# 1NC

## Off

### 1NC – T

#### Interp: Reductions must decrease, otherwise it’s a limit

Speirs 7 – brief in the District Ct of Eastern Texas (REEDHYCALOG v. BAKER HUGHES OILFIELD, 2007 U.S. Dist. Ct. Pleadings LEXIS 9234)//BB

Baker Hughes's interpretation should be adopted. The claims expressly use the word "limit," not "reduce." The plain meanings of those two words are not the same. "Limit" means "a boundary" or a "restrict[ion]." See, e.g., RANDOM HOUSE UNABRIDGED DICTIONARY, Exh. 5 (2006). "Reduce" means "to bring down to a smaller extent, size, amount, number, etc." Id. Accordingly, the word "reduce" cannot be substituted for the word "limit." Moreover, the specification discusses the two words disjunctively. See'631 patent, Exh. 4 at col. 3, lines 12-15 ("features which reduce, or limit, the extent" of "expos[ure]"); col. 6, line 61 ("reduced, or limited, exposure cutter").

#### Violation: They set a boundary for patents to only one period of exclusivity, it’s not a reduction of \*protections\*.

#### Standards:

#### 1] Limits and ground – placing arbitrary boundaries gets rid of neg generics like boundary related CPs and the Price Control CP. Independently not requiring the aff to decrease something means we get \*no\* DAs since they no-link out of all of them by saying that companies still get one period of exclusivity.

#### 2] Extra T is a voter – means the res is no longer a stable basis and they can defend whatever they want. Also means you don’t have jurisdiction to vote for them cuz they haven’t affirmed the res.

#### Drop the debater:

#### 1] The abuse already occurred and shifted my time allocation

#### 2] It’s the same as DTA since we indict your whole aff

#### Use Competing Interps for T:

#### 1] There’s no way to be “reasonably” topical, it’s a yes/no binary

#### 2] Reasonability collapses since we use offense defense to determine what’s reasonable

#### No RVI’s:

#### 1] It’s your burden to be topical means it’s a prereq to engaging in substance

#### 2] Encourages people to bait theory then win the RVI

### 1NC – CP

#### CP: The member nations of the World Trade Organization should integrate centralized medical records and genetic information with machine learning technology and make data commercially available for biotechnology and pharmaceutical companies.

#### Combining centralized records with genetic info shifts research to a genotype first approach---both are key for synching gene variants with their medical effects. Excluding people from coverage ensures bottlenecks that undermine research.

Broad 14. (The Eli and Edythe L. Broad Institute of MIT and Harvard, often referred to as the Broad Institute, is a biomedical and genomic research center located in Cambridge, Massachusetts. Innovative “genotype first” approach uncovers protective factor for heart disease. June 31, 2014.https://www.broadinstitute.org/news/innovative-“genotype-first”-approach-uncovers-protective-factor-heart-disease)

**Extensive sequencing of DNA from thousands of individuals** in Finland has **unearthed scores of mutations that** destroy gene function **and are found at unusually high frequencies**. Among these are two mutations in a gene called LPA that may reduce a person’s risk of heart disease. **These findings are an exciting** proof-of-concept **for a new “**genotype first**” approach to identifying** rare genetic variants **associated with, or protecting from, disease followed by** extensive medical review **of carriers**. The new study by researchers from the Broad Institute, Massachusetts General Hospital (MGH), the University of Helsinki, and an international team of collaborators appears in a paper published online July 31 in PLOS Genetics. The **researchers** studied exomes — the portions of the genome that correspond to protein-coding genes — from 3,000 Finns and compared them to those of 3,000 non-Finnish Europeans. They identified 83 gene-deactivating variants that were at least twice as prevalent in Finns and went on to study these variants in over 35,000 Finns. Recent examples in heart disease, HIV, type 2 diabetes and Crohn’s disease have demonstrated that such mutations – known as “loss-of-function” mutations – in some cases protect from, rather than cause, disease and thereby **suggest** new paths **toward** therapeutics. **Geneticists have known that** Mendelian, **recessive genetic diseases** – such as Tay-Sachs or cystic fibrosis that **are caused by a single, mutated gene** – are **more common in** isolated populations **because of a phenomenon known as “**bottlenecking**.”** When a small population is isolated for tens to hundreds of generations, the population’s genetic diversity becomes restricted, and occasional rare genetic variations can by chance become much more common. While this has long been recognized as the source of the unique rare disease patterns seen in isolated populations, this paper demonstrates that the same principles can help researchers identify rare, loss-of-function variants in genome-wide association studies on these isolated populations. In the current study, researchers chose to study modern Finns – a population that descended from a well-documented bottleneck that occurred around 4,000 years ago. Comparing Finns with their non-Finnish European counterparts gave the researchers strong, empirical data. The LPA gene encodes Lipoprotein(a), a type of lipoprotein, first identified in 1963 and a known risk factor for heart disease. The variants described in this paper reduced levels of LPA gene expression causing lower levels of Lipoprotein(a) in the blood. The research team examined Finnish medical records and found that the loss-of-function variants were not associated with other health problems, making blocking LPA expression a potentially exciting therapeutic approach. **The availability of** centralized medical records **available in Finland enabled the researchers to** shift the paradigm **of** medical genetics **to a “genotype first” approach**. “**This new approach could significantly change how researchers analyze rare variants for complex diseases**. **It gives us a** window **into the** genetics of complex diseases **that we haven’t had before**,” said co-senior author Mark Daly, co-director of the Program in Medical and Population Genetics at the Broad Institute and chief of the Analytic and Translational Genetics Unit for the Center for Human Genetic Research at MGH. “By combining the information from detailed medical records with the information contained in the genomes of a bottlenecked population, we’re uncovering rare variants that contribute to complex diseases.” Heart disease is a leading killer globally. The World Health Organization reports that cardiovascular disease was responsible for 30 percent of all global deaths, or 17.3 million people in 2008. Therapeutics able to specifically address this risk by targeting LPA could have a global impact on medical outcomes. This work highlights the potential for using rare variant analysis in isolated populations to study complex diseases, an approach that had previously been largely limited to Mendelian traits. **The approach can now be applied to other complex diseases that have many contributing genetic factors.** “We’ve illustrated the validity of this approach by identifying rare, loss-of-function variants with promising therapeutic potential for the treatment of heart disease, but **this work also represents a** reproducible approachthat can be used to increase our understanding of other complex diseases as well,” said co-senior author Aarno Palotie (Broad Institute, Massachusetts General Hospital, Harvard Medical School, Institute for Molecular Medicine Finland FIMM, University of Helsinki).

#### Only data integration solves pharma collapse---the CP saves the industry

**Shaywit**[**z**](https://www.forbes.com/sites/davidshaywitz/)**13** (David, Medicine reporter for Forbes, “What's Holding Back Cures? Our Collective Ignorance (And No, Not A Pharma Conspiracy)” <https://www.forbes.com/sites/davidshaywitz/2013/05/10/whats-holding-back-cures-our-collective-ignorance-and-no-not-a-pharma-conspiracy/#eda1100236fd>)

The unfortunate truth is that drug companies really want to cure disease, but rarely know how. [Medical science simply isn’t up to the challenge](http://www.forbes.com/sites/davidshaywitz/2011/12/02/biopharmas-dirty-secret-revealed-science-is-fragile-forecasting-is-unreliable-now-deal-with-it-2/). Most diseases aren’t well enough understood to enable the rational development of truly transformative treatments. When high-profile pharma studies fail – such as the slew of recent Phase 3 Alzheimer’s Disease trials – it’s fashionable to characterize them as yet another industry failure. There’s some truth to this: the proximal cause may well be a poor decision to continue the development of a questionable drug. But the root cause is likely insufficient understanding of disease pathophysiology. We should also be careful about dismissing the value of incremental advances– a reflex I know I still have, although I’ve [recognized](http://www.nytimes.com/2002/07/16/health/improved-drug-regimens-help-patients-take-their-medicine.html) the value of seemingly small tweaks from the time I was a resident. Even today, when I critique (as derivative) formulation plays like liquid Ritalin, I’m glad to be [reminded](https://twitter.com/kevintoshio/status/312306291261448192) of the kids who stand to benefit from just such a medication. What’s Next? As the healthcare system looks more critically at value – demanding more evidence of effectiveness from providers and products alike – drug companies will be faced with two options. The best choice, of course, would be to figure out how to come up with truly revolutionary treatments. Perhaps unexpected insights will emerge from big data and the [integration](http://www.forbes.com/sites/davidshaywitz/2012/12/30/turning-information-into-impact-digital-healths-long-road-ahead/) of phenotypic and genotypic information, in the [framework of system biology](http://www.nature.com/nrd/journal/v8/n4/abs/nrd2826.html); maybe a new therapeutic modality will arrive on the scene. It’s possible intensified [collaboration](http://www.forbes.com/sites/davidshaywitz/2012/03/29/youre-welcome-the-vital-role-companies-play-in-pressure-testing-academic-medical-research/) between academic and industry researchers will eventually yield something useful, or that [open-data approaches](http://www.sagebase.org/philosophy/) (as championed by organizations like [Sage Bionetworks](http://www.sagebase.org/)[disclosure: I served as a founding advisor]) will achieve critical mass, and deliver impactful insights. But unless something substantial changes, progress is likely to remain slow and stochastic, and truly game-changing novel therapeutics will continue to be the exceptions rather than the rule. Given the ongoing challenges of creating transformative medications, there’s likely to be intensified focus on capturing, in a more granular fashion, the benefits of incrementally improved drugs; such assessments will not be a “nice to have” but a “must have,” table stakes for consideration by payors, and (to the extent these measures are used to demonstrate efficacy) regulators as well. I also suspect pharmas will increasingly look to offer “solutions” (e.g. associated app or access to an online community) not just pills, to deliver value, though it’s unclear whether such approaches will either prove effective or represent an attractive value proportion for the relevant stakeholders.

### 1NC - DA

#### The Debt Ceiling expansion gives Democrats two months to finalize and pass Biden’s spending package – every moment is necessary to resolve intraparty disputes

Cochrane 10/7 Cochrane, Emily. Emily Cochrane is a correspondent based in Washington. She has covered Congress since late 2018, focusing on the annual debate over government funding and economic legislation, ranging from emergency pandemic relief to infrastructure. "Senate Leaders Agree to Vote on Short-Term Debt Ceiling Increase." N.Y. Times, 7 Oct. 2021, www.nytimes.com/2021/10/07/us/politics/debt-ceiling-senate.html.

Senator Chuck Schumer of New York, the majority leader, announced that he reached an agreement with Senator Mitch McConnell of Kentucky, the minority leader, to raise the federal borrowing limit through early December. “We have reached agreement to extend the debt ceiling through early December, and it’s our hope that we can get this done as soon as today.” “Republican and Democratic members and staff negotiated through the night in good faith. The pathway our Democratic colleagues have accepted will spare the American people any near-term crisis.” Video player loading Senator Chuck Schumer of New York, the majority leader, announced that he reached an agreement with Senator Mitch McConnell of Kentucky, the minority leader, to raise the federal borrowing limit through early December.CreditCredit...T.J. Kirkpatrick for The New York Times Oct. 7, 2021Updated 3:17 p.m. ET WASHINGTON — Top Senate Democrats and Republicans said on Thursday that they had struck a deal to allow the debt ceiling to be raised through early December, temporarily staving off the threat of a first-ever default on the national debt after the G.O.P. agreed to temporarily drop its blockade of an increase. Senator Chuck Schumer, Democrat of New York and the majority leader, announced that he had reached an agreement with Senator Mitch McConnell of Kentucky, the minority leader, to clear the way for a vote as early as Thursday on a short-term extension, with potentially as few as 11 days left before a possible default. The movement came the day after Mr. McConnell partly backed down from his refusal to allow any such increase to move forward, offering a temporary reprieve as political pressure mounted to avoid being blamed for a fiscal calamity. “It’s our hope that we can get this done as soon as today,” Mr. Schumer said on Thursday morning on the Senate floor. But one day after Mr. McConnell indicated that Republicans would stand aside and allow the short-term increase to advance, he and his top deputies were laboring on Thursday to ensure his members will put aside their objections and clear the path for a vote. “We gotta see if the deal is done,” President Biden told reporters during a trip to Illinois. “I’m not sure of that yet.” The agreed-upon bill would boost the legal debt cap by $480 billion, which the Treasury Department estimates would be enough to allow the government to continue borrowing through at least Dec. 3. The current debt limit was reinstated at $28.4 trillion on Aug. 1, and the Treasury Department has been using so-called extraordinary measures to delay a breach of the borrowing cap since then. The agency estimated that the government would no longer be able to pay all of its bills by Oct. 18, once those fiscal accounting maneuvers were exhausted. Without congressional action before then, economists and lawmakers have warned of catastrophic economic consequences, including the U.S. government having to choose between making payments on the interest on its debt or sending out Social Security checks and other crucial assistance. The legislation under consideration on Thursday did not offer a hard deadline for when cash would run out, and it would not restart the Treasury Department’s ability to employ extraordinary measures, such as curbing certain government investments, a Treasury official said. Some Republicans said they thought the set dollar figure would ensure the limit would not be reached again until at least January. The actual “X-date” will be determined by tax revenues that the government receives and expenditures that it must make near the end of the year. Making such projections has been especially difficult this year because the pandemic relief programs that are in place have made it harder to predict when money is coming and going. “There is no way to predict with any precision exactly how much you would need to increase the debt limit by to get to a certain date,” said Shai Akabas, the director of economic policy at the Bipartisan Policy Center, an independent think tank. But in aiming for Dec. 3, the deal may position the next debt limit fight to overlap once again with negotiations over avoiding a government shutdown, as funding is set to lapse on that same day if Congress does not approve new spending legislation beforehand. Democrats hope nearly two additional months will give them space to focus on finalizing and enacting most of President Biden’s domestic agenda, including hammering out an array of intraparty disagreements over an expansive multi-trillion-dollar social safety net and climate change package. In raising the prospect of a stopgap extension on Wednesday, Mr. McConnell had said that Republicans would allow Democrats to use normal procedures to consider it. But that commitment appeared in doubt on Thursday afternoon, as Republicans privately objected and leaders toiled to line up the votes needed. Should even one senator demand a recorded vote, at least 10 Republicans would be needed to join every Democrat to muster the 60 votes needed to move the bill forward. Image The movement on debt ceiling negotiations came the day after Senator Mitch McConnell backed down partially from his refusal to allow any such increase to move forward. Credit...T.J. Kirkpatrick for The New York Times “We’re having conversations with our members and kind of figuring out where people are, but, as you might expect, this is not an easy one to whip,,” said Senator John Thune of South Dakota, the No. 2 Republican. He added that, “in the end we’ll be there, but it will be a painful birthing process.” Some Republicans were wary of angering their base by allowing the bill to move forward, especially after former President Donald J. Trump issued a statement on Wednesday that attacked Mr. McConnell for “folding to the Democrats.” Mr. Trump seemed to be pressuring Republicans to force a showdown in the face of a looming default, saying that Mr. McConnell had “all of the cards with the debt ceiling, it’s time to play the hand.” Even if Republicans clear the way to allow the measure to pass, it does nothing to address the crux of the partisan stalemate over the debt. Most notably, Republicans have not dropped their demand that Democrats ultimately use an arcane and time-consuming budget process known as reconciliation to lift the debt ceiling into next year. Democrats are currently using that process to steer around Republican opposition and push through a sprawling domestic package that would address climate change, expand the social safety net with more health care and education benefits, and increase taxes on the wealthy and corporations. “The pathway our Democratic colleagues have accepted will spare the American people any near-term crisis,” Mr. McConnell said on the Senate floor. The extension, he added, also means “there’ll be no question they’ll have plenty of time” to use the reconciliation process to approve a long-term increase.

