### AT: Reasonability/T Debates = Race To Bottom---2NC

#### The point of our T arg is to determine what a reasonable interpretation of the topic is---our violation’s that they’re outside the scope of that

#### A competing interpretations framework is critical – the resolution contains no words that provide an inherent limit, so we need to craft the best possible interpretation or else all predictability is lost

#### Reasonability’s bad

#### ---Neutrality – competing interpretations is the only objective way to determine topicality – you should err on the side of objectivity because topicality is a rule of the game

#### ---Silly – the aff doesn’t win if they almost outweigh a disad, they shouldn’t win if they’re almost topical

#### It’s arbitrary and undermines research

Resnick 1 Evan- assistant professor of political science – Yeshiva University, “Defining Engagement,” Journal of International Affairs, Vol. 54, Iss. 2

In matters of national security, establishing a clear definition of terms is a precondition for effective policymaking. Decisionmakers who invoke critical terms in an erratic, ad hoc fashion risk alienating their constituencies. They also risk exacerbating misperceptions and hostility among those the policies target. Scholars who commit the same error undercut their ability to conduct valuable empirical research. Hence, if scholars and policymakers fail rigorously to define "engagement," they undermine the ability to build an effective foreign policy.

## Warming Advantage

### Impact Calculus

#### We’ve explicitly conceded their warming impact which means if we win a stronger internal link you default negative.

**Their Deibel evidence says warming is the only major existential risk and outweigh nuclear war which can’t cause extinction [green]**

Deibel ‘7

(Terry L, Professor of IR @ National War College, “Foreign Affairs Strategy: Logic for American Statecraft”, Conclusion: American Foreign Affairs Strategy Today – card starts on page 387 of this book)

Finally, **there is one major existential threat** to American security (as well as prosperity) of a nonviolent nature, which, though far in the future, demands urgent action. It is the threat of **global warming** to the stability of the climate upon which all earthly life depends. Scientists worldwide have been observing the gathering of this threat for three decades now, and what was once a mere possibility has passed through probability to near certainty. Indeed ***not one* of more than 900 articles on climate change** published in refereed scientific journals from 1993 to 2003 **doubted that anthropogenic warming is occurring**. “In legitimate scientific circles,” writes Elizabeth Kolbert, “it is virtually impossible to find evidence of disagreement over the fundamentals of global warming.” Evidence from a vast international scientific monitoring effort accumulates almost weekly, as this sample of newspaper reports shows: an international panel predicts “brutal droughts, floods and violent storms across the planet over the next century”; climate change could “literally alter ocean currents, wipe away huge portions of Alpine Snowcaps and aid the spread of cholera and malaria”; “glaciers in the Antarctic and in Greenland are melting much faster than expected, and…worldwide, plants are blooming several days earlier than a decade ago”; “rising sea temperatures have been accompanied by a significant global increase in the most destructive hurricanes”; “NASA scientists have concluded from direct temperature measurements that 2005 was the hottest year on record, with 1998 a close second”; “Earth’s warming climate is estimated to contribute to more than 150,000 deaths and 5 million illnesses each year” as disease spreads; “widespread bleaching from Texas to Trinidad…killed broad swaths of corals” due to a 2-degree rise in sea temperatures. “**The world is slowly disintegrating**,” concluded Inuit hunter Noah Metuq, who lives 30 miles from the Arctic Circle. “They call it climate change…but we just call it breaking up.” From the founding of the first cities some 6,000 years ago until the beginning of the industrial revolution, carbon dioxide levels in the atmosphere remained relatively constant at about 280 parts per million (ppm). At present they are accelerating toward 400 ppm, and by 2050 they will reach 500 ppm, about double pre-industrial levels. Unfortunately, atmospheric CO2 lasts about a century, so **there is no way immediately to reduce levels, only to slow their increase**, we are thus in for significant global warming**; the only debate is how much and how serious the effects will be.** As the newspaper stories quoted above show, we are already experiencing the effects of 1-2 degree warming in more violent storms, spread of disease, mass die offs of plants and animals, species extinction, and threatened inundation of low-lying countries like the Pacific nation of Kiribati and the Netherlands **at a** **warming of 5 degrees** or less the Greenland and West Antarctic **ice sheets could disintegrate**, **leading to a sea level** of **rise** of 20 feet that would cover North Carolina’s outer banks, **swamp the southern third of Florida**, and inundate Manhattan up to the middle of Greenwich Village. Another catastrophic effect would be the collapse of the Atlantic thermohaline circulation that keeps the winter weather in Europe far warmer than its latitude would otherwise allow. Economist William Cline once estimated the damage to the United States alone from moderate levels of warming at 1-6 percent of GDP annually; severe warming could cost 13-26 percent of GDP. But the most frightening scenario is runaway greenhouse warming, based on positive feedback from the buildup of water vapor in the atmosphere that is both caused by and causes hotter surface temperatures. **Past ice age transitions, associated** with **only 5-10 degree changes** in average global temperatures, took place in just decades, even though no one was then pouring ever-increasing amounts of carbon into the atmosphere. Faced with this specter, the best one can conclude is that “**humankind’s continuing enhancement of the** natural **greenhouse effect is akin to playing Russian roulette with** the earth’s climate and **humanity’s life support system**. At worst, says physics professor Marty Hoffert of New York University, “we’re just going to burn everything up; we’re going to heat the atmosphere to the temperature it was in the Cretaceous when there were crocodiles at the poles, and then everything will collapse.” During the Cold War, astronomer Carl Sagan popularized a theory of nuclear winter to describe how a thermonuclear war between the Untied States and the Soviet Union would not only destroy both countries but possibly end life on this planet. Global warming is the post-Cold War era’s equivalent of nuclear winter at least as serious and considerably better supported scientifically. Over the long run it puts dangers from terrorism and traditional military challenges to shame. It is a threat not only to the security and prosperity to the United States, but potentially to the continued existence of life on this planet.

