## OFF

### 1NC---Econ DA

#### Long term econ collapse is coming.

Conerly 11-2 (, B., 2021. No Recession In 2022—But Watch Out In 2023. [online] Forbes. Available at: <https://www.forbes.com/sites/billconerly/2021/11/02/no-recession-in-2022-but-watch-out-in-2023/?sh=5e3b27d33555> [Accessed 24 December 2021] Dr. Bill Conerly connects the dots between the economy and business decisions. He has the unique combination of a Ph.D. in economics from Duke University and over 30 years’ experience helping companies adapt to changing economic conditions. He was formerly Senior Vice President at a major bank and held positions in economics and corporate planning at two Fortune 500 corporations. Dr. Conerly has earned the Chartered Financial Analyst designation.)-rahulpenu

No Recession In 2022—But Watch Out In 2023

A **recession** **will** **come** to the United States economy, but not in 2022. Federal Reserve policy will lead to more business cycles, which many businesses are not well prepared for. The downturn won’t come in 2022, but could arrive as early as 2023. If the Fed avoids recession in 2023, then look for a more severe slump in 2024 or 2025.

Recessions usually come from demand weakness, but **supply** **problems** can also trigger a downturn. In 2022 demand for goods and services will be strong. Consumers have plenty of money, thanks to past earnings, stimulus payments and extra unemployment insurance. They have paid down their credit card balances. Even though they also increased their car loans outstanding as they upgraded their rides, their general condition is good. Employment will increase thanks to the spending, reinforcing the income gains that enable expenditures.

Businesses, too, have plenty of cash on hand. Not only have profits been good, but the Paycheck Protection Program gave nearly $800 billion to businesses. Companies want to buy computers, equipment and machinery to substitute for the workers they cannot find, and this spending will help manufacturers of the equipment.

Homebuilders will construct as many homes as they can, though that will be limited by buildable lots, skilled labor and building materials. Non-residential construction will slowly gain ground, especially in warehouse space and suburban offices.

The government will spend, not only at the federal level but also among state and local entities. The federal government has no worries about deficits, while state and local governments are flush with federal money.

Exports should grow slowly, thanks to improving world economies.

The **spending** side of the economy has **little** **risk** of recession in 2022, but could supply problems trigger a recession?

Supply chain problems can have negative impacts when factories have to shut down for lack of parts, as happened in the **automobile** industry. Recently Ford Europe’s Gunnar Herrmann told CNBC, “It’s not only semiconductors. You find shortages or constraints all over the place,” mentioning **lithium**, **plastics** and **steel** in particular. The automobile industry has laid off workers at multiple plants, mostly for a few weeks, but some long term. When workers are laid off for lack of materials to assemble, then the economy suffers. Most of the shortages under discussion, however, are **limiting** **growth** rather than cutting back on current production.

So the supply challenge we have is not an actual reduction in materials available, just **insufficient** **materials** to meet the stronger demand. Despite the snarls at the ports of Long Beach and Los Angeles, more inbound containers are hitting the docks than in 2019. Mostly we are seeing supply as a limit on growth rather than a cause of recession.

Much of the supply limitation prevents growth, but does not push spending downward. Businesses are cutting back on variety. A shirt in a particular size may only be available in a few colors, not 16. That is unfortunate, and may discourage a few shoppers, but for the most part we’ll still be buying goods.

**Job** **losses** from vaccine mandate layoffs could push the economy toward recession, given that 31% of people over age 18 are not fully vaccinated. The various mandates cover about 100 million workers. Some of those 31 million unvaccinated workers subject to mandates will get their shots, but others certainly won’t. In the worst of the pandemic recession, the country lost 22 million jobs. Losing 31 million jobs because of vaccine mandates—or even half that number—would be disastrous. And because it would be disastrous, it will not happen. The Biden administration almost certainly will pull back the mandate before accepting such a harsh result rise in unemployment.

Though 2022 is unlikely to host a recession, 2023 and 2024 are extremely risky. The Federal Reserve will start tapering its quantitative stimulus soon, and sometime in mid-2022 it will begin raising short-term interest rates. The economy reacts with a **time** **lag** of about one year, plus or minus. The **greatest** **risk** in the near term is that the Fed realizes that much of the recent inflation is long-lasting rather than transitory. They will then hit the brakes. Because of the time lag, the Fed may decide to stomp down harder on the brakes, triggering a recession.

If the Fed avoids an over-reaction recession, it risks not bringing inflation down at all. The longer the Fed waits, the more work they will need to do later. We’ll still have massive fiscal stimulus plus the lagged effects of past monetary stimulus. Public anger over inflation will provoke a stronger Fed response by 2025 at the latest, but probably earlier.

Can a recession be completely avoided in the next few years? Theoretically it’s possible. The Fed would have to tighten at just the right time, in just the right magnitude, then return to neutral at just the right time. It could happen, but the odds are very, very slim. The people at the Fed are smart and knowledgeable, but the task is too difficult for mere mortals. So businesses should enjoy their gains in 2022 while developing contingency plans to be ready for the nearly-inevitable recession.

#### Private appropriation saves econ growth and innovation in the long run---the plan flips it and saps resources that spills over.