#### Pushing a WTO takes time, energy, and political capital away from domestic legislation – big pharma and EU allies

Bhadrakumar 5/9 M K Bhadrakumar is a former Indian diplomat. "Biden’s talk of vaccine IP waiver is political theater." Asia Times, May 9, 2021, asiatimes.com/2021/05/bidens-talk-of-vaccine-ip-waiver-is-political-theater.

On the other hand, Biden, whose political life of half a century was largely spent in the US Congress, is well aware of the awesome clout of the pharmaceutical companies in American politics. From that lobby’s perspective, the patent waiver “amounts to the expropriation of the property of the pharmaceutical companies whose innovation and financial investments made the development of Covid-19 vaccines possible in the first place,” as a senior scholar at the Johns Hopkins Center for Health Security puts it. The US pharmaceutical industry and congressional Republicans have already gone on the offensive blasting Biden’s announcement, saying it undermines incentives for American innovation. Besides, the argument goes, even with the patent waiver, vaccine manufacturing is a complex process and is not like simply flipping a switch. Senator Richard Burr, the top Republican on the US Senate Health Committee, denounced Biden’s decision. “Intellectual property protections are part of the reason we have these life-saving products,” he said. “Stripping these protections only ensures we won’t have the vaccines or treatments we need when the next pandemic occurs.” The Republican senators backed by Republican Study Committee chairman Jim Banks propose to introduce legislation to block the move. Clearly, Biden would rather spend his political capital on getting the necessary legislation through Congress to advance his domestic reform agenda rather than spend time and energy to take on the pharmaceutical industry to burnish his image as a good Samaritan on the world stage. Conceivably, Biden could be counting on the “text-based negotiations” at the WTO dragging on for months, if not years, without reaching anywhere. The US support for the waiver could even be a tactic to persuade pharmaceutical firms to back less drastic steps like sharing technology and expanding joint ventures to boost global production quickly. So far Covid-19 vaccines have been distributed primarily to the wealthy countries that developed them, while the pandemic sweeps through poorer ones such as India, and the real goal is, after all, expanded vaccine distribution. Biden is well aware that there will be huge opposition to the TRIPS waiver from the United States’ European allies as well. The British press has reported that the UK has been in closed-door talks at the World Trade Organization in recent months along with the likes of Australia, Canada, Japan, Norway, Singapore, the European Union and the US, who all opposed the idea.

#### Infrastructure package is sufficient, necessary, and the last opportunity to solve climate change – extinction

Leber 10/7 Leber, Rebecca. Rebecca Leber covers climate change for Vox. Before joining Vox, she was an environmental reporter at Mother Jones, where her investigations exposed government corruption and fossil fuel industry disinformation. She has worked as a staff writer at Grist, The New Republic, and ThinkProgress. A dozen more outlets have published her work over her decade as a climate journalist. "A last chance for US climate action: Democrats’ Build Back Better and infrastructure bills." Vox, 7 Oct. 2021, www.vox.com/22685920/democrats-infrastructure-build-back-better-climate-change.