#### More evidence---nuclear war can’t cause extinction---reject their evidence

**Seitz 6**---former associate of the John M. Olin Institute for Strategic Studies at Harvard University’s Center for International Affairs (Russell, “The' Nuclear Winter ' Meltdown Photoshopping the Apocalypse”, http://adamant.typepad.com/seitz/2006/12/preherein\_honor.html)

All that remains of Sagan's Big Chill are curves such as this , but history is full of prophets of doom who fail to deliver, not all are without honor in their own land. The 1983 'Nuclear Winter " papers in Science were so politicized that even the eminently liberal President of The Council for a Liveable World called "The worst example of the misrepesentation of science to the public in my memory." Among the authors was Stanford President Donald Kennedy. Today he edits Science , the nation's major arbiter of climate science--and policy. Below, a case illustrating the mid-range of the ~.7 to ~1.6 degree C maximum cooling the 2006 studies suggest is superimposed in color on the Blackly Apocalyptic predictions published in Science Vol. 222, 1983 . They're worth comparing, because the range of soot concentrations in the new models overlaps with cases assumed to have dire climatic consequences in the widely publicized 1983 scenarios -- "Apocalyptic predictions require, to be taken seriously, higher standards of evidence than do **assertions** on other matters where the stakes are not as great." wrote Sagan in Foreign Affairs , Winter 1983 -84. But that "evidence" was never forthcoming. 'Nuclear Winter' never existed outside of a computer except as air-brushed animation commissioned by the a PR firm---Porter Novelli Inc. Yet Sagan predicted "the extinction of the human species " as temperatures plummeted 35 degrees C and the world froze in the aftermath of a nuclear holocaust. Last year, Sagan's cohort tried to reanimate the ghost in a machine anti-nuclear activists invoked in the depths of the Cold War, by re-running equally arbitrary scenarios on a modern interactive Global Circulation Model. But the Cold War is history in more ways than one. It is a credit to post-modern computer climate simulations that they do not reproduce the apocalyptic results of what Sagan oxymoronically termed "a sophisticated one dimensional model." The subzero 'baseline case' has melted down into a tepid 1.3 degrees of average cooling- grey skies do not a Ragnarok make . What remains is just not the stuff that End of the World myths are made of. It is hard to exaggerate how seriously " nuclear winter "was once taken by policy analysts who ought to have known better. Many were taken aback by the sheer force of Sagan's rhetoric Remarkably, Science's news coverage of the new results fails to graphically compare them with the old ones Editor Kennedy and other recent executives of the American Association for the Advancement of Science, once proudly co-authored and helped to publicize. You can't say they didn't try to reproduce this Cold War icon. Once again, soot from imaginary software materializes in midair by the megaton , flying higher than Mount Everest . This is not physics, but a crude exercise in ' garbage in, gospel out' parameter forcing designed to maximize and extend the cooling an aeosol can generate, by sparing it from realistic attrition by rainout in the lower atmosphere. Despite decades of progress in modeling atmospheric chemistry , there is none in this computer simulation, and ignoring photochemistry further extends its impact. Fortunately , the history of science is as hard to erase as it is easy to ignore. Their past mastery of semantic agression cannot spare the authors of "Nuclear Winter Lite " direct comparison of their new results and their old. Dark smoke clouds in the lower atmosphere don't last long enough to spread across the globe. Cloud droplets and rainfall remove them. rapidly washing them out of the sky in a matter of days to weeks- not long enough to sustain a global pall. Real world weather brings down particles much as soot is scrubbed out of power plant smoke by the water sprays in smoke stack scrubbers, Robock acknowledges this- not even a single degree of cooling results when soot is released at lower elevations in the models . The workaround is to inject the imaginary aerosol at truly Himalayan elevations---pressure altitudes of 300 millibar and higher , where the computer model's vertical transport function modules pass it off to their even higher neighbors in the stratosphere , where it does not rain and particles linger.. The new studies like the old suffer from the disconnect between a desire to paint the sky black and the vicissitudes of natural history. As with many exercise in worst case models both at invoke rare phenomena as commonplace, claiming it prudent to assume the worst. But the real world is subject to Murphy's lesser known second law- if everything must go wrong, don't bet on it. In 2006 as in 1983 firestorms and forest fires that send smoke into the stratosphere rise to alien prominence in the modelers re-imagined world , but in the real one remains a very different place, where though every month sees forest fires burning areas the size of cities---2,500 hectares or larger , stratospheric smoke injections arise but once in a blue moon. So how come these neo-nuclear winter models feature so much smoke so far aloft for so long?

#### Warming causes global nuclear warfare and breaks down international cooperation

Dyer 9 – PhD in ME History

Gwynne, MA in Military History and PhD in Middle Eastern History former @ [Senior Lecturer](file:///C%3A%5Cwiki%5CSenior_Lecturer) in War Studies at the [Royal Military Academy Sandhurst](file:///C%3A%5Cwiki%5CRoyal_Military_Academy_Sandhurst), Climate Wars

THIS BOOK IS AN ATTEMPT, peering through a glass darkly, to understand the politics and the strategies of the potentially apocalyptic crisis that looks set to occupy most of the twenty­first century. There are now many books available that deal with the science of climate change and some that suggest pos­sible approaches to getting the problem under control, but there are few that venture very far into the grim detail of how real countries experiencing very different and, in some cases, overwhelming pressures as global warming proceeds, are likely to respond to the changes. Yet we all know that it's mostly politics, national and international, that will decide the outcomes. Two things in particular persuaded me that it was time to write this book. One was the realization that the first and most important impact of climate change on human civiliza­tion will be an acute and permanent crisis of food supply. Eating regularly is a non-negotiable activity, and countries that cannot feed their people are unlikely to be "reasonable" about it. Not all of them will be in what we used to call the "Third World" -the developing countries of Asia, Africa and Latin America. The other thing that finally got the donkey's attention was a dawning awareness that, in a number of the great pow­ers, climate change scenarios are already playing a large and increasing role in the military planning process. Rationally, you would expect this to be the case, because each country pays its professional military establishment to identify and counter "threats" to its security, but the implications of their scenarios are still alarming. There is a probability of wars, including even nuclear wars, if temperatures rise two to three degrees Celsius. Once that happens, all hope of international cooperation to curb emissions and stop the warming goes out the window.

### Methane Turn

#### The EPA regs they remove are key to cap methane leakage from fracking---that’s Howarth---our second piece of Howarth evidence says otherwise methane will trigger rapid warming and feedbacks that cause extinction quickly---short-circuits their “bridge fuel” argument.

#### Methane is comparatively more important than CO2 to stall warming

Frongillo 12 Dominic Frongillo - deputy town supervisor of Caroline, Tompkins County, and founder of Elected Officials to Protect New York , “Wrong Time to Push Fracking,”August 15, 2012 <http://www.timesunion.com/opinion/article/Wrong-time-to-push-fracking-3788647.php>)

Why should this ring alarm bells for Cuomo and every New Yorker?

Far from being a climate solution, fracking may be a disaster. Research indicates the methane leakage may mean that fracking is **worse for the climate than coal and oil,** **particularly in the short term.**

Gas from fracking is mostly methane, a dangerous greenhouse gas that is up to 105 times more powerful at trapping heat in the atmosphere than carbon dioxide over 20 years. **A recent United Nations Environment Program report shows that it is** more urgent to reduce methane than CO2, **given that methane is so much more powerful, has quicker climate impacts, and will trigger runaway climate change sooner.**

In February, the journal Nature reported on one of the first studies to look at methane emissions from fracking, a Colorado study led by researchers at the National Oceanic and Atmospheric Administration. The study found 4 percent of gas drilled in fracking is venting directly into the atmosphere — even greater than the high-end estimate of the Cornell study and twice what was reported by the industry.

This is cause for grave concern. According to the Nobel Prize-winning Intergovernmental Panel on Climate Change, we must reduce our greenhouse gas emissions to avoid dangerous tipping points for the climate. Failing to do so will cause catastrophic impacts, far worse than the extreme heat and droughts this summer.

It may be that preventing hydraulic fracturing is crucial to stop a large new source of greenhouse gas emissions in New York. **Fracking would release large amounts of methane that is now safety underground** — **cooking the planet further** at the time when we most need to reduce methane emissions.

In Tompkins County, our Planning Department estimates that one well pad will release more climate pollution over its operational life than all of our county's 100,000 residents do in one year. Fracking may overwhelm and undermine the work of our governments, businesses, and institutions across the state to lessen our impact on the global climate.

New York State's Climate Action Plan interim report contains ambitious and necessary strategies to cut greenhouse gas emissions 80 percent by 2050. How would fracking in New York affect our ability to meet these targets?

#### Even with zero leakage – tradeoff with coal is net worse

Wigley 11 (Tom Wigley – national center for atmospheric research, “Substituting Gas for Coal Won't Help Global Warming,” September 12, 2011, http://www.realclearenergy.org/charticles/2011/09/12/substituting\_gas\_for\_coal\_wont\_help\_global\_warming\_106274.html)

In a development that could take some of the steam out of the enthusiasm for natural gas, senior researcher Tom Wigley of the National Center for Atmospheric Research in Boulder is publishing a paper arguing that **converting 50 percent of our power production from coal to natural gas could actually increase global temperatures**, at least over the next several decades. The problem is leakage. Methane is itself a greenhouse gas., blocking the escape of infrared heat rays at 22 times the rate of carbon dioxide. The only advantage is that it remains in the atmosphere only 9.6 years while CO2 lingers for more than a century. Thus, there is a tradeoff. Because methan contains more hydrogen per carbon, it produces only about half the carbon dioxide as coal. That has been touted as its main advantage. But if gas escapes anywhere along the line - in drilling, transporting or combustion - this advantage will be offset. Carefully calculating the numbers, Wigley found that if leakage occurs at a rate of 10 percent (the brown line), substituting natural gas would actually increase global temperatures well into the 21st century. If leakage can be reduced to 5 percent (the red line), some benefit begins to kick in around 2060. But even reducing loss to zero (the bottom line) increases temperatures until 2050. How can this be? The great irony is that, while **coal** produces more carbon dioxide per unit of energy, it also **throws up lots of sulfates, dust and ash, which block sunlight**, **thereby reducing global temperatures.** As a result, even with zero leakage, substituting gas will create an initial negative impact. In any case, Wigley calculates, the largest long-range temperature reduction that can be anticipated from substituting gas for coal is 0.4 degree Celsius. This is well below the 5 degree C increase anticipated in the worst scenarios for global warming.

#### Prefer this analysis---decadal time scales critical---means natty gas can’t be a bridge fuel

**Howarth et al 12** (Robert W. Howarth, David R. Atkinson Professor of Ecology & Environmental Biology at Cornell, Director of the Agriculture, Energy & the Environment Program, Renee Santoro, Renee Santoro, Research Aide Ecology & Evol. Bio, and Anthony Ingraffea, Dwight C. Baum Professorship in Engineering, “Venting and leaking of methane from shale gas,” <http://cce.cornell.edu/EnergyClimateChange/NaturalGasDev/Documents/PDFs/Howarth%20et%20al.%202012%20--%20Climatic%20Change.pdf>)

Abstract In April 2011, we published the first comprehensive analysis of greenhouse gas

(GHG) emissions from shale gas obtained by hydraulic fracturing, with a focus on methane emissions. Our analysis was challenged by Cathles et al. (2012). Here, we respond to those criticisms. We stand by our approach and findings. The latest EPA estimate for methane emissions from shale gas falls within the range of our estimates but not those of Cathles et al. which are substantially lower. Cathles et al. believe the focus should be just on electricity generation, and the global warming potential of methane should be considered only on a 100-year time scale. Our analysis covered both electricity (30% of US usage) and heat generation (the largest usage), and we evaluated both 20- and 100-year integrated time frames for methane. Both time frames are important, but the decadal scale is critical, given the urgent need to avoid climate-system tipping points. Using all available information and the latest climate science, we conclude that for most uses, the GHG footprint of shale gas is greater than that of other fossil fuels on time scales of up to 100 years. When used to generate electricity, the shale-gas footprint is still significantly greater than that of coal at decadal time scales but is less at the century scale. We reiterate our conclusion from our April 2011 paper that shale gas is not a suitable bridge fuel for the 21st Century.

#### Only direct peer reviewed measurement goes neg

Shawb et al 12 Karena, University of Victoria, School of Environmental Studies, Eleanor Stephensona, University of Victoria, University of Oxford, Environmental Change Institute, Oxford University Centre for the Environment, and Alexander Doukasa, University of Oxford, Environmental Change Institute, Oxford University Centre for the Environment. “Greenwashing gas: Might a ‘transition fuel’ label legitimize carbon-intensive natural gas development?” SciDirect

The scientific discourse remains contested, with camps coalescing around higher and lower emissions factors achieved through different methods of measurement. The International Energy Agency (2011) finds that shalegas produces life-cycle emissions between 3.5% and 12% higher than conventional natural gas over a 100-year timeframe (in the low estimate gas is flared while in the high estimate it is vented). At the lower end are recent models from Shell Global Solutions, which find that shalegas exhibits a 1.8–2.4% increase over “wells-to-wires” lifecycle emissions from conventional gas when used for electricity generation (Stephenson et al., 2011). This study further finds that emissions intensity is strongly affected by the ultimate recovery (the volume of gas produced by a well) but estimates of this variable exhibit a considerable range of between 1 and 3 bcf for shale wells, which will affect relative emissions especially as drilling moves on from the most productive wells. At the higher end of estimates, the first peer-reviewed study on fugitive emissions from shalegas production, Howarth et al. (2011), generated significant controversy by suggesting that over a 20-year timeframe, greenhouse gas emissions from shalegas are typically 20–100% higher than coal, and over a 100-year time frame they are similar to coal (Howarth et al., 2011). The timeframe of measurement is significant because of the higher climate sensitivity of methane as a greenhouse gas over a 20-year timeframe: the 20-year Global Warming Potential of methane is 72 times that of CO2 according to IPCC AR4 (2007), and may be as high as 105 times greater according to recent research (Shindell et al., 2009). Critics have taken issue with various assumptions in the Howarth et al. study, identifying it as an “outlier,” and have referred to these higher estimates as “alarmist” (Stephenson et al., 2011). Why are these estimates contested? In part, important input variables remain uncertain. For example, we can look to the estimates on so-called “fugitive emissions”. Howarth et al. (2011) estimate methane emissions of 2.2–4.3% of total gas volume from upstream and midstream (processing) combined. Multiple recent low-estimate studies (e.g. [Jiang et al., 2011], [Cathles et al., 2012] and [Venkatesh et al., 2011]) use the input variable of fugitive emissions equal to 2.2% of total production, based on EPA estimates (2011b), in several cases without including a sensitivity analysis for this variable. Meanwhile, the only peer-reviewed study that has actually measured landscape-level emissions from a natural gas field found fugitive emissions in line with higher rather than lower estimates: a joint study by the National Oceanic and Atmospheric Administration (NOAA) and the University of Colorado measured emissions directly using air quality testing equipment over tight sands natural gas fields near Boulder, Colorado, and measured a 2.3–7.7% loss of methane to the atmosphere due to fugitive emissions (Pétron et al., 2012), with a best estimate of 4%. Pétron et al. (2012) emphasize that these estimates are subject to a high degree of uncertainty, but if reproducible elsewhere, these findings would suggest higher lifecycle emissions for shalegas.

#### It causes warming so fast that adaption is impossible

Pooley 12 Eric Pooley - senior VP @Environmental Defense Fund, Served as chief political correspondent of Time, managing editor of Fortune, and deputy editor of Bloomberg Businessweek. “Natural Gas – A Briefing Paper For Candidates,” August 10, 2012, http://blogs.edf.org/energyexchange/2012/08/10/natural-gas-a-briefing-paper-for-candidates/)

Reducing Methane Leakage

**In the absence of responsible natural gas oversight,** increased reliance **on the resource could result in a future in which the U.S. emits** as much or **more climate disrupting pollution** as it does with our current energy mix.

This outcome is possible if enough uncombusted natural gas is allowed to leak into the atmosphere from well sites, gas processing plants, pipelines and distribution systems. Though it burns cleaner than coal, **uncombusted natural gas is extremely damaging to the climate:** It is mostly made up of methane, a greenhouse gas far more potent than carbon dioxide. (For the first 20 years after it is emitted, a pound of methane is 72 times more potent as a heat-trapping emission than a pound of carbon dioxide. Over 100 years, a pound of methane is 25 times more potent as a greenhouse gas than a pound of carbon dioxide.) Small amounts of natural gas are lost into the air as it makes its way from the wells and through the processing and pipeline system that brings it to consumers; the cumulative impact of those leaks is highly significant.

**The potential for damaging** methane leakage willonlygrow if, as expected, the use of natural gas expands **in the coming years**. Now and in the future, the United States cannot afford to be wasting a valuable American energy resource by allowing unchecked leakage to occur. As Americans, none of us should be content to stand idly by and let this important resource be squandered through fugitive emissions and unnecessary venting. Nor can we ignore the national security consequences of allowing our climate to deteriorate through easily avoidable greenhouse gas pollution. Reducing methane emissions isn’t just an environmental issue, it’s an important part of any candidate's plan for domestic energy security.

Uncertainty remains about just how much methane is currently being emitted along the supply chain, from the well site to the end-user. Estimates vary widely — from less than 2% to more than 7% of total production. The Environmental Protection Agency (EPA) has estimated the methane leak rate at about 2.3%, while a study by the National Oceanic and Atmospheric Administration (NOAA) suggested that in northern Colorado it might be roughly twice as high. If the higher estimates turn out to be correct, **the leaks could eat up the short-term climate benefit equivalent to closing one-third of the nation’s coal plants**. If the lower EPA estimate is correct, leak rates of two to three percent still leave significant and cost-effective greenhouse gas reductions on the table. