual and prevent them from using the trade secret.

PATENTS

As defined by the U.S. Patent and Trademark Office (USPTO), a patent is a type of limited-duration protection that can be used to protect inventions (or discoveries) that are new, non-obvious, and useful, such a new process, machine, article of manufacture, or composition of matter.

When a property owner holds a patent, others are prevented, under law, from offering for sale, making, or using the product.

COPYRIGHTS

Copyrights and patents are not the same things, although they are often confused. A copyright is a type of intellectual property protection that protects original works of authorship, which might include literary works, music, art, and more. Today, copyrights also protect computer software and architecture.

Copyright protections are automatic; once you create something, it is yours. However, if your rights under copyright protections are infringed and you wish to file a lawsuit, then registration of your copyright will be necessary.

TRADEMARKS

Finally, the fourth type of intellectual property protection is a trademark protection. Remember, patents are used to protect inventions and discoveries and copyrights are used to protect expressions of ideas and creations, like art and writing.

Trademarks, then, refer to phrases, words, or symbols that distinguish the source of a product or services of one party from another. For example, the Nike symbol–which nearly all could easily recognize and identify–is a type of trademark.

While patents and copyrights can expire, trademark rights come from the use of the trademark, and therefore can be held indefinitely. Like a copyright, registration of a trademark is not required, but registering can offer additional advantages.

#### Vote neg:

#### 1] Fairness – post facto topic adjustment structurally favors the aff by manipulating the balance of prep. They can specialize in 1 area of literature for 4 years which gives them a huge edge over people switching topics every 2 months and locks us into a predictable null set of monolithic criticisms that are susceptible to the perm.

#### Fairness is an impact –

#### a] it’s an intrinsic good – debate is fundamentally a game and some level of competitive equity is necessary to sustain the activity which they’ve ceded validity to by participating,

#### b] probability – individual ballots can’t alter subjectivity even if long term clash over a season can, but they can rectify skews which means the only immediate impact to a ballot is fairness and deciding who wins,

#### c] it internal link turns every impact – a limited topic promotes in-depth research and engagement which is necessary to access all of their education

#### 2] Clash – argumentative testing along a stable tether and SSD are good – they force debaters to consider a controversial issue from multiple perspectives through nuanced 3rd and 4th level testing that only occurs alongside a stasis point for preparation. Non-T affs allow individuals to establish their own metrics for what they want to debate leading to ideological dogmatism – our argument is that the process of defending and answering proposals against a well-researched opponent is a benefit of engaging the topic regardless of the truth value of those proposals.

#### 3] TVA –

#### A] Defending a topical aff w k framing – getting rid of IP is a form of disassembling medical ip practices; doesn’t necessarily have to endorse the state and that’s neg ground

#### B] Data exclusivity affs or secondary patent affs – a core thesis of their aff is IPR bad and specific forms of IPR that allow for the consolidation of data into the virtual class are especially bad

#### Use competing interps – topicality is question of models of debate which they should have to proactively justify and we’ll win reasonability links to our offense.

#### Drop the debater because dropping the arg is severance which moots 7 minutes of 1nc offense

#### No rvis—it’s your burden to be fair and T—same reason you don’t win for answering inherency or putting defense on a disad.

#### They can’t weigh the case—

#### lack of preround prep means their truth claims are untested which you should presume false—they’re also only winning case because we couldn’t engage with it

#### No impact turns—

#### exclusions are inevitable because we only have 45 minutes so it’s best to draw those exclusions along reciprocal lines to ensure a role for the negative

## Case

#### Tech innovation undergirded by profit motives are driving the Second Machine Age, which dematerializes capitalism and makes growth a sustainable necessity

McAfee, 19—cofounder and codirector of the MIT Initiative on the Digital Economy at the MIT Sloan School of Management, former professor at Harvard Business School and fellow at Harvard’s Berkman Center for Internet and Society (Andrew, “Looking Ahead: The World Cleanses Itself This Way,” *More from Less: The Surprising Story of How We Learned to Prosper Using Fewer Resources—and What Happens Next*, Chapter 14, pg 278-292, Kindle, dml)

The decreases in resource use, pollution, and other exploitations of the earth cataloged in the preceding chapters are great news. But are they going to last? It could be that we're just living in a pleasant interlude between the Industrial Era and another rapacious period during which we massively increase our footprint on our planet and eventually cause a giant Malthusian crash.

It could be, but I don't think so. Instead, I think we're going to take better care of our planet from now on. I'm confident that the Second Machine Age will mark the time in our history when we started to progressively and permanently tread more lightly on the earth, taking less from it and generally caring for it better, even as we humans continue to become more numerous and prosperous. The work of Paul Romer, who shared the 2018 Nobel Prize in economics, is one of the sources of this confidence.

Growth Mindset

Romer's largest contribution to economics was to show that it's best not to think of new technologies as something that companies buy and bring in from the outside, but instead as something they create themselves (the title of his most famous paper, published in 1990, is "Endogenous Technological Change"). These technologies are like designs or recipes; as Romer put it, they’re "the instructions that we follow for combining raw materials." This is close to the definitions of technology presented in chapter 7.

Why do companies invent and improve technologies? Simply, to generate profits. They come up with instructions, recipes, and blueprints that will let them grow revenues or shrink costs. As we saw repeatedly in chapter 7, capitalism provides ample incentive for this kind of tech progress.

So far, all this seems like a pretty standard argument for how the first two horsemen work together. Romer's brilliance was to highlight the importance of two key attributes of the technological ideas companies come up with as they pursue profits. The first is that they're nonrival, meaning that they can be used by more than one person or company at a time, and that they don't get used up. This is obviously not the case for most resources made out of atoms—I can't also use the pound of steel that you've just incorporated into the engine of a car—but it is the case for ideas and instructions. The Pythagorean theorem, a design for a steam engine, and a recipe for delicious chocolate chip cookies aren't ever going to get "used up" no matter how much they're used.

The second important aspect of corporate technologies is that they're partially excludable. This means that companies can kind of prevent others from using them. They do this by keeping the technologies secret (such as the exact recipe for Coca-Cola), filing for patents and other intellectual-property protection, and so on. However, none of these measures is perfect (hence the words partially and kind of). Trade secrets leak. Patents expire, and even before they expire, they must describe the invention they're claiming and so let others study it.

Partial excludability is a beautiful thing. It provides strong incentives for companies to create useful, profit-enhancing new technologies that they alone can benefit from for a time, yet it also ensures that the new techs will eventually "spill over"—that with time they’ll diffuse and get adopted by more and more companies, even if that's not what their originators want.

Romer equated tech progress to the production by companies of nonrivalrous, partially excludable ideas and showed that these ideas cause an economy to grow. What's more, he also demonstrated that this idea-fueled growth doesn't have to slow down with time. It's not constrained by the size of the labor force, the amount of natural resources, or other such factors. Instead, economic growth is limited only by the idea-generating capacity of the people within a market. Romer called this capacity "human capital" and said at the end of his 1990 paper, "The most interesting positive implication of the model is that an economy with a larger total stock of human capital will experience faster growth."

This notion, which has come to be called "increasing returns to scale," is as powerful as it is counterintuitive. Most formal models of economic growth, as well as the informal mental ones most of us walk around with, feature decreasing returns—growth slows down as the overall economy gets bigger. This makes intuitive sense; it just feels like it would be easier to experience 5 percent growth in a $1 billion economy than a $1 trillion one. But Romer showed that as long as that economy continued to add to its human capital—the overall ability of its people to come up with new technologies and put them to use—it could actually grow faster even as it grew bigger. This is because the stock of useful, nonrivalrous, nonexcludable ideas would keep growing. As Romer convincingly showed, economies run and grow on ideas.

The Machinery of Prosperity

Romer's ideas should leave us optimistic about the planetary benefits of digital tools—hardware, software, and networks—for three main reasons. First, countless examples show us how good these tools are at fulfilling the central role of technology, which is to provide "instructions that we follow for combining raw materials." Since raw materials cost money, profit-maximizing companies are particularly keen to find ways to use fewer of them. So they use digital tools to come up with beer cans that use less aluminum, car engines that use less steel and less gas, mapping software that removes the need for paper atlases, and so on and so on. None of this is done solely for the good of the earth—it's done for the pursuit of profit that's at the heart of capitalism—yet it benefits the planet by, as we've seen, causing us to take less from it.

Digital tools are technologies for creating technologies, the most prolific and versatile ones we've ever come up with. They're machines for coming up with ideas. Lots of them. The same piece of computer-aided design software can be used to create a thinner aluminum can or a lighter and more fuel-efficient engine. A drone can be used to scan farmland to see if more irrigation is needed, or to substitute for a helicopter when filming a movie. A smartphone can be used to read the news, listen to music, and pay for things, all without consuming a single extra molecule.

In the Second Machine Age, the global stock of digital tools is increasing much more quickly than ever before. It's being used in countless ways by profit-hungry companies to combine raw materials in ways that use fewer of them. In advanced economies such as America's, the cumulative impact of this combination of capitalism and tech progress is clear: absolute dematerialization of the economy and society, and thus a smaller footprint on our planet.

The second way Romer's ideas about technology and growth are showing up at present is via decreased excludability. Pervasive digital tools are making it much easier for good designs and recipes to spread around the world. While this is often not what a company wants—it wants to exclude others from its great cost-saving idea— excludability is not as easy as it used to be.

This isn't because of weaker patent protection, but instead because of stronger digital tools. Once one company shows what's possible, others use hardware, software, and networks to catch up to the leader. Even if they can't copy exactly because of intellectual-property restrictions, they can use digital tools to explore other means to the same end. So, many farmers learn to get higher yields while using less water and fertilizer, even though they combine these raw materials in different ways. Steve Jobs would certainly have preferred for Apple to be the only provider of smartphones after it developed the iPhone, but he couldn't maintain the monopoly no matter how many patents and lawsuits he filed. Other companies found ways to combine processors, memory, sensors, a touch screen, and software into phones that satisfied billions of customers around the world.

The operating system that powers most non-Apple smartphones is Android, which is both free to use and freely modifiable. Google's parent company, Alphabet, developed and released Android without even trying to make it excludable; the explicit goal was to make it as widely imitable as possible. This is an example of the broad trend across digital industries of giving away valuable technologies for free.

The Linux operating system, of which Android is a descendant, is probably the best-known example of free and open-source software, but there are many others. The online software repository GitHub maintains that it's "the largest open source community in the world" and hosts millions of projects. The Arduino community does something similar for electronic hardware, and the Instructables website contains detailed instructions for making equipment ranging from air-particle counters to machine tools, all with no intellectual-property protection. Contributors to efforts such as these have a range of motivations (Alphabet's goals with Android were far from purely altruistic—among other things, the parent of Google wanted to achieve a quantum leap in mobile phone users around the world, who would avail themselves of Google Search and services such as YouTube), but they're all part of the trend of technology without excludability, which is great news for growth.

As we saw in chapter 10, smartphone use and access to the Internet are increasing quickly across the planet. This means that people no longer need to be near a decent library or school to gain knowledge and improve their abilities. Globally, people are taking advantage of the skill-building opportunities of new technologies. This is the third reason that the spread of digital tools should make us optimistic about future growth: these tools are helping human capital grow quickly.

The free Duolingo app, for example, is now the world's most popular way to learn a second language. Of the nearly 15 billion Wikipedia page views during July of 2018, half were in languages other than English. Google's chief economist, Hal Varian, points out that hundreds of millions of how-to videos are viewed every day on YouTube, saying, "We never had a technology before that could educate such a broad group of people anytime on an as-needed basis for free."

Romer's work leaves me hopeful because it shows that it's our ability to build human capital, rather than chop down forests, dig mines, or burn fossil fuels that drives growth and prosperity. His model of how economies grow also reinforces how well capitalism and tech progress work together, which is a central point of this book. The surest way to boost profits is to cut costs, and modern technologies, especially digital ones, offer unlimited ways to combine and recombine materials—to swap, slim, optimize, and evaporate—in cost-reducing ways. There's no reason to expect that the two horsemen of capitalism and tech progress will stop riding together anytime soon. Quite the contrary. Romer's insights reveal that they're likely to gallop faster and farther as economies grow.

Our Brighter, Lighter Future

The world still has billions of desperately poor people, but they won't remain that way. All available evidence strongly suggests that most will become much wealthier in the years and decades ahead. As they earn more and consume more, what will be the impact on the planet?

The history and economics of the Industrial Era lead to pessimism on this important question. Resource use increased in lockstep with economic growth throughout the two centuries between James Watt's demonstration of his steam engine and the first Earth Day. Malthus and Jevons seemed to be right, and it was just a question of when, not if, we'd run up against the hard planetary limits to growth.

But in America and other rich countries something strange, unexpected, and wonderful happened: we started getting more from less. We decoupled population and economic growth from resource consumption, pollution, and other environmental harms. Malthus's and Jevons's ideas gave way to Romer's, and the world will never be the same.

This means that instead of worrying about the world's poor becoming richer, we should instead be helping them upgrade economically as much and as quickly as possible. Not only is it the morally correct thing to do, it's also the smart move for our planet. As today’s poor countries get richer, their institutions will improve and most will eventually go through what Ricardo Hausmann calls "the capitalist makeover of production." This makeover doesn't enslave people, nor does it befoul the earth.

As today’s poor get richer, they'll consume more, but they'll also consume much differently from earlier generations. They won't read physical newspapers and magazines. They'll get a great deal of their power from renewables and (one hopes) nuclear because these energy sources will be the cheapest. They’ll live in cities, as we saw in chapter 12; in fact, they already are. They'll be less likely to own cars because a variety of transportation options will be only a few taps away. Most important, they'll come up with ideas that keep the growth going, and that benefit both humanity and the planet we live on.

Predicting exactly how technological progress will unfold is much like predicting the weather: feasible in the short term, but impossible over a longer time. Great uncertainty and complexity prevent precise forecasts about, for example, the computing devices we’ll be using thirty years from now or the dominant types of artificial intelligence in 2050 and beyond.

But even though we can't predict the weather long term, we can accurately forecast the climate. We know how much warmer and sunnier it will be on average in August than in January, for example, and we know that global average temperatures will rise as we keep adding greenhouse gases to the atmosphere. Similarly, we can predict the "climate" of future technological progress by starting from the knowledge that it will be heavily applied in the areas where it can affect capitalism the most. As we've seen over and over, tech progress supplies opportunities to trim costs (and improve performance) via dematerialization, and capitalism provides the motive to do so.

As a result, the Second Enlightenment will continue as we move deeper into the twenty-first century. I'm confident that it will accelerate as digital technologies continue to improve and multiply and global competition continues to increase. We’ll see some of the most striking examples of slim, swap, evaporate, and optimize in exactly the places where the opportunities are biggest. Here are a few broad predictions, spanning humanity's biggest industries.

Manufacturing. Complex parts will be made not by the techniques developed during the Industrial Era, but instead by three- dimensional printing. This is already the case for some rocket engines and other extremely expensive items. As 3-D printing improves and becomes cheaper, it will spread to automobile engine blocks, manifolds and other complicated arrangements of pipes, airplane struts and wings, and countless other parts. Because 3-D printing generates virtually no waste and doesn't require massive molds, it accelerates dematerialization.

We'll also be building things out of very different materials from what we're using today. We're rapidly improving our ability to use machine learning and massive amounts of computing power to screen the huge number of molecules available in the world. Well use this ability to determine which substances would be best for making flexible solar panels, more efficient batteries, and other important equipment. Our search for the right materials to use has so far been slow and laborious. That's about to change.

So is our ability to understand nature's proteins, and to generate new ones. All living things are made out of the large biomolecules known as proteins, as are wondrous materials such as spiders' silk. The cells in our bodies are assembly lines for proteins, but we currently understand little about how these assembly lines work—how they fold a two-dimensional string of amino acids into a complicated 3-D protein. But thanks to digital tools, we're learning quickly. In 2018, as part of a contest, the AlphaFold software developed by Google DeepMind correctly guessed the structure of twenty-five out of forty-three proteins it was shown; the second-place finisher guessed correctly three times. DeepMind cofounder Demis Hassabis says, "We [haven't] solved the protein-folding problem, this is just a first step... but we have a good system and we have a ton of ideas we haven't implemented yet." As these good ideas accumulate, they might well let us make spider-strength materials.

Energy. One of humanity's most urgent tasks in the twenty-first century is to reduce greenhouse gas emissions. Two ways to do this are to become more efficient in using energy and, when generating it, to shift away from carbon-emitting fossil fuels. Digital tools will help greatly with both.

Several groups have recently shown that they can combine machine learning and other techniques to increase the energy efficiency of data centers by as much as 30 percent. This large improvement matters for two reasons. First, data centers are heavy users of energy, accounting for about 1 percent of global electricity demand. So efficiencies in these facilities help. Second, and more important, these gains indicate how much the energy use of all our other complicated infrastructures— everything from electricity grids to chemical plants to steel mills—can be trimmed. All are a great deal less energy efficient than they could be. We have both ample opportunity and ample incentive now to improve them.

Both wind and solar power are becoming much cheaper, so much so that in many parts of the world they're now the most cost-effective options, even without government subsidies, for new electrical generators. These energy sources use virtually no resources once they're up and running and generate no greenhouse gases; they're among the world champions of dematerialization.