Clark 20 (, S., 2020. Opinion: Space is our new economic frontier. The US can't afford to lose out. [online] CNN. Available at: <https://www.cnn.com/2020/03/02/perspectives/space-economic-frontier/index.html> [Accessed 24 December 2021] Suzanne Clark is president and chief executive officer of the U.S. Chamber of Commerce, a director on two corporate boards, a former business owner, and an entrepreneur at heart. With a global perspective and a fierce commitment to free enterprise, Clark’s experience in the private sector deeply informs her leadership of the U.S. Chamber—the world’s largest business organization representing employers of every size and sector in Washington, D.C., across the country, and around the globe. Clark has led a multiyear effort to strengthen the Chamber’s well-known influence, advocacy, and impact, while modernizing its work and attracting new members from the fastest-growing and most innovative sectors of the U.S. economy. These efforts to invest in the Chamber’s future proved prescient when the COVID-19 pandemic hit in 2020, enabling the organization to quickly pivot to new ways of working and successfully advocate for businesses in the midst of the worst economic downturn since the Great Depression. Clark has also helped drive the national conversation on issues central to managing and recovering from the pandemic through the U.S. Chamber Foundation’s Path Forward program. In interviews with dozens of thought leaders and experts such as Dr. Anthony Fauci, former CDC Director Dr. Robert Redfield, Bill and Melinda Gates, Carlyle Group Founder David Rubenstein, and former U.S. Surgeon General Jerome Adams, Path Forward has reached an audience of millions of viewers with practical information, insightful guidance, and forward-looking strategies.)-rahulpenu

**Space** is our **new** economic **frontier**. The US can't afford to lose out

President Trump's budget, which was released last month, outlines several moonshots that are unlikely to pass a divided Congress. But there's one in particular that both Republicans and Democrats should support wholeheartedly: the $25.2 billion request to fund NASA, a 12% boost over the prior year.

The **future** **of** our **economy** **depends** **on** the **vigorous** **pursuit** **of** **space** exploration. And with NASA leading the way, the potential for **growth** — like space itself — **has** **no** **limits**.

Since NASA's launch, American space exploration has always been a bipartisan venture. It was President Kennedy who announced our goal of going to the moon, but it was President Nixon who brought that goal to fruition. Reaching the next milestone in interplanetary travel requires a commitment from our leaders that spans political parties and administrations. And with a new space race getting underway — one that could prove even more consequential than the last — NASA needs bipartisan support from Congress today more than ever.

**Space** is the **most** **promising** **industry** to arise since the birth of the tech sector, with **growth** projected to **skyrocket** in the coming years **led** **by** companies such as **Boeing** and **Northrop** **Grumman**, and new entrants, such as Virgin **Galactic**, **SpaceX** and **Blue** **Origin**. According to US Chamber of Commerce economists, the industry will be worth at least $1.5 trillion by 2040. While no one can fully grasp what our economy will look like 20 years from now, one thing is certain: the **private** **sector** space **industry** will **transform** how societies across the **globe** **live**, **communicate** and do **business**. In fact, it already has.

Nearly **every** **company** **depends** **on** **space**-enabled **tech**nologies **for** **day**-**to**-**day** **op**eration**s** — whether they use satellite **communications**, **remote** **sensing** or **location**-based **services**. **Businesses** across multiple sectors are **leveraging** these and other **tech**nologies to **stake** their **claim** **in** this new economic **frontier**.

Pharmaceutical companies such as Merck and Sanofi, for example, are conducting experiments in low-Earth orbit aboard the International Space Station to evaluate the potential advantages of microgravity in developing new drug treatments that will help people live longer, healthier lives. Companies, such as Bigelow, are committed to making off-Earth habitation a reality. Even retailers are getting in on the action, with companies like Target funding research on the International Space Station to produce more sustainable forms of cotton.

Lunar colonies, asteroid mining and interplanetary travel — once the stuff of science fiction — could become a reality. But for any of that to happen, we need sustained and meaningful action from members of Congress.

They can start by meeting the president's request for NASA funding. Included in the White House budget is $12.4 billion specifically for lunar exploration that would include landing systems, continued development of the Space Launch System (SLS) and the Orion crew module. These spacecraft will allow us to shuttle people and equipment to the moon and back. They will take us not only beyond Earth's orbit but also into the **next** **phase** **of** **commercial** **space** **development**. Most importantly, they will **ensure** that the **U**nited **S**tates continues to **outpace** **competitors** like China and Russia in the space race. Our country must be the vanguard in exploring these new economic frontiers. **Planting** the **American** **flag** **in** the **private** **sector** space **industry** will help **create** the **jobs** of the future and **allow** the **U**nited **S**tates **to** **lead** the **formation** of best practices **that** **will** **govern** the **industry** for decades to come.

Some might ask if returning to the moon is worth the expense. The answer is undeniably yes. Providing NASA with the resources it needs to succeed is a small investment that will yield tremendous dividends over time.

To start, it would help **secure** American **commercial** **dominance** in a fast-growing industry. It also would be a **catalyst** **for** **innovation** and scientific discovery, with **salutary** **effects** that would **benefit** the **entire** **economy**.

#### Decline causes nuclear war via hotspot escalation---accelerates tech shift and warming.

Oppenheimer 21 (, M., 2021. 2. The Turbulent Future of International Relations. The Future of Global Affairs - Springer International Publishing, 1(1), p.Chapter 2. Michael Oppenheimer leads the IR Futures concentration at CGA, teaching courses on International Relations (core course), The Future of International Relations, and U.S. Foreign Policy. He also oversees an ongoing research and consulting project for the UN Security Council’s Counter Terrorism Executive Directorate, which involves students directly in advising the UN system on counter terrorism policies and practices. He writes and speaks publicly on U.S foreign policy and on the future of international relations. He has had a varied career, beginning with several years with the U.S. government, then in strategic consulting for government policy makers and private firms, and-since 2005-teaching and research at CGA. His particular specialty is the cognition and methods of thinking about the future, and how perceptions of future change can be incorporated into the foreign policy process, in order to improve foresight and agility. He has applied his skills in research and consulting for the US intelligence community, the Department of State, the Joint Chiefs of Staff, the UN, and many others. He is a life member of the Council on Foreign Relations, and is actively involved (and involves his students) in the foreign policy/IR community.)-re-cut rahulpenu

Some of these structural forces could be managed to promote prosperity and avoid war. Multipolarity (inherently more prone to conflict than other configurations of power, given coordination problems)5 plus globalization can work in a world of prosperity, convergent values, and effective conflict management. The Congress of Vienna system achieved relative peace in Europe over a hundred-year period through informal cooperation among multiple states sharing a fear of populist revolution. It ended decisively in 1914. Contemporary neoliberal institutionalists, such as John Ikenberry, accept multipolarity as our likely future, but are confident that globalization with liberal characteristics can be sustained without American hegemony, arguing that liberal values and practices have been fully accepted by states, global institutions, and private actors as imperative for growth and political legitimacy.6 Divergent values plus multipolarity can work, though at significantly lower levels of economic growth-in an autarchic world of isolated units, a world envisioned by the advocates of decoupling, including the current American president. 7 Divergent values plus globalization can be managed by hegemonic power, exemplified by the decade of the 1990s, when the Washington Consensus, imposed by American leverage exerted through the IMF and other U.S. dominated institutions, overrode national differences, but with real costs to those states undergoing “structural adjustment programs,”8 and ultimately at the cost of global growth, as states—especially in Asia—increased their savings to self insure against future financial crises.9

But all four forces operating simultaneously will produce a future of increasing internal polarization and cross border conflict, diminished economic growth and poverty alleviation, weakened global institutions and norms of behavior, and reduced collective capacity to confront emerging challenges of global warming, accelerating technology change, nuclear weapons innovation and proliferation. As in any effective scenario, this future is clearly visible to any keen observer. We have only to abolish wishful thinking and believe our own eyes.10

Secular Stagnation

This unbrave new world has been emerging for some time, as US power has declined relative to other states, especially China, global liberalism has failed to deliver on its promises, and totalitarian capitalism has proven effective in leveraging globalization for economic growth and political legitimacy while exploiting technology and the state’s coercive powers to maintain internal political control. But this new era was jumpstarted by the world financial crisis of 2007, which revealed the bankruptcy of unregulated market capitalism, weakened faith in US leadership, exacerbated economic deprivation and inequality around the world, ignited growing populism, and undermined international liberal institutions. The skewed distribution of wealth experienced in most developed countries, politically tolerated in periods of growth, became intolerable as growth rates declined. A combination of aging populations, accelerating technology, and global populism/nationalism promises to make this growth decline very difficult to reverse. What Larry Summers and other international political economists have come to call “secular stagnation” increases the likelihood that illiberal globalization, multipolarity, and rising nationalism will define our future. Summers11 has argued that the world is entering a long period of diminishing economic growth. He suggests that secular stagnation “may be the defining macroeconomic challenge of our times.” Julius Probst, in his recent assessment of Summers’ ideas, explains:

…rich countries are ageing as birth rates decline and people live longer. This has pushed down real interest rates because investors think these trends will mean they will make lower returns from investing in future, making them more willing to accept a lower return on government debt as a result.

Other factors that make investors similarly pessimistic include rising global inequality and the slowdown in productivity growth…

This decline in real interest rates matters because economists believe that to overcome an economic downturn, a central bank must drive down the real interest rate to a certain level to encourage more spending and investment… Because real interest rates are so low, Summers and his supporters believe that the rate required to reach full employment is so far into negative territory that it is effectively impossible.

…in the long run, more immigration might be a vital part of curing secular stagnation. Summers also heavily prescribes increased government spending, arguing that it might actually be more prudent than cutting back – especially if the money is spent on infrastructure, education and research and development.

Of course, governments in Europe and the US are instead trying to shut their doors to migrants. And austerity policies have taken their toll on infrastructure and public research. This looks set to ensure that the next recession will be particularly nasty when it comes… Unless governments change course radically, we could be in for a sobering period ahead.12

The rise of nationalism/populism is both cause and effect of this economic outlook. Lower growth will make every aspect of the liberal order more difficult to resuscitate post-Trump. Domestic politics will become more polarized and dysfunctional, as competition for diminishing resources intensifies. International collaboration, ad hoc or through institutions, will become politically toxic. Protectionism, in its multiple forms, will make economic recovery from “secular stagnation” a heavy lift, and the liberal hegemonic leadership and strong institutions that limited the damage of previous downturns, will be unavailable. A clear demonstration of this negative feedback loop is the economic damage being inflicted on the world by Trump’s trade war with China, which— despite the so-called phase one agreement—has predictably escalated from negotiating tactic to imbedded reality, with no end in sight. In a world already suffering from inadequate investment, the uncertainties generated by this confrontation will further curb the investments essential for future growth. Another demonstration of the intersection of structural forces is how populist-motivated controls on immigration (always a weakness in the hyper-globalization narrative) deprives developed countries of Summers’ recommended policy response to secular stagnation, which in a more open world would be a win-win for rich and poor countries alike, increasing wage rates and remittance revenues for the developing countries, replenishing the labor supply for rich countries experiencing low birth rates.

Illiberal Globalization

Economic weakness and rising nationalism (along with multipolarity) will not end globalization, but will profoundly alter its character and greatly reduce its economic and political benefits. Liberal global institutions, under American hegemony, have served multiple purposes, enabling states to improve the quality of international relations and more fully satisfy the needs of their citizens, and provide companies with the legal and institutional stability necessary to manage the inherent risks of global investment. But under present and future conditions these institutions will become the battlegrounds—and the victims—of geopolitical competition. The Trump Administration’s frontal attack on multilateralism is but the final nail in the coffin of the Bretton Woods system in trade and finance, which has been in slow but accelerating decline since the end of the Cold War. Future American leadership may embrace renewed collaboration in global trade and finance, macroeconomic management, environmental sustainability and the like, but repairing the damage requires the heroic assumption that America’s own identity has not been fundamentally altered by the Trump era (four years or eight matters here), and by the internal and global forces that enabled his rise. The fact will remain that a sizeable portion of the American electorate, and a monolithically pro- Trump Republican Party, is committed to an illiberal future. And even if the effects are transitory, the causes of weakening global collaboration are structural, not subject to the efforts of some hypothetical future US liberal leadership. It is clear that the US has lost respect among its rivals, and trust among its allies. While its economic and military capacity is still greatly superior to all others, its political dysfunction has diminished its ability to convert this wealth into effective power.13 It will furthermore operate in a future system of diffusing material power, diverging economic and political governance approaches, and rising nationalism. Trump has promoted these forces, but did not invent them, and future US Administrations will struggle to cope with them.

What will illiberal globalization look like? Consider recent events. The instruments of globalization have been weaponized by strong states in pursuit of their geopolitical objectives. This has turned the liberal argument on behalf of globalization on its head. Instead of interdependence as an unstoppable force pushing states toward collaboration and convergence around market-friendly domestic policies, states are exploiting interdependence to inflict harm on their adversaries, and even on their allies. The increasing interaction across national boundaries that globalization entails, now produces not harmonization and cooperation, but friction and escalating trade and investment disputes.14 The Trump Administration is in the lead here, but it is not alone. Trade and investment friction with China is the most obvious and damaging example, precipitated by China’s long failure to conform to the World Trade Organization (WTO) principles, now escalated by President Trump into a trade and currency war disturbingly reminiscent of the 1930s that Bretton Woods was designed to prevent. Financial sanctions against Iran, in violation of US obligations in the Joint Comprehensive Plan Of Action (JCPOA), is another example of the rule of law succumbing to geopolitical competition. Though more mercantilist in intent than geopolitical, US tariffs on steel and aluminum, and their threatened use in automotives, aimed at the EU, Canada, and Japan,15 are equally destructive of the liberal system and of future economic growth, imposed as they are by the author of that system, and will spread to others. And indeed, Japan has used export controls in its escalating conflict with South Korea16 (as did China in imposing controls on rare earth,17 and as the US has done as part of its trade war with China). Inward foreign direct investment restrictions are spreading. The vitality of the WTO is being sapped by its inability to complete the Doha Round, by the proliferation of bilateral and regional agreements, and now by the Trump Administration’s hold on appointments to WTO judicial panels. It should not surprise anyone if, during a second term, Trump formally withdrew the US from the WTO. At a minimum it will become a “dead letter regime.”18

As such measures gain traction, it will become clear to states—and to companies—that a global trading system more responsive to raw power than to law entails escalating risk and diminishing benefits. This will be the end of economic globalization, and its many benefits, as we know it. It represents nothing less than the subordination of economic globalization, a system which many thought obeyed its own logic, to an international politics of zero-sum power competition among multiple actors with divergent interests and values. The costs will be significant: Bloomberg Economics estimates that the cost in lost US GDP in 2019- dollar terms from the trade war with China has reached $134 billion to date and will rise to a total of $316 billion by the end of 2020.19 Economically, the just-in-time, maximally efficient world of global supply chains, driving down costs, incentivizing innovation, spreading investment, integrating new countries and populations into the global system, is being Balkanized. Bilateral and regional deals are proliferating, while global, nondiscriminatory trade agreements are at an end.

Economies of scale will shrink, incentivizing less investment, increasing costs and prices, compromising growth, marginalizing countries whose growth and poverty reduction depended on participation in global supply chains. A world already suffering from excess savings (in the corporate sector, among mostly Asian countries) will respond to heightened risk and uncertainty with further retrenchment. The problem is perfectly captured by Tim Boyle, CEO of Columbia Sportswear, whose supply chain runs through China, reacting to yet another ratcheting up of US tariffs on Chinese imports, most recently on consumer goods:

We move stuff around to take advantage of inexpensive labor. That’s why we’re in Bangladesh. That’s why we’re looking at Africa. We’re putting investment capital to work, to get a return for our shareholders. So, when we make a wager on investment, this is not Vegas. We have to have a reasonable expectation we can get a return. That’s predicated on the rule of law: where can we expect the laws to be enforced, and for the foreseeable future, the rules will be in place? That’s what America used to be.20

The international political effects will be equally damaging. The four structural forces act on each other to produce the more dangerous, less prosperous world projected here. Illiberal globalization represents geopolitical conflict by (at first) physically non-kinetic means. It arises from intensifying competition among powerful states with divergent interests and identities, but in its effects drives down growth and fuels increased nationalism/populism, which further contributes to conflict. Twenty-first-century protectionism represents bottom-up forces arising from economic disruption. But it is also a top-down phenomenon, representing a strategic effort by political leadership to reduce the constraints of interdependence on freedom of geopolitical action, in effect a precursor and enabler of war. This is the disturbing hypothesis of Daniel Drezner, argued in an important May 2019 piece in Reason, titled “Will Today’s Global Trade Wars Lead to World War Three,”21 which examines the pre- World War I period of heightened trade conflict, its contribution to the disaster that followed, and its parallels to the present:

Before the First World War started, powers great and small took a variety of steps to thwart the globalization of the 19th century. Each of these steps made it easier for the key combatants to conceive of a general war. We are beginning to see a similar approach to the globalization of the 21st century. One by one, the economic constraints on military aggression are eroding. And too many have forgotten—or never knew—how this played out a century ago.