The United States — the largest carbon polluter in history — is closer than it’s ever been to taking sweeping and lasting action on the climate crisis. The bad news is that if Democrats can’t pull it off, they may never get another opportunity like this — and the planet certainly won’t. Democratic leaders are trying to pass two major pieces of legislation — the $1 trillion bipartisan infrastructure bill and the up to $3.5 trillion Build Back Better Act — that they say can slash US pollution by up to 45 percent in the coming decade. In the outlined Build Back Better Act, Congress would flex its power to transform the electricity sector so that it runs on mostly clean energy, steer the transportation sector toward electric vehicles, and finally take action on methane pollution, one of the most harmful greenhouse gases. But there have been many recent moments when the precarious dealmaking in Congress seemed close to falling apart. One of the biggest sticking points has been with West Virginia Sen. Joe Manchin, who has questioned the party’s approach to passing both bills simultaneously. “What’s the urgency that we have?” Manchin asked on CNN’s State of the Union in late September. In part because of Manchin’s opposition, even progressive leaders have begun to manage expectations, signaling the ultimate bill will be less ambitious. Sen. Bernie Sanders of Vermont suggested that the $3.5 trillion figure would see some “give and take.” The package is likely to shrink to $2.3 trillion or less, the New York Times reported on Wednesday. So what is the urgency? Democrats only have one year before midterm elections could take away their narrow majorities in the House and Senate. That would leave them powerless to pass any legislation without help from Republicans. At the same time, the planet faces a rapidly closing window to avert the worst catastrophes of global warming. Every fraction of a degree will translate into lives and livelihoods lost. The world can’t afford another decade of American inaction, and what Congress does next will help determine the future of the climate. A last chance for Democrats Historically, the president’s party loses seats in Congress in midterm elections. Next November, Democrats could lose their narrow control of Congress if they lose even one Senate seat or more than a few House seats. “The middle of that Venn diagram — when we have leaders who care about science and we still have that window of opportunity — is now,” said Lena Moffitt, campaign director at the climate advocacy group Evergreen Action. Democrats in Congress are also relying on a roughly once-a-year process, known as budget reconciliation, to try and push the Build Back Better Act through the Senate. Reconciliation allows them to pass a budget with a simple majority, instead of the 60 votes that are usually required in the Senate. There might not be time or political will to make a similar move in 2022. And some Democrats remain unwilling to eliminate the Senate filibuster, which is the other way they could pass progressive policies. In short, if the historical pattern holds, Democrats may not get another chance under President Biden — or even this decade — to take serious action on climate. Some Republicans have been hinting at taking climate change more seriously, but much of the party’s leadership continues to downplay and deny climate science. The next time the US has an opening like this, climate change will likely be dramatically worse — and that much harder to stop. A flooded street of shops at night reflecting the lights in the water. Hurricane Ida caused record flooding in New Jersey in September. Climate change is already intensifying extreme weather such as tropical storms and heat waves. Anadolu Agency via Getty Images The best chance for the global climate Climate scientists have warned that once the atmosphere warms more than 1.5 degrees Celsius, we will live in a drastically changed world. If countries, corporations, and individuals don’t take immediate action to reduce pollution, the world may hit that grim milestone in just 10 years. Over the long term, if the world continues on its current polluting path, the world will warm more than double that amount, risking catastrophes humanity has never had to confront. The window to chart a new course is rapidly closing. And the world’s “last, best chance” to take decisive collective action is less than a month away, as John Kerry, who serves as President Biden’s climate envoy, has said. In early November, world governments will gather in Glasgow for the United Nations climate conference, COP26. Following up on the Paris climate accord, countries will pledge more ambitious pollution targets and tackle the challenge of financing a worldwide transition to clean energy. The US bears the most responsibility of any country for global warming, having released 20 percent of the world’s greenhouse pollution since 1850. Today, the country ranks second in emissions behind China. But the US also has the power to magnify its impact if it leads by example, or if it flexes its influence on the global economic system, for example by affecting global prices of fossil fuels by ending government subsidies. Climate experts say progress at the COP26 conference depends on the United States proving it can do its part, for symbolic as well as practical reasons. This is the first year the US officially returns to global negotiations after former President Donald Trump withdrew the country from the Paris climate accord. Now, Biden has to lead by example by showing that the country can swiftly change direction for good, demonstrating progress on its national pledge of cutting emissions 50 to 52 percent by 2030. “There is this sense of exhaustion about how long is it going to take for one of the biggest emitters in the world to do its fair share,” said Rachel Cleetus, the clean energy policy director at the Union of Concerned Scientists. It’s unclear whether Congress will deliver on climate-change legislation by the time the international community meets in Glasgow. But any steps forward would send “a very important signal that can really help catalyze more ambition from other countries,” Cleetus said.

### 1NC – CP

#### CP: The member nations of the World Trade Organization should increase penalties for patent abuse and evergreening fraud in the pharmaceutical industry.

#### **Evergreening links to politics and collapses innovation, BUT the downsides are empirically debunked media hype – shifting enforcement for existing patent law solves abuse without harming pharma**

Madigan & O'Connor 19 [Kevin Madigan joined CPIP in January of 2016. As Deputy Director, Kevin works closely with CPIP scholars in their research and promotion of comprehensive intellectual property law and policy. Before joining CPIP, Kevin worked as an intellectual property Research Associate at Finnegan Henderson Farabow Garrett & Dunner and also interned at the Recording Industry Association of America. Sean O’Connor, noted innovation law scholar, is a Professor of Law and Faculty Director of the Center for Intellectual Property x Innovation Policy (C-IP2) at George Mason University, Antonin Scalia Law School. "“No Combination Drug Patents Act” Stalls, but Threats to Innovation Remain." https://cip2.gmu.edu/2019/06/27/no-combination-drug-patents-act-stalls-but-threats-to-innovation-remain/]

This week, the Senate Judiciary Committee was to mark up a bill limiting patent eligibility for combination drug patents—new forms, uses, and administrations of FDA approved medicines. While the impetus was to curb so-called “evergreening” of drug patents, the effect would have been to stifle life-saving therapeutic innovations. Though the “No Combination Drug Patents Act”—reportedly to be introduced by Senator Lindsey Graham (R-SC)—was wisely withdrawn at the last minute, it’s likely not the last time that such a misconceived legislative effort will be introduced.

An Exaggerated Response to a Disputed Theory

The bill would have established a presumption of obviousness for drug or biologic patent applications whose invention was a new: dosing regimen, method of delivery, method of treatment, or formulation. While there was a rebuttal provision where the claim covered a new treatment for a new indication or “increase[d] . . . efficacy,” the latter was almost certain to introduce years of uncertainty and litigation. Further, the bill would have covered a broader class than true combination drug patents, in which one active ingredient is combined with another or with a non-drug.

Like many recent legislative efforts, the amendment sought to address a perceived lack of affordability of prescription drugs. After praising the America Invents Act of 2011 and subsequent Supreme Court rulings for strengthening the US patent system, the bill claimed that rising drug prices have outpaced “spending on research and development with respect to those drugs.” In addition to applauding Supreme Court decisions that have injected unquestionable uncertainty into patentable subject matter standards, the amendment went on to blame high drug prices on continually overstated issues related to advanced drug patents.

According to critics, combination drug patents have granted drug makers unearned and extended protection over existing drugs or biological products. But, quite simply, when properly issued by the USPTO under existing patentability standards, these are new patents for new products or processes.

Combination patents have been maligned as anticompetitive, resulting in a “thicket” of patents that impedes innovation through transaction costs and other inefficiencies. Unfortunately, notwithstanding a lack of empirical evidence validating the harm of follow-on innovation patents, patent thicket rhetoric is now being echoed by the media, the academy, courts, and policy makers in a fraught attempt to fix drug pricing.

Reports (see here, here, here, and here) from leading antitrust experts and intellectual property scholars have detailed the value of incremental innovation and challenged the notion that patent thickets are a true threat to competition and innovation. These studies have exposed patent thicket claims—much like the “troll” narrative that for years infected patent law debates—as an empty strawman theory, the repetition of which has led to undue confidence in its accuracy. The reality is that what critics point to as problematic cases of combination patents are in fact infrequent outliers, strategically highlighted to discount evidence of the value of new and innovative drug uses and administrations.

#### CP solves the aff while fostering innovation – directly comparative to the aff

Holman 20 [Christopher, Professor of Law, University of Missouri-Kansas City School of Law. “Congress Should Decline Ill-Advised Legislative Proposals Aimed at Evergreening of Pharmaceutical Patent Protection” p. 29-30 https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3593954]

Senator Thom Tillis, in his opening remarks prepared for one of the Senate’s hearings on drug pricing and intellectual property, expressed his concern that “[some members of Congress are] trying to take a sledgehammer to a problem that needs a fine tuned and highly efficient scalpel[, and that] by just focusing on patent protections, and the number of patent protections available to a single product, [Congress] may be doing more harm than good to our nation’s innovation economy.”112 Instead, he would support legislation that will “promote innovation and competition, allow the United States to continue to be the leader in medical and pharmaceutical research, and will ultimately lower drug prices for consumers.”113 It is important to bear in mind that the reason there has been such an uproar over the price of drugs is that these drugs provide huge benefits for society, far exceeding most other patentable innovation, and were it not for the patent incentive, it is very unlikely these products would have been made available to patients in the first place. In his testimony prepared for the same Senate hearing, Professor Olson reminded the Judiciary Committee that “even studies casting doubt on patent law’s efficacy generally tend to find that in the area of pharmaceuticals, patent law has a large, positive effect on social welfare by providing incentive for significant levels of drug development that otherwise simply would not occur.”114 By ~~impairing~~ impeding the ability of pharmaceutical companies to obtain patents on their inventions, the legislation discussed in this Article could discourage the investment necessary to bring the next generation of pharmaceutical innovation to patients. If pharmaceutical companies are deemed to be misusing patents to the detriment of patients and third-party payers, then it is that misuse of patents that should be targeted by legislation, not the patents themselves. For example, if the allegations regarding product hopping are true, and doctors are prescribing and patients using far more expensive follow-on products that provide little if any benefit to the patient, then that is a problem with the market that should be addressed, rather than denying patent protection for truly worthwhile product improvements. If pharmaceutical companies are using anticompetitive means to coerce patients and doctors into switching drugs, then antitrust laws can provide the remedy, as discussed above.115 Likewise, if the sheer number of patents that could be infringed by a single generic or biosimilar product exceeds the litigation capacity of any company attempting to bring such a product to market, then courts have it within their means to require the patent owner to limit infringement litigation to some reasonable number of patents and patent claims, and Congress could pass legislation that would encourage courts to do so, if such a reform is deemed necessary. By targeting misuse of patents by pharmaceutical companies, rather than pharmaceutical patents per se, it should be possible to address any valid concerns with the way pharmaceutical companies are using the patent system, while maintaining adequate incentives for the next generation of innovation.

## Innovation

### AT – Feldman and Wang

#### Feldman and Wang are wrong about evergreening

Risch 17 [Michael; “Data for the Evergreening Debate,” Written Description; 11/21/17; <https://writtendescription.blogspot.com/2017/11/data-for-evergreening-debate.html>] Justin // recut MNHS NL

**Feldman and Wang** argue that the Orange Book has been used by companies to "evergreen" their drugs - that is, to extend exclusivity beyond patent expiration. The paper is on SSRN and the abstract is here:

Why do drug prices remain so high? Even in sub-optimally competitive markets such as health care, one might expect to see some measure of competition, at least in certain circumstances. Although anecdotal evidence has identified instances of evergreening, which can be defined as artificially extending the protection cliff, just how pervasive is such behavior? Is it simply a matter of certain bad actors, to whom everyone points repeatedly, or is the problem endemic to the industry?

This study examines all drugs on the market between 2005 and 2015, identifying and analyzing every instance in which the company added new patents or exclusivities. The results show a startling departure from the classic conceptualization of intellectual property protection for pharmaceuticals. Key results include: 1) Rather than creating new medicines, pharmaceutical companies are recycling and repurposing old ones. Every year, at least 74% of the drugs associated with new patents in the FDA’s records were not new drugs coming on the market, but existing drugs; 2) Adding new patents and exclusivities to extend the protection cliff is particularly pronounced among blockbuster drugs. Of the roughly 100 best-selling drugs, almost 80% extended their protection at least once, with almost 50% extending the protection cliff more than once; 3) Once a company starts down this road, there is a tendency to keep returning to the well. Looking at the full group, 80% of those who added protections added more than one, with some becoming serial offenders; 4) The problem is growing across time.

I think the data the authors have gathered is extremely important, and I think that their study sheds important light on what happens in the pharmaceutical industry. That said, as I explain below, my takeaways from this paper are much different from theirs.

My concerns are fourfold. First, even assuming that every one of the efforts listed by the the study were an attempt to evergreen, I have no sense for whether evergreening actually happened. This study doesn't provide any data about generic entry or pricing. For example, the study describes 13 listings for OxyContin, but I'd bet dollars to donuts that there was plenty of generic oxycodone available. Similarly, many of the new listings are changes from Drug 1.0 to "new and improved!" Drug 2.0. This, of course, has been criticized as anti-competitive (since generics rely on auto-substitution laws), but the study presents no data about whether insurers refuse to pay for Drug 2.0 and instead require the generic, nor does it explain why generics can't do their own advertisements to get doctors to prescribe Drug 1.0.

Second, many of these listings and the new patents that go with them are for advances, like extended release and dissolvables. These can be critically important advances, and they are preferred by consumers. Thus, one person's "evergreening" is another person's innovation. I take extended release drugs (and expensive generic) to avoid side effects and I gave my son dissolvable Prevacid when he wouldn't stop crying with GERD (and was glad for it). Without consumer data or patent data, it is impossible to tell just how much evergreening is going on (or how harmful it is). Now, if these patents are obvious because making them dissolvable or extended is easy, I'm all for stripping protection - but that's a different issue.

Third, the article speaks of orphan drug approvals as if they are a bad thing. This made me bristle, quite frankly. My mother has an extremely rare autoimmune disease that is very painful. I often wondered, isn't there some incentive to develop drugs to treat it? Turns out there is, and though she got no relief, apparently a bunch of other rare diseases did, and that's the whole point behind orphan drug exclusivity. Concern about this exclusivity seems misguided anyway. If it turns out that drug companies are gaming it and nobody actually needs the drug, then the the loss is not too large, because it's a small population and nobody needs the generic anyway. And if it turns out that they do need it, the Orange Book only limits labeling, and doctors are free to prescribe a generic for off-label use. Without evidence that doctors refuse to do so, there's no real evidence that Orphan exclusivity does much harm. In another personal story, my wife was prescribed a generic drug in a different formulation than the patented tablet for off-label use.

Fourth, and most generally, the article speaks of new patents as if there is no innovation. New use discoveries are important. Many of our most important drugs are not for their original uses. As far as I know, generics are not barred from finding new uses and patenting them, either, though admittedly their hands are tied for patient use. So, where the authors see evergreening, I see innovation. Maybe. Maybe it's obvious. But we can't tell that from this high level, and I'm not ready to write it all off as evergreening. It is telling that I was able to provide four personal stories about how supposed evergreening efforts benefited, would have benefited, or did not increase costs for my family or me (and thankfully none of them involved oxycodone).

### AT – Secondary Patents

#### Secondary patents are only on the improvement, not the original product

IP Watch 18 9-21-2018 "Inside Views: Why Follow-On Pharmaceutical Innovations Should Be Eligible For Patent Protection" <https://www.ip-watch.org/2018/09/21/follow-pharmaceutical-innovations-eligible-patent-protection/> (a non-profit independent news service that provides professional coverage of global policymaking on intellectual property and innovation.)//Elmer // recut MNHS NL

“Evergreening” – an Incoherent Concept Drug innovators are often accused of using secondary patents to “evergreen” the patent protection of existing drugs, based on an assumption that a secondary patent somehow extends the patent protection of a drug after the primary patent on the active ingredient is expired. As a general matter, this is a false assumption — a patent on an improved formulation, for example, is limited to that improvement and does not extend patent protection for the original formulation. Once the patents covering the original formulation have expired, generic companies are free to market a generic version of the original product, and patients willing to forgo the benefits of the improved formulation can choose to purchase the generic product, free of any constraints imposed by the patent on the improvement. Of course, drug innovators hope that doctors and their patients will see the benefits of the improved formulation and be willing to pay a premium for it, but it is important to bear in mind that ultimately it is patients, doctors, and third-party payers who determine whether the value of the improvement justifies the costs. Of course, this assumes a reasonably well-functioning pharmaceutical market. If that market breaks down in a manner that forces patients to pay higher prices for a patented new version of a drug that provides little real improvement over the original formulation, then it is the deficiency in the market which should be addressed, rather than the patent system itself. For example, if a drug company is found to have engaged in some anticompetitive activity to block generic competition in the market for the original product once it has gone off patent, then antitrust and competition laws should be invoked to address that problem. If doctors are prescribing an expensive new formulation of a drug that provides little benefit compared to a cheaper, unpatented original product, then that is a deficiency in the market that should be addressed directly, rather than through a broadside attack on follow-on innovation. In short, if is found that secondary patents are being used in a manner that creates an unwarranted extension of patent protection, it is that misuse of the patent system which should be addressed directly, rather than through what amounts to an attack on the patent system itself.

### NC – Innovation

#### Vague standards for new patents are unenforceable and explode costs – the link alone turns case because the plan is unenforceable

Madigan & O'Connor 19 [Kevin Madigan joined CPIP in January of 2016. As Deputy Director, Kevin works closely with CPIP scholars in their research and promotion of comprehensive intellectual property law and policy. Before joining CPIP, Kevin worked as an intellectual property Research Associate at Finnegan Henderson Farabow Garrett & Dunner and also interned at the Recording Industry Association of America. Sean O’Connor, noted innovation law scholar, is a Professor of Law and Faculty Director of the Center for Intellectual Property x Innovation Policy (C-IP2) at George Mason University, Antonin Scalia Law School. "“No Combination Drug Patents Act” Stalls, but Threats to Innovation Remain." https://cip2.gmu.edu/2019/06/27/no-combination-drug-patents-act-stalls-but-threats-to-innovation-remain/]

While the amendment provided for a rebuttal to the presumption of obviousness, the language was ambiguous and likely to render the patent system even more unreliable than it already is. The proposed statute said that an applicant may rebut the presumption of obviousness if the covered claimed invention “results in a statistically significant increase in the efficacy of the drug or biological product that the covered claimed invention contains or uses.” It is unclear what would qualify as “statistically significant,” and proving this vague standard would be nearly impossible.

In order to show a “statistically significant increase in efficacy,” long and costly head-to-head clinical trials would be necessary. To be clear, this is not a standard required by the FDA for new drug approval, let alone patentability.

#### Eliminating evergreening ends the pharmaceutical industry – incremental developments are key to global breakthroughs on emerging pathogens

Madigan & O'Connor 19 [Kevin Madigan joined CPIP in January of 2016. As Deputy Director, Kevin works closely with CPIP scholars in their research and promotion of comprehensive intellectual property law and policy. Before joining CPIP, Kevin worked as an intellectual property Research Associate at Finnegan Henderson Farabow Garrett & Dunner and also interned at the Recording Industry Association of America. Sean O’Connor, noted innovation law scholar, is a Professor of Law and Faculty Director of the Center for Intellectual Property x Innovation Policy (C-IP2) at George Mason University, Antonin Scalia Law School. "“No Combination Drug Patents Act” Stalls, but Threats to Innovation Remain." https://cip2.gmu.edu/2019/06/27/no-combination-drug-patents-act-stalls-but-threats-to-innovation-remain/]

Like most forms of innovation, the development of medicines and therapeutics is a process by which one builds and improves upon previous discoveries and breakthroughs. Sometimes those improvements are major advancements, but often they are incremental steps forward. In the pharmaceutical field, incremental or follow-on innovation frequently results in new therapeutic uses for existing drugs, which address serious challenges related to adverse effects, delivery systems, and dosing schedules. While they might not sound like medical breakthroughs on par with the discovery of penicillin, these advancements in the administration and use of pharmaceuticals improve public health and save lives.

Additionally, follow-on innovations are—and should remain—subject to the same patentability standards as any other technologies. Patents reward advancements that are novel, useful, and nonobvious, and our patent system has long recognized that patent claims are to be presumed patentable and nonobvious. The Graham amendment would have turned this established standard on its head, creating a separate and ill-defined hurdle for certain advancements in medicine.

The benefits of incremental innovation to public health and patients cannot be overstated. New formulations of malaria drugs, dosing regimens and delivery systems for AIDS patients, more efficient administrations of insulin for the treatment of diabetes, and developments in the treatment of cognitive heart disease have all been possible because of incremental innovation.

Imposing unjustified restrictions on the patentability of advancements like these would be disastrous for drug development, as the incentives that come with patent protection would be all but eliminated. Without the assurance that their innovative labor would be supported by intellectual property protection, pioneering drug developers would shift resources away from improving drug formulations and uses. The development of more effective treatments of some of the most devastating diseases would stall, as innovators would be unable to commercialize their products, recoup losses, or fund future research and development.

As critics continue to target myopically the patent system for a broader issue of drug prices in the American health care system, it’s likely not the last time that language like this will be proposed. In order to avoid the implementation of such ill-conceived standards into our patent laws, understanding what’s at stake is critical. The future of medical innovation depends on it.

#### It tips the entire industry into insolvency

Globerman & Lybecker 14 [Steven Globerman is Resident Scholar and Addington Chair in Measurement at the Fraser Institute as well as Professor Emeritus at Western Washington University. Kristina M.L. Acri, née Lybecker – Chair of the Department of Economics and Business, Colorado College. "The Benefits of Incremental Innovation FOCUS ON THE PHARMACEUTICAL INDUSTRY The Benefits of Incremental Innovation FOCUS ON THE PHARMACEUTICAL INDUSTRY." https://www.fraserinstitute.org/sites/default/files/benefits-of-incremental-innovation.pdf]

Incremental innovation is a financial necessity for high-tech industries such as biotechnology and pharmaceuticals. Given the paucity and unpredictability of radical innovation, incremental advances sustain the industry financially, for no mature industry can do so from income derived from breakthrough innovation alone. As described by Wertheimer, Levy, and O’Connor, “[t]he pharmaceutical industry must generate revenue based predominantly on incremental innovations, which characterize the majority of products and contribute the majority of revenue” (Wertheimer, Levy, and O’Connor, 2001: 108–109). Evidence of the prevalence of breakthrough relative to incremental innovations is shown in figure 2.2 below. Over the entire period, products based on incremental innovations outnumber breakthrough products. In addition, it is essential to recognize the importance of risk management. Any technology portfolio will comprise projects of differing risk levels. In the case of the pharmaceutical industry, incremental innovation projects are an essential—and significant—component of this portfolio. The incremental innovation projects will be characterized by lower risk and a greater probability of reaching the market (Wertheimer, Levy, and O’Connor, 2001: 110).

#### Weakening IP encourages imitation, not innovation – it removes the financial incentive to invent

Globerman & Lybecker 14 [Steven Globerman is Resident Scholar and Addington Chair in Measurement at the Fraser Institute as well as Professor Emeritus at Western Washington University. Kristina M.L. Acri, née Lybecker – Chair of the Department of Economics and Business, Colorado College. "The Benefits of Incremental Innovation FOCUS ON THE PHARMACEUTICAL INDUSTRY The Benefits of Incremental Innovation FOCUS ON THE PHARMACEUTICAL INDUSTRY." https://www.fraserinstitute.org/sites/default/files/benefits-of-incremental-innovation.pdf]

Finally, protecting innovation fosters economic growth and development, and that includes incremental innovation. A growing body of empirical evidence demonstrates that increasingly robust intellectual property protections, in combination with other policies, increase economic development, foreign direct investment (FDI), and innovation.5 A 2006 report from the United Nations Industrial Development Organization (UNIDO) studied the role of intellectual property rights in advanced nations in technology transfer and economic growth, concluding that protecting innovation creates benefits for countries at all levels of development. For developing countries, strengthening intellectual property rights encourages growth. For middle-income countries, evidence indicates that domestic innovation and diffusion of technology can lead to growth and that strengthening IPRs can encourage industries to shift from imitation to innovation. For advanced economies, stronger IPRs increase innovation and raise growth (Falvy, Foster, and Memedovic, 2006). Moreover, enforcing intellectual property rights and protecting innovation also drives research on cures. This is true of the diseases of both industrialized and developing nations. A recent study by Kyle and McGahan (2012) finds evidence of more research on diseases in nations with TRIPS-compliant IP provisions, as their patent provisions were put into place and implemented, than on diseases prevalent in non-TRIPS-compliant nations, controlling for the level of economic development and other factors.6

### NC – Health Diplomacy

#### The aff doesn’t solve global health diplomacy – their ev isn’t about giving people next gen AIDS medication, it’s about making sure people have clean water in developing countries and health diplomacy more broadly

#### Their impact card is about how there’s instability in the Middle East, Africa, Central Asia, etc. because of lack of public health infrastructure in those regions–no explanation for the aff solves that

### NC – India

#### No internal link – their Neelakantan ev says India produces 20% of generic drugs, which the plan doesn’t affect and it’s not about exports – just listing different statistics

#### Kamdar card doesn’t say extinction --

## Drug Prices

### NC - AMR

#### Low prices independently cause AMR.

Babu and Suma 6 Babu, Varsha, and C. Suma. "Antibiotic pricing: when cheaper may not be better." Clinical infectious diseases 43.8 (2006): 1085-1086. (Government Primary Health Center)//Elmer

To The Editor—Antibiotics in India have always been cheaper in absolute terms thanks to weak patent laws that have been in effect until recently. Because a direct translation of drug prices from US dollars to Indian rupees (INR) would have rendered most new antibiotics inaccessible to the vast majority of Indians, such patent violations were subtly encouraged. Even despite this, we were caught unaware when pharmaceutical representatives approached our primary care center in rural India, claiming that a 5-day course of levofloxacin would henceforth cost the patient ∼INR 20 (<$0.50). Reluctant to accept such a statement at face value, we consulted the CIMS Updated Prescriber's Handbook [1], a popular index of pharmaceutical drugs available in India. Here, we discovered that a 5-day course of oral levofloxacin (500 mg once daily) cost anywhere from INR 19.5 to INR 475 ($0.50–$10.50), with most companies pricing their brand at <$1 for a full course. The same course in the United States would cost >$100. Intrigued, we did some more research and came up with the following results. The cheapest 5-day courses of first-line antibiotics, such as oral amoxicillin (500 mg thrice daily) or oral erythromycin (500 mg 4 times daily), cost INR 45 ($1) and INR 90 ($2), respectively. On the other hand, the cost of a 3-day course of oral azithromycin (500 mg daily) was one-half that of a course of erythromycin. Despite the obvious price advantage to the patients, we find this trend troubling. **Lower prices** often **lead to wider prescription of a given drug**, especially in resource-limited settings. **If** second-line **antibiotics**—such as levofloxacin and azithromycin—**are made available at lower prices** than first-line antibiotics, **there is a high probability of their overuse and subsequent development of resistance**. In the face of **very low costs of medication**, patients are unlikely to complain of escalating medical expenses. The issue assumes more gravity when one considers the fact that levofloxacin is an important second-line drug for the treatment of tuberculosis [2]. Its widespread use in the community **is likely to lead to emergence of resistance** **among** **mycobacteria** **and** delayed diagnosis of **tuberculosis** [3]—an occurrence that India, with its large population of tuberculosis-affected patients, cannot afford. We believe we have encountered a situation where **low prices of antibiotics are likely to cause more harm than good**. In the post World Trade Organization treaty scenario, governments in resource-limited countries should use their privileges of essential drug control to ensure that the costs of first-line antibiotics remain lower than those of second-line drugs. Such a government-instituted ladder in antibiotic pricing is essential to prevent the misuse of antibiotics in the community and to ensure that antibiotic resistance is kept at low levels.

#### Resistance causes extinction---microbiome collapse and superbugs.

Garrett 16. (Laurie Garrett is a Pulitzer prize-winning science journalist and writer of two bestselling books. She was awarded the Pulitzer Prize for Explanatory Journalism in 1996 for a series of works published in Newsday, chronicling the Ebola virus outbreak in Zaire. Antibiotic-Resistant Bacteria and the World's Peril. September 19, 2016. https://blogs.scientificamerican.com/guest-blog/antibiotic-resistant-bacteria-and-the-world-s-peril/)

Welcome to the Anthropocene, the era in which one species—human beings—so utterly dominates the planet that all of the driving forces of climate, oceans, geology, air and every other life form on Earth are controlled by the activities of humanity. Most of the damage is thoughtless. Humans don’t decide to pollute, they just do so. People don’t make a choice to lower the numbers of oxygen-producing trees on the planet, they just chop them down without thinking about it. Among the most dangerous of these thoughtless actions executed by our species is wild misuse of antibiotics. On September 21, the United Nations General Assembly is convening a special session to look at ways to curb use of precious medicinal drugs that are swiftly being outwitted by drug-resistant bacteria, making everything from a scraped knee to a bout of pneumonia far more dangerous and difficult to treat. But that focus, important as it is, remains limited to human use of chemicals and concern about their misuse to our species’ health. Genuine governance and stewardship in the Anthropocene requires a far broader look at what our activities mean for the planet, writ large. At the most basic levels of life every single system on Earth is controlled, or influenced, by microbes—microscopic creatures ranging from nano-sized viruses to enormous colonies of bacteria; from populations of microbes in the depths of the oceans to the inside of the human gut. A human being is made up of about 30 trillion cells and 39 trillion microbes, most of which are indispensable to our mental and physical health. If all the viruses and parasites swarming inside and on the skin of a human being are tallied the microbe-to-cell ratio is about ten-to-one. The microbes—collectively known as the Human Microbiome—digest our food, help us do battle with invading pathogens, clean our skin and provide us fuel. Life without microbes is no life at all. Antibiotics kill bacteria, and as anybody who has been on a long course of the drugs to treat an ailment knows, the medicine is indiscriminate, knocking off not only invaders like the bugs that cause pneumonia and ear infections, but also those that prevent stomach aches and constipation in response to ingestion of food. Human overuse or misuse of antibiotics has bred the emergence of Superbugs that are not only resistant to the drugs, but may be able to surge in numbers within a person’s gut, for example, leading to dangerous imbalances in bacterial populations that then cause diabetes, some types of heart disease, depression and an enormous range of common diseases. The Earth has its own microbiome, representing about a third of the weight of all biological material and life forms on the planet. And it is every bit as indispensable to the planet as your microbiome is to your personal health. Microbes living on the surface of the oceans, for example, aerosolize and end up in the atmosphere, where water droplets collect on their surfaces, forming clouds . Eliminating those microbes would directly affect rainfall. More oxygen that humans breathe is made by microbes than plants. And even the plants rely upon the microbiome of soil to transfer nutrients into their roots, allowing trees and forests to make more oxygen for humans to breathe. So it should be with some considerable alarm that we consider the killing potential manmade antibiotics have for Earth’s microbiome.

### NC - Econ

#### No impact to econ decline

Liao 19 [Jianan Liao, Shenzhen Nanshan Foreign Language School, China. Business Cycle and War: A Literature Review and Evaluation. Advances in Economics, Business and Management Research, volume 68. Copyright 2019]

First, war can occur at any stage of expansion, crisis, recession, recovery, so it is unrealistic to assume that wars occur at any particular stage of the business cycle. On the one hand, although the domestic economic problems in the crisis/recession/depression period break out and become prominent in a short time, in fact, such challenge exists at all stages of the business cycle. When countries cannot manage to solve these problems through conventional approaches, including fiscal and monetary policies, they may resort to military expansion to achieve their goals, a theory known as Lateral Pressure. [13] Under such circumstances, even countries in the period of economic expansion are facing downward pressure on the economy and may try to solve the problem through expansion. On the other hand, although the resources required for foreign wars are huge for countries in economic depression, the decision to wage wars depends largely on the consideration of the gain and loss of wars. Even during depression, governments can raise funding for war by issuing bonds. Argentina, for example, was mired in economic stagflation before the war on the Malvinas islands (also known as the Falkland islands in the UK). In fact, many governments would dramatically increase their expenditure to stimulate the economy during the recession, and economically war is the same as these policies, so the claim that a depressed economy cannot support a war is unfounded. In addition, during the crisis period of the business cycle, which is the early stage of the economic downturn, despite the economic crisis and potential depression, the country still retains the ability to start wars based on its economic and military power. Based on the above understanding, war has the conditions and reasons for its outbreak in all stages of the business cycle.

Second, the economic origin for the outbreak of war is downward pressure on the economy rather than optimism or competition for monopoly capital, which may exist

during economic recession or economic prosperity. This is due to a fact that during economic prosperity, people are also worried about a potential economic recession. Blainey pointed out that wars often occur in the economic upturn, which is caused by the optimism in people's mind [14], that is, the confidence to prevail. This interpretation linking optimism and war ignores the strength contrast between the warring parties. Not all wars are equally comprehensive, and there have always been wars of unequal strength. In such a war, one of the parties tends to have an absolute advantage, so the expectation of the outcome of the war is not directly related to the economic situation of the country. Optimism is not a major factor leading to war, but may somewhat serve as stimulation. In addition, Lenin attributed the war to competition between monopoly capital. This theory may seem plausible, but its scope of application is obviously too narrow. Lenin's theory of imperialism is only applicable to developed capitalist countries in the late stage of the development capitalism, but in reality, many wars take place among developing countries whose economies are still at their beginning stages. Therefore, the theory centered on competition among monopoly capital cannot explain most foreign wars. Moreover, even wars that occur during periods of economic expansion are likely to result from the potential expectation of economic recession, the "limits of growth" [15] faced during prosperity — a potential deficiency of market demand. So the downward pressure on the economy is the cause of war.