In the decades to come they might well be joined by nuclear fusion, the astonishingly powerful process that takes place inside the sun and other stars. Harnessing fusion has been tantalizingly out of reach for more than half a century—the old joke is that it's twenty years away and always will be. A big part of the problem is that it's hard to control the fusion reaction inside any human- made vessel, but massive improvements in sensors and computing power are boosting hope that fusion power might truly be only a generation away.

Transportation. Our current transportation systems are chronically inefficient. Most vehicles aren't used much of the time, and even when they’re in use, they're not nearly full. Now that we have technologies that let us know where every driver, passenger, piece of cargo, and vehicle is at all times, we can greatly increase the utilization and efficiency of every element of transportation.

Renting instead of owning transportation is a likely consequence of this shift. Instead of owning cars, which typically sit idle more than 90 percent of the time, more people will choose to access transportation as needed. We're already seeing this with car-hailing companies such as Uber and Lyft. These services are quickly spreading around the world, and expanding to cover more modes of transportation, from motorbikes to bicycles to electric scooters. They're also moving into commercial applications such as long- and short-haul trucking. As this shift continues, we’ll need fewer tons of steel, aluminum, plastic, gasoline, and other resources to move the world's people and goods around.

We might also experience less congestion and gridlock as we try to get around. Bikes and scooters take up little space compared to cars, so streets can accommodate many more of them. Technology also gives us the ability to implement many forms of "congestion pricing," which has been shown to reduce gridlock by making car access to busy streets expensive enough that people use other options. The most intriguing future transportation platform of all might be the sky. The same technologies that power today's small drones can be scaled up to build "air taxis" with as many as eight propellers and no pilot. Such contraptions sound like science fiction today, but they might be carrying us around by midcentury.

Agriculture. As we saw in chapter 5, leading farms have demonstrated an ability to increase their tonnage of output year after year while decreasing their use of inputs such as land, water, and fertilizer. This trend toward optimization will continue thanks to a set of innovations under the label precision agriculture. The precision comes from many sources, including better sensors of plant and animal health, soil quality and moisture, and so on; the ability to deliver fertilizer, pesticides, and water just where they're needed; and machinery that adapts itself to each plant or animal. All these varieties of precision will combine to allow traditional farms to generate more from less.

So will changes to the genomes of plants and animals. DNA modifications will increase disease and drought tolerance, expand where crops can be grown, and allow us to get more of what we want from each crop or herd. As we saw in chapter 9, they'll also allow us to take better care of vulnerable populations such as infants in poor countries by creating golden rice and other nutrition enhancers. We'll also be able to make much more precise and targeted genetic modifications thanks to a new crop of gene-editing tools that are large improvements over their more scattershot predecessors. Opposition to genetically modified organisms is fierce in some quarters, but isn't based on reason or science. This opposition will, one hopes, fade.

Throughout human history, just about all farming has been done in fields. For some crops, this is now changing. Agriculture has moved indoors, where parameters such as light, humidity, fertilizer, and even the composition of the atmosphere can be precisely monitored and controlled. In everything from urban buildings to shipping containers, crops are now being grown with progressively less labor and fewer material inputs. These completely contained farms will spread and help reduce the planetary footprint of our agriculture.

These examples aren't intended to be comprehensive, and I don't have precise estimates of how likely each innovation is, or when it's most likely to occur. I offer them only to indicate how broad and exciting are the possibilities offered by the two horsemen of capitalism and technological progress, and how they’ll continue to dematerialize our consumption and let us increase our prosperity while treading more lightly on our planet.

#### Growth is sustainable.

Harford, 20—economics columnist for the Financial Times, citing Diane Coyle, Bennett Professor of Public Policy at the University of Cambridge, Vaclav Smil, Distinguished Professor Emeritus in the Faculty of Environment at the University of Manitoba, Chris Goodall, English businessman, author and expert on new energy technologies, alumnus of St Dunstan's College, University of Cambridge, and Harvard Business School, and Jesse Ausubel, Director and Senior Research Associate of the Program for the Human Environment of Rockefeller University (Tim, “Two cheers for the dematerialising economy,” <https://www.ft.com/content/04858216-322e-11ea-9703-eea0cae3f0de>, dml)

If past trends continue, the world’s gross domestic product will be about twice as big by 2040 as it is today. That’s the sort of growth rate that translates to 30-fold growth over a century, or by a factor of a thousand over two centuries.

Is that miraculous, or apocalyptic? In itself, neither. GDP is a synthetic statistic, invented to help us put a measuring rod up against the ordinary business of life. It measures neither the energy and resource consumption that might worry us, nor the things that really lead to human flourishing.

That disconnection from what matters might be a problem if politicians strove to maximise GDP, but they don’t — otherwise they would have hesitated before imposing austerity in the face of a financial crisis, launching trade wars or getting Brexit done. Economic policymaking has flaws, but an obsession with GDP is not one of them.

Nevertheless the exponential expansion of GDP is indirectly important, because GDP growth is correlated with things that do matter, good and bad. Economic growth has long been associated with unsustainable activities such as carbon dioxide emissions and the consumption of metals and minerals.

But GDP growth is also correlated with the good things in life: in the short run, an economy that is creating jobs; in the long run, more important things. GDP per capita is highly correlated with indicators such as the Social Progress Index. The SPI summarises a wide range of indicators from access to food, shelter, health and education to vital freedoms of choice and from discrimination. All the leading countries in the Social Progress database are rich. All the strugglers are desperately poor.

So the prospect of a doubling of world GDP matters, not for its own sake, but for what it implies — an expansion of human flourishing, and the risk of environmental disaster.

So here’s the good news: we might be able to enjoy all the good stuff while avoiding the unsustainable environmental impact. The link between economic activity and the use of material resources is not as obvious as one might think. There are several reasons for this.

The first is that for all our seemingly insatiable desires, sometimes enough is enough. If you live in a cold house for lack of money, a pay rise lets you take off the extra cardigan and turn up the radiators. But if you win the lottery, you are not going to celebrate by roasting yourself alive.

The second is that, while free enterprise may care little for the planet, it is always on the lookout for ways to save money. As long as energy, land and materials remain costly, we’ll develop ways to use less. Aluminium beer cans weighed 85 grammes when introduced in the late 1950s. They now weigh less than 13 grammes.

The third reason is a switch to digital products — a fact highlighted back in 1997 by Diane Coyle in her book The Weightless World. The trend has only continued since then. My music collection used to require a wall full of shelves. It is now on a network drive the size of a large hardback book. My phone contains the equivalent of a rucksack full of equipment.

Dematerialisation is not automatic, of course. As Vaclav Smil calculates in his new book, Growth, US houses are more than twice as large today as in 1950. The US’s bestselling vehicle in 2018, the Ford F-150, weighs almost four times as much as 1908’s bestseller, the Model T. Let’s not even talk about the number of cars; Mr Smil reckons the global mass of automobiles sold has increased 2,500-fold over the past century.

Still, there is reason for hope. Chris Goodall’s research paper “Peak Stuff” concluded that, in the UK, “both the weight of goods entering the economy and the amounts finally ending up as waste probably began to fall from sometime between 2001 and 2003”. That figure includes the impact of imported goods.

In the US, Jesse Ausubel’s article “The Return of Nature” found falling consumption of commodities such as iron ore, aluminium, copper, steel, and paper and many others. Agricultural land has become so productive that some of it is being allowed to return to nature.

In the EU, carbon dioxide emissions fell 22 per cent between 1990 and 2017, despite the economy growing by 58 per cent. Only some of this fall is explained by the offshoring of production. (For a good summary of all this research, try Andrew McAfee’s book More From Less.)

Can we, then, relax? No. To pick a single obvious problem, global carbon dioxide emissions may be rising more slowly than GDP — but they are rising nevertheless, and they need to fall rapidly.

Yet the fact that dematerialisation is occurring is heartening. We all know what the basic policies are that would tilt the playing field in favour of smaller, lighter, lower-emission products and activities. Adopting those policies means we might actually be able to save the planet, preserve human needs, rights and freedoms — and still have plenty of fun into the bargain.

#### Critique of neoliberalism is politically useless—economic elites don’t identify with the title and dismiss social criticism as ‘economically illiterate.’

Rajesh VENUGOPAL 15, Assistant Professor in the Department of International Development at the London School of Economics [“Neoliberalism as concept,” *Economy and Society*, Vol. 44, No. 2, 2015, p. 165-187, Accessed Online through Emory Libraries]

Beyond conceptual proliferation and incoherence, there is an important third terminological feature of neoliberalism that more clearly distinguishes it from the multitude of other stressed and stretched concepts that dot the social sciences: it dares not speak its own name. While there are many who give out and are given the title of neoliberal, there are none who will embrace this moniker of power and call themselves as such. There is no contemporary body of knowledge that calls itself neoliberalism, no self-described neoliberal theorists that elaborate it, nor policy-makers or practitioners that implement it. There are no primers or advanced textbooks on the subject matter, no pedagogues, courses or students of neoliberalism, no policies or election manifestoes that promise to implement it (although there are many that promise to dismantle it). Pedantic as it may seem, this is a point that warrants repetition if only because there is a considerable body of critical literature that deploys neoliberalism under the mistaken assumption that, in doing so, it is being transported into the front-lines of hand-to-hand combat with free-market economics.