…In many ways, 19th century globalization was a victim of its own success. Reduced tariffs and transport costs flooded Europe with inexpensive grains from Russia and the United States. The incomes of landowners in these countries suffered a serious hit, and the Long Depression that ran from 1873 until 1896 generated pressure on European governments to protect against cheap imports.

…The primary lesson to draw from the years before 1914 is not that economic interdependence was a weak constraint on military conflict. It is that, even in a globalized economy, governments can take protectionist actions to reduce their interdependence in anticipation of future wars. In retrospect, the 30 years of tariff hikes, trade wars, and currency conflicts that preceded 1914 were harbingers of the devastation to come. European governments did not necessarily want to ignite a war among the great powers. By reducing their interdependence, however, they made that option conceivable.

…the backlash to globalization that preceded the Great War seems to be reprised in the current moment. Indeed, there are ways in which the current moment is scarier than the pre-1914 era. Back then, the world’s hegemon, the United Kingdom, acted as a brake on economic closure. In 2019, the United States is the protectionist with its foot on the accelerator. The constraints of Sino-American interdependence—what economist Larry Summers once called “the financial balance of terror”—no longer look so binding. And there are far too many hot spots—the Korean peninsula, the South China Sea, Taiwan—where the kindling seems awfully dry.

## OFF

### 1NC---Ev Ethics Shell

Ev Ethics

#### Interp: Full paragraphs must be cut properly and not conceal information, regardless of perceived relevancy.

#### Cutting cards in the middle of a paragraph allows debaters to manipulate evidence and strategically leave out what contradicts with their arguments – putting rest of the uncut paragraph in the doc solves all your offense unless your intent was to cheat which is even worse.

#### Violation---Insert SS

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#### This is a reason to reject the team—miscutting evidence is academic misconduct that should disqualify any other argument they make in the debate from counting on the record—a brilliant, plagiarized paper or speech would still get a zero---it’s the only portable skill we take from debate and ev ethics obscures the ability the engage with the aff insofar as they have cheated and all their args are epistemologically suspect---ow any other layer of debate or any of their theory arguments---it’s a sequencing question and a preeq to engaging in the debate or allowing the aff to finish this round---im willing to stake the round on it.

### Framework

#### I value morality, because every other value begs the question of what is right or what is wrong.

#### The government should prioritize the well-being of the general population. This is because government officials don’t know how policies will affect abstract concepts like freedom or dignity for every single person. What they do know is whether a policy will be net good or net bad for the well-being of everyone in a country.

#### Thus, the standard is maximizing expected well-being.

**1] Pleasure and pain are intrinsic value and disvalue**

**Blum et al. 18**

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**Pleasure** is not only one of the three primary reward functions but it also **defines reward.** As homeostasis explains the functions of only a limited number of rewards, the principal reason why particular stimuli, objects, events, situations, and activities are rewarding may be due to pleasure. This applies first of all to sex and to the primary homeostatic rewards of food and liquid and extends to money, taste, beauty, social encounters and nonmaterial, internally set, and intrinsic rewards. Pleasure, as the primary effect of rewards, drives the prime reward functions of learning, approach behavior, and decision making and provides the **basis for hedonic theories** of reward function. We are attracted by most rewards and exert intense efforts to obtain them, just because they are enjoyable [10]. Pleasure is a passive reaction that derives from the experience or prediction of reward and may lead to a long-lasting state of happiness. The word happiness is difficult to define. In fact, just obtaining physical pleasure may not be enough. One key to happiness involves a network of good friends. However, it is not obvious how the higher forms of satisfaction and pleasure are related to an ice cream cone, or to your team winning a sporting event. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure [14]. Pleasure as a hallmark of reward is sufficient for defining a reward, but it may not be necessary. A reward may generate positive learning and approach behavior simply because it contains substances that are essential for body function. When we are hungry, we may eat bad and unpleasant meals. A monkey who receives hundreds of small drops of water every morning in the laboratory is unlikely to feel a rush of pleasure every time it gets the 0.1 ml. Nevertheless, with these precautions in mind, we may define any stimulus, object, event, activity, or situation that has the potential to produce pleasure as a reward. In the context of reward deficiency or for disorders of addiction, homeostasis pursues pharmacological treatments: drugs to treat drug addiction, obesity, and other compulsive behaviors. The theory of allostasis suggests broader approaches - such as re-expanding the range of possible pleasures and providing opportunities to expend effort in their pursuit. [15]. It is noteworthy, the first animal studies eliciting approach behavior by electrical brain stimulation interpreted their findings as a discovery of the brain’s pleasure centers [16] which were later partly associated with midbrain dopamine neurons [17–19] despite the notorious difficulties of identifying emotions in animals. Evolutionary theories of pleasure: The love connection BO:D Charles Darwin and other biological scientists that have examined the biological evolution and its basic principles found various mechanisms that steer behavior and biological development. Besides their theory on natural selection, it was particularly the sexual selection process that gained significance in the latter context over the last century, especially when it comes to the question of what makes us “what we are,” i.e., human. However, the capacity to sexually select and evolve is not at all a human accomplishment alone or a sign of our uniqueness; yet, we humans, as it seems, are ingenious in fooling ourselves and others–when we are in love or desperately search for it. It is well established that modern biological theory conjectures that **organisms are** the **result of evolutionary competition.** In fact, Richard Dawkins stresses gene survival and propagation as the basic mechanism of life [20]. Only genes that lead to the fittest phenotype will make it. It is noteworthy that the phenotype is selected based on behavior that maximizes gene propagation. To do so, the phenotype must survive and generate offspring, and be better at it than its competitors. Thus, the ultimate, distal function of rewards is to increase evolutionary fitness by ensuring the survival of the organism and reproduction. It is agreed that learning, approach, economic decisions, and positive emotions are the proximal functions through which phenotypes obtain other necessary nutrients for survival, mating, and care for offspring. Behavioral reward functions have evolved to help individuals to survive and propagate their genes. Apparently, people need to live well and long enough to reproduce. Most would agree that homo-sapiens do so by ingesting the substances that make their bodies function properly. For this reason, foods and drinks are rewards. Additional rewards, including those used for economic exchanges, ensure sufficient palatable food and drink supply. Mating and gene propagation is supported by powerful sexual attraction. Additional properties, like body form, augment the chance to mate and nourish and defend offspring and are therefore also rewards. Care for offspring until they can reproduce themselves helps gene propagation and is rewarding; otherwise, many believe mating is useless. According to David E Comings, as any small edge will ultimately result in evolutionary advantage [21], additional reward mechanisms like novelty seeking and exploration widen the spectrum of available rewards and thus enhance the chance for survival, reproduction, and ultimate gene propagation. These functions may help us to obtain the benefits of distant rewards that are determined by our own interests and not immediately available in the environment. Thus the distal reward function in gene propagation and evolutionary fitness defines the proximal reward functions that we see in everyday behavior. That is why foods, drinks, mates, and offspring are rewarding. There have been theories linking pleasure as a required component of health benefits salutogenesis, (salugenesis). In essence, under these terms, pleasure is described as a state or feeling of happiness and satisfaction resulting from an experience that one enjoys. Regarding pleasure, it is a double-edged sword, on the one hand, it promotes positive feelings (like mindfulness) and even better cognition, possibly through the release of dopamine [22]. But on the other hand, pleasure simultaneously encourages addiction and other negative behaviors, i.e., motivational toxicity. It is a complex neurobiological phenomenon, relying on reward circuitry or limbic activity. It is important to realize that through the “Brain Reward Cascade” (BRC) endorphin and endogenous morphinergic mechanisms may play a role [23]. While natural rewards are essential for survival and appetitive motivation leading to beneficial biological behaviors like eating, sex, and reproduction, crucial social interactions seem to further facilitate the positive effects exerted by pleasurable experiences. Indeed, experimentation with addictive drugs is capable of directly acting on reward pathways and causing deterioration of these systems promoting hypodopaminergia [24]. Most would agree that pleasurable activities can stimulate personal growth and may help to induce healthy behavioral changes, including stress management [25]. The work of Esch and Stefano [26] concerning the link between compassion and love implicate the brain reward system, and pleasure induction suggests that social contact in general, i.e., love, attachment, and compassion, can be highly effective in stress reduction, survival, and overall health. Understanding the role of neurotransmission and pleasurable states both positive and negative have been adequately studied over many decades [26–37], but comparative anatomical and neurobiological function between animals and homo sapiens appear to be required and seem to be in an infancy stage. Finding happiness is different between apes and humans As stated earlier in this expert opinion one key to happiness involves a network of good friends [38]. However, it is not entirely clear exactly how the higher forms of satisfaction and pleasure are related to a sugar rush, winning a sports event or even sky diving, all of which augment dopamine release at the reward brain site. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure. Remarkably, there are pathways for ordinary liking and pleasure, which are limited in scope as described above in this commentary. However, there are **many brain regions**, often termed hot and cold spots, that significantly **modulate** (increase or decrease) our **pleasure or** even **produce the opposite** of pleasure— that is disgust and fear [39]. One specific region of the nucleus accumbens is organized like a computer keyboard, with particular stimulus triggers in rows— producing an increase and decrease of pleasure and disgust. Moreover, the cortex has unique roles in the cognitive evaluation of our feelings of pleasure [40]. Importantly, the interplay of these multiple triggers and the higher brain centers in the prefrontal cortex are very intricate and are just being uncovered. Desire and reward centers It is surprising that many different sources of pleasure activate the same circuits between the mesocorticolimbic regions (Figure 1). Reward and desire are two aspects pleasure induction and have a very widespread, large circuit. Some part of this circuit distinguishes between desire and dread. The so-called pleasure circuitry called “REWARD” involves a well-known dopamine pathway in the mesolimbic system that can influence both pleasure and motivation. In simplest terms, the well-established mesolimbic system is a dopamine circuit for reward. It starts in the ventral tegmental area (VTA) of the midbrain and travels to the nucleus accumbens (Figure 2). It is the cornerstone target to all addictions. The VTA is encompassed with neurons using glutamate, GABA, and dopamine. The nucleus accumbens (NAc) is located within the ventral striatum and is divided into two sub-regions—the motor and limbic regions associated with its core and shell, respectively. The NAc has spiny neurons that receive dopamine from the VTA and glutamate (a dopamine driver) from the hippocampus, amygdala and medial prefrontal cortex. Subsequently, the NAc projects GABA signals to an area termed the ventral pallidum (VP). The region is a relay station in the limbic loop of the basal ganglia, critical for motivation, behavior, emotions and the “Feel Good” response. This defined system of the brain is involved in all addictions –substance, and non –substance related. In 1995, our laboratory coined the term “Reward Deficiency Syndrome” (RDS) to describe genetic and epigenetic induced hypodopaminergia in the “Brain Reward Cascade” that contribute to addiction and compulsive behaviors [3,6,41]. Furthermore, ordinary “liking” of something, or pure pleasure, is represented by small regions mainly in the limbic system (old reptilian part of the brain). These may be part of larger neural circuits. In Latin, hedus is the term for “sweet”; and in Greek, hodone is the term for “pleasure.” Thus, the word Hedonic is now referring to various subcomponents of pleasure: some associated with purely sensory and others with more complex emotions involving morals, aesthetics, and social interactions. The capacity to have pleasure is part of being healthy and may even extend life, especially if linked to optimism as a dopaminergic response [42]. Psychiatric illness often includes symptoms of an abnormal inability to experience pleasure, referred to as anhedonia. A negative feeling state is called dysphoria, which can consist of many emotions such as pain, depression, anxiety, fear, and disgust. Previously many scientists used animal research to uncover the complex mechanisms of pleasure, liking, motivation and even emotions like panic and fear, as discussed above [43]. However, as a significant amount of related research about the specific brain regions of pleasure/reward circuitry has been derived from invasive studies of animals, these cannot be directly compared with subjective states experienced by humans. In an attempt to resolve the controversy regarding the causal contributions of mesolimbic dopamine systems to reward, we have previously evaluated the three-main competing explanatory categories: “liking,” “learning,” and “wanting” [3]. That is, dopamine may mediate (a) liking: the hedonic impact of reward, (b) learning: learned predictions about rewarding effects, or (c) wanting: the pursuit of rewards by attributing incentive salience to reward-related stimuli [44]. We have evaluated these hypotheses, especially as they relate to the RDS, and we find that the incentive salience or “wanting” hypothesis of dopaminergic functioning is supported by a majority of the scientific evidence. Various neuroimaging studies have shown that anticipated behaviors such as sex and gaming, delicious foods and drugs of abuse all affect brain regions associated with reward networks, and may not be unidirectional. Drugs of abuse enhance dopamine signaling which sensitizes mesolimbic brain mechanisms that apparently evolved explicitly to attribute incentive salience to various rewards [45]. Addictive substances are voluntarily self-administered, and they enhance (directly or indirectly) dopaminergic synaptic function in the NAc. This activation of the brain reward networks (producing the ecstatic “high” that users seek). Although these circuits were initially thought to encode a set point of hedonic tone, it is now being considered to be far more complicated in function, also encoding attention, reward expectancy, disconfirmation of reward expectancy, and incentive motivation [46]. The argument about addiction as a disease may be confused with a predisposition to substance and nonsubstance rewards relative to the extreme effect of drugs of abuse on brain neurochemistry. The former sets up an individual to be at high risk through both genetic polymorphisms in reward genes as well as harmful epigenetic insult. Some Psychologists, even with all the data, still infer that addiction is not a disease [47]. Elevated stress levels, together with polymorphisms (genetic variations) of various dopaminergic genes and the genes related to other neurotransmitters (and their genetic variants), and may have an additive effect on vulnerability to various addictions [48]. In this regard, Vanyukov, et al. [48] suggested based on review that whereas the gateway hypothesis does not specify mechanistic connections between “stages,” and does not extend to the risks for addictions the concept of common liability to addictions may be more parsimonious. The latter theory is grounded in genetic theory and supported by data identifying common sources of variation in the risk for specific addictions (e.g., RDS). This commonality has identifiable neurobiological substrate and plausible evolutionary explanations. Over many years the controversy of dopamine involvement in especially “pleasure” has led to confusion concerning separating motivation from actual pleasure (wanting versus liking) [49]. We take the position that animal studies cannot provide real clinical information as described by self-reports in humans. As mentioned earlier and in the abstract, on November 23rd, 2017, evidence for our concerns was discovered [50] In essence, although nonhuman primate brains are similar to our own, the disparity between other primates and those of human cognitive abilities tells us that surface similarity is not the whole story. Sousa et al. [50] small case found various differentially expressed genes, to associate with pleasure related systems. Furthermore, the dopaminergic interneurons located in the human neocortex were absent from the neocortex of nonhuman African apes. Such differences in neuronal transcriptional programs may underlie a variety of neurodevelopmental disorders. In simpler terms, the system controls the production of dopamine, a chemical messenger that plays a significant role in pleasure and rewards. The senior author, Dr. Nenad Sestan from Yale, stated: “Humans have evolved a dopamine system that is different than the one in chimpanzees.” This may explain why the behavior of humans is so unique from that of non-human primates, even though our brains are so surprisingly similar, Sestan said: “It might also shed light on why people are vulnerable to mental disorders such as autism (possibly even addiction).” Remarkably, this research finding emerged from an extensive, multicenter collaboration to compare the brains across several species. These researchers examined 247 specimens of neural tissue from six humans, five chimpanzees, and five macaque monkeys. Moreover, these investigators analyzed which genes were turned on or off in 16 regions of the brain. While the differences among species were subtle, **there was** a **remarkable contrast in** the **neocortices**, specifically in an area of the brain that is much more developed in humans than in chimpanzees. In fact, these researchers found that a gene called tyrosine hydroxylase (TH) for the enzyme, responsible for the production of dopamine, was expressed in the neocortex of humans, but not chimpanzees. As discussed earlier, dopamine is best known for its essential role within the brain’s reward system; the very system that responds to everything from sex, to gambling, to food, and to addictive drugs. However, dopamine also assists in regulating emotional responses, memory, and movement. Notably, abnormal dopamine levels have been linked to disorders including Parkinson’s, schizophrenia and spectrum disorders such as autism and addiction or RDS. Nora Volkow, the director of NIDA, pointed out that one alluring possibility is that the neurotransmitter dopamine plays a substantial role in humans’ ability to pursue various rewards that are perhaps months or even years away in the future. This same idea has been suggested by Dr. Robert Sapolsky, a professor of biology and neurology at Stanford University. Dr. Sapolsky cited evidence that dopamine levels rise dramatically in humans when we anticipate potential rewards that are uncertain and even far off in our futures, such as retirement or even the possible alterlife. This may explain what often motivates people to work for things that have no apparent short-term benefit [51]. In similar work, Volkow and Bale [52] proposed a model in which dopamine can favor NOW processes through phasic signaling in reward circuits or LATER processes through tonic signaling in control circuits. Specifically, they suggest that through its modulation of the orbitofrontal cortex, which processes salience attribution, dopamine also enables shilting from NOW to LATER, while its modulation of the insula, which processes interoceptive information, influences the probability of selecting NOW versus LATER actions based on an individual’s physiological state. This hypothesis further supports the concept that disruptions along these circuits contribute to diverse pathologies, including obesity and addiction or RDS.

**Extinction first –**

**1 – Forecloses future improvement – we can never improve society because our impact is irreversible**

**2 – Turns suffering – mass death causes suffering because people can’t get access to resources and basic necessities**

**3 – Moral obligation – allowing people to die is unethical and should be prevented because it creates ethics towards other people**

**4 – Objectivity – body count is the most objective way to calculate impacts because comparing suffering is unethical**

**5 – Moral uncertainty – if we’re unsure about which interpretation of the world is true – we ought to preserve the world to keep debating about it**

### Contention 1

#### No Extinction from Warming – new studies prove over-hype and tech solves.

* Extinction Tipping Point is implausible – we’re on track for 3 degrees, not 4-5 degrees
* Tech and Energy Modernization Solve – Renewable Energy is replacing Fossil Fuels which reduces Climate Mortality by a rate of 5.

Nordhaus 20 Ted Nordhaus 1-23-2020 “Ignore the Fake Climate Debate” <https://www.wsj.com/articles/ignore-the-fake-climate-debate-11579795816>, found by BPS, (American author, environmental policy expert, and the director of research at The Breakthrough Institute, citing new climate change forecasts)//Re-cut by Elmer

Beyond the headlines and social media, where Greta Thunberg, Donald Trump and the online armies of climate “alarmists” and “deniers” do battle, there is a real climate debate bubbling along in scientific journals, conferences and, occasionally, even in the halls of Congress. It gets a lot less attention than the boisterous and fake debate that dominates our public discourse, but it is much more relevant to how the world might actually address the problem. In the real climate debate, no one denies the relationship between human emissions of greenhouse gases and a warming climate. Instead, the disagreement comes down to different views of climate risk in the face of multiple, cascading uncertainties. On one side of the debate are optimists, who believe that, with improving technology and greater affluence, our societies will prove quite adaptable to a changing climate. On the other side are pessimists, who are more concerned about the risks associated with rapid, large-scale and poorly understood transformations of the climate system. But most pessimists do not believe that runaway climate change or a hothouse earth are plausible scenarios, much less that human extinction is imminent. And most optimists recognize a need for policies to address climate change, even if they don’t support the radical measures that Ms. Thunberg and others have demanded. In the fake climate debate, both sides agree that economic growth and reduced emissions vary inversely; it’s a zero-sum game. In the real debate, the relationship is much more complicated. Long-term economic growth is associated with both rising per capita energy consumption and slower population growth. For this reason, as the world continues to get richer, higher per capita energy consumption is likely to be offset by a lower population. A richer world will also likely be more technologically advanced, which means that energy consumption should be less carbon-intensive than it would be in a poorer, less technologically advanced future. In fact, a number of the high-emissions scenarios produced by the United Nations Intergovernmental Panel on Climate Change involve futures in which the world is relatively poor and populous and less technologically advanced. Affluent, developed societies are also much better equipped to respond to climate extremes and natural disasters. That’s why natural disasters kill and displace many more people in poor societies than in rich ones. It’s not just seawalls and flood channels that make us resilient; it’s air conditioning and refrigeration, modern transportation and communications networks, early warning systems, first responders and public health bureaucracies. New research published in the journal Global Environmental Change finds that global economic growth over the last decade has reduced climate mortality by a factor of five, with the **greatest benefits documented in the poorest nations.** In low-lying Bangladesh, 300,000 people died in Cyclone Bhola in 1970, when 80% of the population lived in extreme poverty. In 2019, with less than 20% of the population living in extreme poverty, Cyclone Fani killed just five people. “Poor nations are most vulnerable to a changing climate. The fastest way to reduce that vulnerability is through economic development.” So while it is true that poor nations are most vulnerable to a changing climate, it is also true that the fastest way to reduce that vulnerability is through economic development, which requires infrastructure and industrialization. Those activities, in turn, require cement, steel, process heat and chemical inputs, all of which are impossible to produce today without fossil fuels. For this and other reasons, the world is unlikely to cut emissions fast enough to stabilize global temperatures at less than 2 degrees above pre-industrial levels, the long-standing international target, much less 1.5 degrees, as many activists now demand. But recent forecasts also suggest that many of the worst-case climate scenarios produced in the last decade, which assumed unbounded economic growth and fossil-fuel development, are also very unlikely. There is still substantial uncertainty about how sensitive global temperatures will be to higher emissions over the long-term. But the best estimates now suggest that the world is on track for 3 degrees of warming by the end of this century, not 4 or 5 degrees as was once feared. That is due in part to slower economic growth in the wake of the global financial crisis, but also to decades of technology policy and energy-modernization efforts. “We have better and cleaner technologies available today because policy-makers in the U.S. and elsewhere set out to develop those technologies.” The energy intensity of the global economy continues to fall. Lower-carbon natural gas **has** displaced coal **as the primary source of new fossil energy**. The falling cost of wind and solar energy has begun to have an effect on the growth of fossil fuels. Even nuclear energy has made a modest comeback in Asia.

### Contention 2