Advocates of market deregulation, private-sector-led growth or any of the various shifting components that might be part of neoliberalism do not describe themselves or their policies as such. Instead, neoliberalism is defined, conceptualized and deployed exclusively by those who stand in evident opposition to it, such that the act of using the word has the twofold effect of identifying oneself as non-neoliberal, and of passing negative moral judgment over it. Consequently, neoliberalism often features, even in sober academic tracts, in the rhetorical toolkit of caricature and dismissal, rather than of analysis and deliberation.

Boas and Gans-Morse (2009, p. 152) find that the inversion in its usage from positive to negative arose during the Pinochet regime in Chile. Until then, Latin American debates over economic policy in the 1960s and 1970s used the term largely in the positive sense, often with reference to West Germany's Wirtschaftswunder, whereas it became steadily negative in the 1980s. Importantly, neoliberalism, which was always a marginal part of the vocabulary in mainstream academic economics, even before its negative association, has since disappeared almost entirely in that arena in parallel with its growing influence and usage in the rest of the social sciences. As a result, the one-sided usage of neoliberalism extends not just to the way it is used only by self-consciously non-neoliberal critics, but also as a term used only by non-economists, and that, too, when referring to economic phenomena and economic forms of reasoning.

Indeed, the word neoliberalism is so utterly absent in modern economics that it is impossible to reconcile Ferguson's above definition of it as ‘macro-economic doctrine’ with the corpus of contemporary macro-economic theory at hand. For example, the word neoliberalism does not appear at all in any of the major macro-economic textbooks, including Mankiw's Principles of macroeconomics (2012), Blanchard's Macroeconomics (2012), Obstfeld and Rogoff's Foundations of international macroeconomics (1996), Krugman, Obstfeld and Melitz's International economics or Agénor and Montiel's Development macroeconomics (2008). Neither does it appear at all in a host of other widely read texts in the field, including Debraj Ray's Development economics (1998), Banerjee and Duflo's Poor economics (2011) or Barr's The economics of the welfare state (1993). Even the more unorthodox economists critical of market-based solutions, such as Paul Krugman or Joseph Stiglitz, find no need to use the concept. Neoliberalism is absent entirely from Krugman's End this depression now! and finds mention only once (in a footnote to the preface) in Stiglitz's The price of inequality: The avoidable causes and the invisible costs of inequality (2012).

Moreover, neoliberalism has, since 1966, only ever appeared twice in the pages of The American Economic Review, on both occasions as fleeting mentions. It has not appeared at all in The Quarterly Journal of Economics since 1960, nor in Journal of Political Economy since 1956. It has never appeared in Journal of Development Economics at all. In comparison, in 2012, it appeared in 10 papers in The Journal of Development Studies, eight papers in World Development, 17 papers in Development and Change and 10 papers in Journal of International Development. 5

What these strikingly different patterns of usage between economics and non-economics indicate is that, beyond dysfunctionality, neoliberalism signifies and reproduces the mutual incomprehensibility and the deep cognitive divide between these two domains (Jackson, 2013; Milonakis & Fine, 2013). Ha-Joon Chang notes that ‘critics of neoliberalism are routinely dismissed as “economically illiterate”’ (Chang, 2003, pp. 42–43). Indeed, for the rest of the social sciences, economics is an entirely alien discipline that is found to be intellectually vapid on the one hand, but also inscrutable and impenetrable due to the mathematical sophistication of its theory and empirics.

Neoliberalism purports to provide a lens through which this mysterious and hostile terrain can be surveyed, simplified, labelled and rendered understandable from a safe distance. Economic theory can thus be vicariously critiqued and dismissed without one having to encounter it, much less understand it. Not unsurprisingly, what emerges as a result is inadequate and often bears the character of dispatches from trench warfare, in which sketchy and vague outlines of enemy activity are reported from across a foggy and impassable no-man's land.

#### Scientific consensus proves warming is inevitable absent negative emissions technologies – only capitalism solves.

Welch 19

\*Large block of text condensed and shrunk to size 4

(Craig Welch, environment writer at National Geographic. Prior to joining National Geographic, he was the environmental reporter for The Seattle Times, where he worked for more than 14 years. A journalist for two decades, his work has appeared in Smithsonian magazine, the Washington Post, and Newsweek. He spent a year as a fellow at the Nieman Foundation for Journalism at Harvard University, and the Society of Environmental Journalists has twice named him Outstanding Beat Reporter of the Year, mostly recently in 2010. That same year, HarperCollins published his book, "Shell Games: A True Story of Cops, Con Men, and the Smuggling of America's Strangest Wildlife," a nonfiction detective story about wildlife thieves. It won the national Rachel Carson Environment Book Award in 2011 and was a finalist for the Pacific Northwest Booksellers Association award and the Washington State Book award. Welch and photographer Steve Ringman's Pulitzer Center-supported five-part series on ocean acidification "Sea Change: The Pacific's Perilous Turn" for The Seattle Times has won numerous including the Online Communication Award from the National Academy of Sciences, National Academy of Engineering, and Institute of Medicine, the Overseas Press Club Whitman Bassow Award, the ONA Online Journalism Award for Explanatory Reporting, and an Emmy Nomination for New Approaches to News & Documentary Programming, “To curb climate change, we have to suck carbon from the sky. But how?”, National Geographic, 17 January 2019, accessed: 12 March 2021, <https://www.nationalgeographic.com/environment/article/carbon-capture-trees-atmosphere-climate-change>, R.S.)

**The world must** quickly **stop burning fossil fuels. And** **that is no longer enough.**

Again and again, including in a major report published fall, the Intergovernmental Panel on Climate Change and other science bodies have reached a stark conclusion: Most paths to halting global temperature increases at 2 degrees—and every path **to** reach **1.5 degrees**—rely in some way on adopting methods of **sucking CO2 from the sky.**

It is a significant about-face. For years many scientists dismissed or downplayed the most highly engineered CO2 removal strategies. Those techniques were often lumped in with more dangerous forms of "geoengineering," such as injecting sulfates or other aerosols into the stratosphere to reflect sunlight and cool the planet. Focusing money and energy on any such technological fix seemed both risky and fraught with "moral hazard"—a distraction from the urgent need to cut emissions by slashing use of coal, oil, and gas.

But now many see "negative emissions," as CO2 removal strategies are also called, as an essential bridge to a clean-energy future.

"**CO2 removal has gone from a moral hazard to a moral imperative**," says Julio Friedmann, senior research scholar at the Center for Global Energy Policy at Columbia University.

There are several reasons for the shift. For starters, attempting to set a hard target at 1.5 or 2 degrees gives the world an emissions cap. With carbon emissions from fossil fuels estimated to have risen 2.7 percent in 2018, we're clearly not moving fast enough to reduce emissions—or even in the right direction.

"The longer we have postponed drastic reductions, the more daunting the challenge of achieving those reductions in the necessary time frame," says Erica Belmont, a University of Wyoming engineering researcher.

Even if the developed world rapidly switched to clean fuels, poorer countries would likely take longer. Emissions from some industries, such as cement and steel production, will be hard to eliminate, and alternative fuels for air travel are expected to remain expensive for quite some time.

Rapid progress

The good news is that CO2-removal technology has advanced far faster than expected in the last decade, says Stephen Pacala, a Princeton professor who oversaw a study of carbon removal strategies published this fall by the National Academies of Science.

The costs of machines that directly capture CO2 from the air **have fallen by two-thirds or more.** Meanwhile, at least **18 commercial-scale projects** around the world already capture CO2 from the smokestacks of coal or natural gas plants, storing it underground or even using it to create other products. Costs of that technology have **dropped by half in a dozen years.** While removing CO2 from smokestack gases is not the same as removing it from the ambient air—the former prevents new emissions, the latter cleans up old ones—both techniques require some means of sequestering CO2 after it’s captured. Additionally, advances in research and development from industrial carbon-capture can help **drive innovation** in efforts to pull old carbon from the atmosphere.

"Post-combustion carbon capture and direct air capture processes have significant components where know-how is transferable," says Christopher W. Jones, associate vice president for research at Georgia Institute of Technology.

Equally important, the **political will to subsidize carbon removal appears to be growing.** Even a **GOP-led Congress hostile to climate change worked** last year **with climate hawks** like Sen. Sheldon Whitehouse, D-Rhode Island, **to approve a $50-a-ton tax credit for** specific types of **CO2 removal**, including negative emissions techniques such as direct-air capture.

“We need to design and deploy technology to capture lots of carbon from our atmosphere at a pace never before seen," Sen. Whitehouse told National Geographic. "That’s why I’ve been pursuing legislation to help drive the development of that technology."

"You are a pessimist if you work on the science of climate impacts, because you see little action," Pacala says. "The people who know the most are the most freaked out. They've seen emissions go up and up andsee a train wreck coming."

But scientists studying negative emissions, Pacala continues, "have seen the most spectacular technological achievements in energy technology in the last 10 years. We've gone from having no tools to do this, to just seeing this unrelenting progress."

He and the other authors of the National Academies report concluded that a concerted multi-billion-dollar research and development push by government and the private sector might **within 10 years** produce market-ready technology that directly removes CO2 from ambient air **on a massive scale.**

But even evangelists such as Pacala and Whitehouse insist that direct air-capture technology can at most fill in the gaps in an overall effort to decarbonize the economy. It will never reach a scale that would save us from having to wean ourselves from fossil fuels—or from having to manage the land much better than we do now. First, do no harm The first step in improved land management is to halt practices that require carbon-removal in the first place, such as large-scale land clearing and burning. Halting deforestation in Indonesia and Brazil alone could reduce emissions equivalent to those produced by every car and light truck on the road in the United States. "Dealing with tropical deforestation is huge, huge, huge," says Katherine Mach, senior research scientist at the Woods Institute for the Environment at Stanford University. Retaining trees does more than just pull carbon from the atmosphere. Since the Amazon produces its own moisture, tree loss can lead to drought and fire, which could quickly destabilize and flip the forest to another type of landscape—one that would release its stored carbon. Replanting trees, on the other hand, could reduce atmospheric greenhouse gases even more. Simply restoring forests already chopped down in Brazil could draw about 1.5 billion metric tons of CO2 out of the air. While trees grow fast in the tropics, forest restoration shouldn't be limited to remote places. In fact, managing most land in the U.S. with an eye toward carbon reduction—both limiting new emissions and looking for places to pull CO2 back out of the atmosphere—could achieve the equivalent of cutting the country's emissions by 21 percent, according to a recent study in Science Advances. Managing land for carbon reduction would include restoring trees to native forests, slowing logging rotations on Southeast timberlands, and planting more trees in some 3,500 cities. But it also would mean better managing forests to reduce catastrophic wildfires, reconnecting tidal marshes cut off from the ocean, and restoring seagrasses. Cover crops would need to be added between plantings on every acre of corn, soil, wheat, rice, and cotton in the U.S. It's ambitious—and essential to at least try, says Joe Fargione, science director for The Nature Conservancy and lead author of the recent study. "The track that we're on with climate change is so dangerous that it requires an all-hands-on-deck approach," Fargione says. "This could buy us 10 years." Many—but not all—of the actions envisioned by his team would require a price on carbon to motivate landowners to change behavior. And there are potential pitfalls. Probably the most important one is that managing land for carbon reduction could conflict with managing it for food production. With global food demand set to increase substantially over the next few decades, restoring the wrong farm land back to native forest or grasslands could limit food availability and send price shocks through the system. Then there is the obvious challenge of realizing the theoretical potential of natural carbon reduction, not just in the U.S. but on a globe covered by a tremendous diversity of landscapes and governed by a mosaic of rules and owners and political situations. In Brazil, for example, the new president-elect threatens to increase deforestation, not tree-planting. The situation in the U.S. is not necessarily easier. "There are 11 million forest landowners just in the U.S," Birdsey says. "Getting 11 million families or entities to do anything—that's a big challenge. Most programs that try to get even 10 percent of potential landowners to participate fail." That's why the National Academies study is far more conservative[RK11] than the research published by Fargione’s team in Science Advances. It assumes that forests and farms worldwide could realistically pull only 2.5 gigatons of CO2 from the atmosphere a year. A massive buildout of a technique called bioenergy with carbon capture and sequestration—in which crops, wood, or waste biomass are burned for electricity or fuel, and the resulting CO2 is captured and stored—would double the amount of CO2 removed, the National Academies study says Still, that would be a real achievement. Five gigatons of CO2 amounts to about half of fossil fuel emissions in the United States, the world's second-largest polluter. Back on the farm At McCarty Family Farms the move toward a carbon-friendlier operation was a slow evolution that highlights landowners' competing motivations. The family relocated from eastern Pennsylvania to the Midwest almost 20 years ago. As its farms grew to 8,500 cows, the family began moving toward sustainability, but not for any single reason. New research confirms that cover crops soften soils and make them richer, increasing yields. That also fights wind erosion, and much of the McCartys' land abuts highways, where dust blowing from fields can cause accidents. Plus, cover crops had been standard in Pennsylvania, because they kept rains from washing nutrients from fertilized fields into Chesapeake Bay. "In western Kansas, cover crops are not common," McCarty says. "Water is scarce and a declining resource, and people historically viewed cover crops as a drain on water. Research shows it can help you capture more water, but it's hard to break old ideas." Then, about six years ago, the McCartys contracted to supply milk to Danone North America—makers of Dannon yogurt—which, as part of a broader sustainability effort, has pledged to become carbon-neutral by 2050. The McCartys also committed to produce non-genetically modified goods. That meant staying connected to their cows' food. They began planting cover crops in earnest. Danone didn't require the McCartys to adopt particular practices. "But they encourage, through a variety of means, the adoption, sharing and utilization of best practices in all aspects of our farm management," McCarty says. The arrangement gives the dairy price stability. When times are tough—especially on dairies, 90 percent of which are family-owned—that makes a world of difference. "The farm economy has been challenging for a number of years," McCarty says. "When you're fighting for sheer survival, it's difficult to think about 'value added' products." Most American farmers, he adds, are much older than he is. At 36, he’s the youngest of four McCarty boys. "The average age of the American farmer is up there, and often-times the belief in climate change and the willingness to try new practices is more common in younger generations," McCarty says. "All we have to do is start" Extending a carbon tax credit like the one Congress passed this year to farms and timber owners might make a difference "That would be incredibly helpful," McCarty says.

The value of incentives to drive innovation is no secret. That's how renewable power went from a **niche** product **to** an **energy staple in** little more than **eight years.**

"Why is wind and solar so cheap? Because **subsidies created a marketplace where capitalism could do its magic**," Pacala says. Creating a similar marketplace for negative emissions while decarbonizing the economy could **bring rapid change.**

#### Free market capitalism has drastically improved the world.

Empirical education in child mortality and increase in life expectancy, development of tech innovation in the private market k2 medical advances, food production increased with agriculture tech green revolution, also decreased armed conflicts

Feyman 14 Yevgeniy [adjunct fellow at the Manhattan Institute. He writes on health care policy, entitlement reform, and the Affordable Care Act. His research has focused on a variety of topics, including the physician shortage, the cost of health care reform, and consumer-directed health care. Feyman was previously the deputy director of health policy at the Manhattan Institute and is currently a research assistant in the department of health policy at the Harvard T.H. Chan School of Public Health] “The Golden Age Is Now” May 23, 2014. IB

In How Much Have Global Problems Cost the World? Lomborg and a group of economists conclude that, with a few exceptions, the world is richer, freer, healthier, and smarter than it’s ever been. These gains have coincided with the near-universal rejection of statism and the flourishing of capitalist principles. At a time when political figures such as New York City mayor Bill de Blasio and religious leaders such as Pope Francis frequently remind us about the evils of unfettered capitalism, this is a worthwhile message. The doubling of human life expectancy is one of the most remarkable achievements of the past century. Consider, Lomborg writes, that “the twentieth century saw life expectancy rise by about 3 months for every calendar year.” The average child in 1900 could expect to live to just 32 years old; now that same child should make it to 70

. This increase came during a century when worldwide economic output, driven by the spread of capitalism and freedom, grew by more than 4,000 percent. These gains occurred in developed and developing countries alike; among men and women; and even in a sense among children, as child mortality plummeted. Why are we living so much longer? Massive improvements in public health certainly played an important role. The World Health Organization’s global vaccination efforts essentially eradicated smallpox. But this would have been impossible without the innovative methods of vaccine preservation developed in the private sector by British scientist Leslie Collier. Oral rehydration therapies and antibiotics have also been instrumental in reducing child mortality. Simply put, technological progress is the key to these gains—and market economies have liberated, and rewarded, technological innovation. People are not just living longer, but better—sometimes with government’s help, and sometimes despite it. Even people in the developing countries of Africa and Latin America are better educated and better fed than ever before. Hundreds of thousands of children who would have died during previous eras due to malnutrition are alive today. Here, we can thank massive advancements in agricultural production unleashed by the free market. In the 1960s, privately funded agricultural researchers bred new, high-yield strains of corn, wheat, and various other crops thanks to advances in molecular genetics. Globalization helped spread these technologies to developing countries, which used them not only to feed their people, but also to become export powerhouses. This so-called “green revolution” reinforced both the educational progress (properly nourished children tend to learn more) and the life-expectancy gains (better nutrition leads to better health) of the twentieth century. These children live in a world with fewer armed conflicts, netting what the authors call a “peace dividend.” Globalization and trade liberalization have surely contributed to this more peaceful world (on aggregate). An interdependent global economy makes war costly. Of course, problems remain. As Lomborg points out, most foreign aid likely does little to boost economic welfare, yet hundreds of billions of dollars in “development assistance” continue to flow every year from developed countries to the developing world. Moreover, climate change is widely projected to intensify in the second half of the twenty-first century, and will carry with it a significant economic cost. But those familiar with the prior work of the “skeptical environmentalist” understand that ameliorating these effects over time could prove wasteful. Lomborg notes that the latest research on climate change estimates a net cost of 0.2 to 2 percent of GDP from 2055 to 2080. The same report points out that in 2030, mitigation costs may be as high as 4 percent of GDP. Perhaps directing mitigation funding to other priorities—curing AIDS for instance—would be a better use of the resources. Lomborg’s main message? Ignore those pining for the “good old days.” Thanks to the immense gains of the past century, there has never been a better time to be alive.

#### Economic decline causes nuclear war.

Tønnesson 15—Research Professor at the Peace Research Institute Oslo; Leader of East Asia Peace program, Uppsala University [Stein, “Deterrence, interdependence and Sino–US peace,” International Area Studies Review, 2015, Vol. 18, No. 3, p. 297-311]

Several recent works on China and Sino–US relations have made substantial contributions to the current understanding of how and under what circumstances a combination of nuclear deterrence and economic interdependence may reduce the risk of war between major powers. At least four conclusions can be drawn from the review above: first, those who say that interdependence may both inhibit and drive conflict are right. Interdependence raises the cost of conflict for all sides but asymmetrical or unbalanced dependencies and negative trade expectations may generate tensions leading to trade wars among interdependent states that in turn increase the risk of military conflict (Copeland, 2015: 1, 14, 437; Roach, 2014). The risk may increase if one of the interdependent countries is governed by an inward-looking socio-economic coalition (Solingen, 2015); second, the risk of war between China and the US should not just be analysed bilaterally but include their allies and partners. Third party countries could drag China or the US into confrontation; third, in this context it is of some comfort that the three main economic powers in Northeast Asia (China, Japan and South Korea) are all deeply integrated economically through production networks within a global system of trade and finance (Ravenhill, 2014; Yoshimatsu, 2014: 576); and fourth, decisions for war and peace are taken by very few people, who act on the basis of their future expectations. International relations theory must be supplemented by foreign policy analysis in order to assess the value attributed by national decision-makers to economic development and their assessments of risks and opportunities. If leaders on either side of the Atlantic begin to seriously fear or anticipate their own nation’s decline then they may blame this on external dependence, appeal to anti-foreign sentiments, contemplate the use of force to gain respect or credibility, adopt protectionist policies, and ultimately refuse to be deterred by either nuclear arms or prospects of socioeconomic calamities. Such a dangerous shift could happen abruptly, i.e. under the instigation of actions by a third party – or against a third party.

Yet as long as there is both nuclear deterrence and interdependence, the tensions in East Asia are unlikely to escalate to war. As Chan (2013) says, all states in the region are aware that they cannot count on support from either China or the US if they make provocative moves. The greatest risk is not that a territorial dispute leads to war under present circumstances but that changes in the world economy alter those circumstances in ways that render inter-state peace more precarious. If China and the US fail to rebalance their financial and trading relations (Roach, 2014) then a trade war could result, interrupting transnational production networks, provoking social distress, and exacerbating nationalist emotions. This could have unforeseen consequences in the field of security, with nuclear deterrence remaining the only factor to protect the world from Armageddon, and unreliably so. Deterrence could lose its credibility: one of the two great powers might gamble that the other yield in a cyber-war or conventional limited war, or third party countries might engage in conflict with each other, with a view to obliging Washington or Beijing to intervene.

**Undercommons/fugitive resistance peters out at best and gets coopted at worst—it trades off with our capacity to use debate to generate utopian imaginaries of concrete alternatives that mobilize systemic change outside the university**

Webb, 18—Senior Lecturer in Education at the University of Sheffield (Darren, “Bolt-holes and breathing spaces in the system: On forms of academic resistance (or, can the university be a site of utopian possibility?),” Review of Education, Pedagogy, and Cultural Studies, 40:2, 96-118, dml)

It is easy to be seduced by the language of the undercommons. Embodying and enacting it, however, is difficult indeed. Being within and against the university, refusing the call to order through insolent obstructive unprofessionalism, is almost impossible to sustain. Halberstam (2009, 45) describes the undercommons as “a marooned community of outcast thinkers who refuse, resist, and renege on the demands of rigor, excellence, and productivity.” A romantic and appealing notion for sure but refusing and reneging on “the university of excellence” will cost you your job. When Moten describes subversion as a “series of immanent upheavals” expressed through “vast repertoires of high-frequency complaints, imperceptible frowns, withering turns, silent sidesteps, and ever-vigilant attempts not to see and hear” (2008, 1743), one is reminded instantly of Thomas Docherty, disciplined and suspended for his negative vibes.7

Being with and for the maroon community is difficult too. First of all, “Where and how can we find/see the Undercommons at work?” (Ĉiĉigoj, Apostolou-Hölscher, and Rusham 2015, 265). Where and how can one find those liminal spaces of sabotage and subversion, and how does one occupy them in a spirit of hapticality, study, and militant arrhythmia that brings the utopic underground to the surface of the fierce and urgent now? Beautiful language, but how does one live it? Networks do, of course, exist—the Undercommoning Collective, the Edu-Factory Collective, the International Network for Alternative Academia, to name but a few. These are promising spaces for bringing together and harboring the maroons and the fugitives. But networks are typically short-lived, and—as Harney and Moten warned—there is a danger of institutionalization, of taking institutional practices with you into alternative spaces “because we’ve been inside so much” (Harney and Moten 2013, 148). And so, predictably, meetings of the fugitives come with structure, order, an official agenda, and circulated minutes. The outcasts convene in conventional academic conferences, with parallel sessions, panels of papers, lunch breaks, wine and nibbles (e.g., Edu-Factory 2012). These spaces offer time out, welcome respite, a breathing space, a trip abroad, and then one returns to work.

If hapticality, the touch of the undercommons, is “a visceral register of experience … the feel that what is to come is here” (Bradley 2014, 129–130), then this seems elusive. It is hard to detect a sense of the utopic undercommons rising to the surface of the corporate-imperial university. Moten describes the call to disorder and to study as a way to “excavate new aesthetic, political, and economic dispositions” (Moten 2008, 1745). But this notion of excavating is highly problematic. It is common within the discourse of “everyday utopianism”—finding utopia in the everyday, recovering lost or repressed transcendence in “everydayness” (Gardiner 2006)—to describe the process of utopian recovery in terms of excavating: excavating repressed desires, submerged longings, suppressed histories, untapped possibilities. But the fundamental questions of where to dig and how to identify a utopian “find” are never adequately addressed (see Webb 2017). Gardiner defines utopia as “a series of forces, tendencies and possibilities that are immanent in the here and now, in the pragmatic activities of everyday life” (2006, 2). But how are these forces, tendencies and possibilities to be identified and recovered? For Harney and Moten, it is through study, hapticality and militant arrhythmia. These are slippy concepts, however, evading concrete material referents.

What is it to inhabit the undercommons? Those who have written of their experiences refer to “small acts of marronage” such as poaching resources and redeploying them in ways at odds with the university’s designs and demands (Reddy 2016, 7), or exploiting funding streams “to form cracks in the institution that enable the Others to invade the university” (Smith, Dyke, and Hermes 2013, 150). For Adusei-Poku (2015), the undercommons is a space of refuge which is all about survival (2015, 4–5). We who feel homeless in the university are forced into refuge. We gather together to survive. We may gain satisfaction from small acts of marronage, but this is less about bringing the utopic common underground to the surface as it is a form of “radical escapism” (Adusei-Poku 2015, 4). Benveniste (2015, v) tells us that: “The undercommons has no set location and no return address. There is no map for entering and no guide for staying. The only condition is a living appetite. Listen to its hunger for difference.” We need more than poetry, however. And we need more than a series of minor acts of resistance. As Srnicek and Williams rightly emphasize, resistance is a defensive, reactive gesture, resisting against. Resistance is not a utopian endeavour: “We do not resist a new world into being” (Srnicek and Williams 2016, 47). The undercommons, when one can find it, is a bolt hole, a place of refuge, a breathing space in the system. We need something more.

The occupation Can the occupied building operate as a site of utopian possibility within the corporate-imperial university? Reflections on, and theorizations of, two recent waves of occupation—“Occupied California” 2009–2010 and the UK Occupations 2010–2011—have answered this question affirmatively. The “occupation” should not be understood here as solely or necessarily “student occupation.” It goes without saying—though sadly so often does need saying —that “faculty also have a responsibility to fight with and for students” (Smeltzer and Hearn 2015, 356). Though led by a new historical subject, “the graduate without a future” (Schwarz-WeinStein 2015, 11), the importance of faculty support for the occupations was emphasized on both sides of the Atlantic (Research and Destroy 2010, 11; Dawson 2011, 112; Holmes and R&D and Dead Labour 2011, 14; Ismail 2011, 128; Newfield and EduFactory 2011, 26). Long before Occupy took shape in Zuccotti Park, “occupation” was being heralded as the harbinger of a new society and a new way of being. If we return to the notion of creating utopian spaces, the key aim for some of the occupiers was to create communes within the university walls—to communize space (Inoperative Committee 2011, 6).8 Communization here is understood as a form of insurrectionary anarchism that refuses to talk of a transition to communism, insisting instead upon the immediate formation of zones of activity removed from exchange, money, compulsory labor, and the impersonal domination of the commodity form (Anon 2010a, 5). As one pamphlet declared: We will take whatever measures are necessary both to destroy this world as quickly as possible and to create, here and now, the world we want: a world without wages, without bosses, without borders, without states. (Anon 2010d, 34) This is a revolutionary anarchism that takes the university campus as the site for a practice—communization—that not only prefigures but also realizes the vision of a free society. Heavily influenced by The Coming Insurrection (Invisible Committee 2009), but tapping into a long tradition of anarchist theory and practice from Hakim Bey’s Temporary Autonomous Zones (Bey 1985) to David Graeber’s Direct Action (Graeber 2009), occupation becomes “the creation of a momentary opening in capitalist time and space, a rearrangement that sketches the contours of a new society” (Research and Destroy 2010, 11). It is “an attempt to imagine a new kind of everyday life” (Hatherley 2011, 123). Firth (2012) refers to these momentary openings as critical, experimental utopias: Such utopias are … simultaneously immanent and prefigurative. They are immanent insofar as they allow space for the immediate expression of desires, satisfaction of needs and also the articulation of difference or dissent. They are prefigurative to the extent that they allow one to practice and exemplify what one would like to see at a more proliferative range in the future (26) The ultimate aim is for the practice to spread beyond the campus through a dual process of provocative rupture—the idea that insurrectionary moments can unleash the collective imagination and stimulate an outpouring of creativity that blows apart common sense and offers glimpses of a future world (Gibson-Graham 2006, 51; Shukaitis and Graeber 2007, 37)—and “contaminationism,” that is, spreading by means of example (Graeber 2009, 211). It may well have been the case that communism was realized on the campuses of Berkeley and UCL, that a momentary opening in capitalist space/time appeared through which another world could be glimpsed. The occupation, however—whether California, London, or anywhere else—is likely always to remain a localized temporary disruptive practice. A practice with utopian potency, for sure, in terms of suspending normalized forms of discipline and opening new egalitarian discursive spaces (Rheingans and Hollands 2013; Nişancioğlu and Pal 2016). In terms of wider systemic change, however, “small interventions consisting of relatively non-scalable actions are highly unlikely to ever be able to reorganise our socioeconomic system” (Srnicek and Williams 2016, 29). What “the occupation” demonstrates more than anything is the reality of the corporate-imperial university, as the institutional hierarchy, backed by the carceral power of the police and criminal justice system, inevitably disperses the occupiers—often using militarized force—and repossesses the occupied space in a strong assertion of its ownership rights not only to university buildings but also to what constitutes legitimate thought and behavior within them (on this see Docherty 2015, 90). The significance, and utopian potential, one attaches to campus occupations depends in part upon the significance one attaches to the university as a site of struggle. For the Edu-Factory Collective: As was the factory, so now is the university. Where once the factory was a paradigmatic site of struggle between workers and capitalists, so now the university is a key space of conflict, where the ownership of knowledge, the reproduction of the labour force, and the creation of social and cultural stratifications are all at stake. This is to say the university is not just another institution subject to sovereign and governmental controls, but a crucial site in which wider social struggles are won and lost. (Caffentzis and Federici 2011, 26) Clearly, if this is true, then the form the struggle takes, and the example it sets, is of immense significance. Srnicek and Williams describe as “wishful thinking” the idea that the occupation might spread beyond the campus by means of rupture or contamination (2016, 35). However, if the university really is a key site of class struggle (Seybold 2008, 120; Haiven and Khasnabish 2014, 38), a site through which wider struggles are refracted and won or lost, then the transformative potential of the occupation needs to be attended to seriously. The analysis of the university offered by the Edu-Factory Collective is, however, outdated. Sounding like Daniel Bell writing in 1973 about how universities had become the “axial structures” of post-industrial society (Bell 1973, 12), the analysis does not hold water today. Moten overdoes it when he tells us that “the university is a kind of corpse. It is dead. It’s a dead institutional body” (Moten 2015, 78). What is clear, however, is that “focusing on the university as a site of radical transformation is a mistake” (Holmes and R&D and Dead Labour 2011, 13). As has been widely noted, there is very little distinguishing universities from other for-profit corporations (Readings 1996; Lustig 2005; Washburn 2005; Shear 2008, Tuchman 2009). What does separate them is their inefficiency, due in large part to the fact that universities operate also as medieval guilds, with faculties “ruled by masters who lord over journeymen and apprentices in an artisanal system of production” (Jemielniak and Greenwood 2015, 77). If the university is a sinister hybrid monstrosity—part medieval guild, part criminal corporation—which has no role other than reproducing its own privilege, then no special status can be attributed to campus protests. In this case, “A free university in the midst of a capitalist society is like a reading room in a prison” (Research and Destroy 2010, 10). A reading room in a prison. Another apposite metaphor. The occupation is a safe space, offering temporary respite, a place to hide, a refuge, a bolt-hole, a breathing space. As with the utopian classroom and the undercommons, what the occupation suggests is that “defending small bunkers of autonomy against the onslaught of capitalism is the best that can be hoped for” (Srnicek and Williams 2016, 48). Conclusion Zaslove was right to characterize utopian pedagogy within the corporateimperial university as the search for bolt-holes and breathing spaces in the system. He himself suggests that, “All university classes should become dialogic-experiential models that educate by expanding the zones of contact with wider communities” (2007, 102). Like so many others, Zaslove sees dialogic-experiential models of education beginning in the classroom then expanding outward. The literature is full of references to “exceeding the limits of the university classroom” (Coté, Day, and de Peuter 2007a, 325), “extend [ing] beyond the boundaries of the campus” (Ruben 2000, 211), and “breeching the walls of the university compounds and spilling into the streets” (Research and Destroy 2010, 10). This all brings to mind Giroux’s notion of academics as border crossers (Giroux 1992), but it also paints a picture of academics taking as their starting point the university and from there crossing the border into the community and the street.

The University can be the site for fleeting, transitory, small-scale experiences of utopian possibility—in the classroom, the undercommons, the occupation. It cannot be the site for transformative utopian politics. It cannot even be the starting point for this. Given the corporatization and militarization of the university, academics are increasingly becoming “functionaries of elite interests” inhabiting a culture which serves to reproduce these interests (Shear 2008, 56). Within the university, “radical” initiatives or movements will soon be co-opted, recuperated, commodified, and neutralized (Gibson-Graham 2006, xxvi; Seybold 2008, 123; Neary 2012b, 249; Rolfe 2013, 21). Institutional habitus weights so heavily that projects born in the university will be scarred from the outset by a certain colonizing “imaginary of education” (Burdick and Sandlin 2010, 117). And we have long known that the university is but one space of learning, and perhaps not a very important one at that. Identifying the academy as the starting point for a utopian pedagogy privileges this arcane space over sites of public pedagogy such as film, television, literature, sport, advertising, architecture, media in its various forms, political organizations, religious institutions, and the workplace (Todd 1997).

Perhaps the emphasis on creating radical experimental spaces within the academy needs to shift toward operating in existing spaces of resistance outside it. Haiven and Khasnabish argue that many social movements function already as “social laboratories for the generation of alternative relationships, subjectivities, institutions and practices” (2014, 62), providing “a space for experiments in knowledge production, radical imagination, subjectification, and concrete alternative-building” (Khasnabish 2012, 237). Why locate utopian pedagogy in the university when “critical utopian politics” can take place in “infrastructures of resistance” such as intentional communities, housing collectives, squats, art centers, community theatres, bars, book shops, health collectives, social centers, independent media and, increasingly of course, the digital sphere (Firth 2012; Shantz 2012; Amsler 2015; Dallyn, Marinetto, and Cederstrom 2015)? Moving beyond short-term, localized, temporary modes of resistance, utopian pedagogy would work across these sites to develop a long-term strategy and vision.

There is a role for the academic in utopian politics, but not in the university-as-such. The utopian pedagogue has a responsibility to exploit their own privilege and to work with students, communities and movements outside and divorced from the university. As Shear rightly notes, academics (and especially those working in the humanities and social sciences) “inhabit a privileged space in which critical inquiry concerning social hegemony and political-economic domination” is possible (Shear 2008, 56). Within the university, however, spaces for embodying and enacting this kind of inquiry have become constrained, compromised, monitored, surveilled, co-opted, and recuperated. As I have argued throughout this article, utopian pedagogy has become a search for bolt-holes and breathing spaces in the system. Beyond the academy, however, there is a role to play. As Chomsky (2010) tells us, with privilege comes responsibility. And as Giroux frames it, this is an ethical and political responsibility to provide “theoretical resources and modes of analysis” to help forge “a utopian imaginary” (Giroux 2014a; 153; 2014b, 200). This means putting one’s knowledge and resources to use in the service of a collaborative process of memory- and story-making, pulling together disparate inchoate dreams and yearnings in order to generate a utopian vision that can help inform, guide, and mobilize long-term collective action for systemic change.

**Reform/Revolution is a false dichotomy- reforms open up space for more radical demands**

**Taylor, PhD, 16**

(Keenga-Yamahtta, AAS@Princeton, http://bostonreview.net/forum/black-study-black-struggle/keeanga-yamahtta-taylor-keeanga-yamahtta-taylor-response-robin)

This is the context within which Robin Kelley intervenes. He critiques what he sees as the student movement’s desire to make the campus more “hospitable” to black students. **Kelley** is not advocating that students of color simply leave the university, but he **argues for a need to be in the university rather than of it**. Here, **he is challenging** the list of **demands of** many **campus protests** intending to make the campus more inclusive to the needs of black and oppressed students—demands for greater faculty diversity, renaming campus buildings and monuments, and curriculum changes, among others. **I don’t disagree with Kelley’s basic claims** that **the university reflects** all of the **institutional racism** and biases that we see throughout American society. **The issue is whether the student protests should be dismissed as** only **putting lipstick on a pig**. **True, their demands will certainly not transform the fundamental character of American universities, but that does not mean these limited reforms are not worthwhile.** In fact, **there is a relationship between more modest demands on the university and the more insurgent posture** that Kelley advocates (and that I agree with). The **demands** made by black students across the country **have been derived in the heat of struggle and represent the politics, collaboration, and aspirations of the existing movement.** **They represent the efforts to transform the conditions of the campuses** they often live within **to reflect their principles of respect and dignity**. No black student should ever have to live in a residential space named after an avowed racist such as John C. Calhoun—which is currently the case at Yale University. Why should black students at Princeton University have to honor the legacy of President Woodrow Wilson, who fought hard to prevent black students from having a presence on the campus? **The demand for more black and women faculty is not an exercise in futility; neither is the desire for curricula that more accurately reflect the world we live in as opposed to the “great white men” narratives of so much coursework and history. These demands may not radically transform the university’**s “commitment to war and security,” **but they have the potential to crack open debates** about racial inequality on campus, thereby **creating a larger platform to address the history and contemporary practices of racism in these institutions. Small victories can empower one to fight larger battles.** Some **protesters** will be satisfied with improving life on campus, but others **will be inspired to struggle for demands of greater consequence**. **Campus radicals who have already come to these conclusions risk cutting themselves off from the newly initiated by dismissing out of hand what appear to be reforms rather than the revolution. But rarely has there been revolution without reform.**

**The University can and must be reformed – even critics agree.**

**Kelly, PhD, 16**

(Robin DG., PoliSci@UCLA, <http://bostonreview.net/forum/black-study-black-struggle/robin-d-g-kelley-robin-d-g-kelleys-final-response> 3-7)

Finally, **I take to heart** Keeanga-Yamahtta **Taylor’s and** Barbara **Ransby’s caution against dismissing student demands as reformist and leaping over reality to revolutionary utopia.** **Taylor is absolutely right to point out the immense value of symbolic changes** like killing monuments to slaveholders and racists (though no respondent was willing to defend cultural-competency training and highly paid administrators to oversee diversity). I think all of us would agree with **Ransby’s prescient call for “non-reformist” reforms, for sustaining the fight to transform universities, not as refuges but as social institutions embedded in the broad public life. She correctly cautions against romanticizing the search for radical alternatives in disengagement.**

I could not agree more with her call for “a radical recalibration of what universities owe” to society as a whole, and that requires rejecting the myth of meritocracy, the false division between the university and the world, and the idea that intellectuals only reside in the university. Her response should stand as a manifesto for the undercommons rather than an alternative. Indeed, **Ransby—**along with Purnell, Taylor, Lebron, Redmond, and Carruthers—**offers a corrective to my own nagging pessimism that the university can’t be transformed, reminding me that it must be transformed since it comprises a critical part of the world we are trying to change. On this point, I fully concede.**

**debate is the opposite of a settler rhythm – its a unique site of argument testing that challenges different ideas through iterative testing.**

**Fugitivity is a flawed method of political engagement that makes neoliberal violence inevitable.**

**Love 15**—Associate Professor at the University of Pennsylvania [Heather, ““Doing Being Deviant: Deviance Studies, Description, and the Queer Ordinary,” *differences* Vol. 26, No. 1, p. 89-91]

Today, queer studies—prestigious but unevenly institutionalized—still signals absolute refusal or criticality—all anti- and no normativity. In their influential 2004 essay, “The University and the Undercommons” (and in the 2013 book that followed from it), Fred **Moten and** Stefano **Harney** rely on such an understanding of queer (as well as concepts borrowed from black studies, feminism, ethnic studies, and anticolonial thought). They **call for betrayal, refusal**, theft, **and marronage** as modes of resisting the iron grip of the academy, pointing to an uncharted, underground, and collective space they call the undercommons. “To enter this space,” they write, “is to inhabit the ruptural and enraptured disclosure of the commons that fugitive enlightenment enacts, the criminal, matricidal, queer, in the cistern, on the stroll of the stolen life, the life stolen by enlightenment and stolen back, where the commons give refuge, where the refuge gives commons” (103). Moten and Harney speculate whether the “thought of the outside” (105) is possible inside the university and suggest that if there is an outside, it is along the margins and at the bottom. **Yet their imagination of that outside is indebted to the inside**, in particular to the conception of deviance produced within sociology. **Their account of the undercommons reads like a rap sheet, a list of the traditional topics of deviance studies: theft, homosexuality, prostitution, incarceration.**

**Moten and Harney do not describe the undercommons, but rather ask their readers to join it**, to participate in active revolt against profes- sional and disciplinary protocols. To o er an objective account of the social position of radical academics would be to further business as usual in the academy; dwelling in the undercommons requires giving up on the usual protocols of description. Moten and Harney argue against the traditional role of the “critical academic” (105), which they see as just another turn of the professional screw, since work that opposes the academy does not challenge its basic structure or everyday operations. They argue that “to be a critical academic in the university is to be against the university, and to be against the university is always to recognize it and to be recognized by it, and to institute the negligence of the internal outside, that unassimilated underground, a negligence of it that is precisely, we must insist, the basis of the professions” (105). In contrast to the figure of the critical academic, they forward the image of the “subversive intellectual” who is “in but not of” the academy (101). Without dismissing the galvanizing effect of such a call to the undercommons, **it is important to consider the limits of the refusal of objectification as a strategy**. To be unlocatable, to be nowhere, to be in permanent revolt: Moten and Harney describe the path that queer inquiry laid out for itself. **Objectification**—**recognition, description, critique**—**can be a way to reinforce the status quo, but it is also a way of acknowledging one’s institutional position and the real differences between inside and outside**. Even the most subversive intellectuals in the academy are “on the stroll” in a metaphorical but not a material sense. The fate of those who came “under false pretenses, with bad documents, out of love” (101), if they survive, is to become “superordinates” in Becker’s sense.

Whose side are we on? Can we hold onto the critical and polemical energy of queer studies as well as its radical experiments in style and thought while acknowledging our implication in systems of power, management, and control? Will a more explicit avowal of disciplinary affiliations and methods snuff out the utopian energies of a field that sees itself as a radical outsider in the university? To date, **both the political and the methodological antinormativity** of queer studies **have made it difficult to address our implication in the violence of knowledge production, pedagogy, and social inequality.** **Such violence is inevitable, and critical histories of the disciplines**—and the production of knowledge about social deviance—**are essential.** **Undertaking such work**, **however**, **will not allow escape into a radically different relation to our objects because we are** (as Moten and Harney also argue) part of that history—we are **its contemporary instantiation**. To imagine a social world in which those relations are transformed—in what Moten and Harney refer to as the “**prophetic organization**” (102)—**may be crucial for** the achievement of **social justice, but to deny our own implication in existing structures is also a form of violence**.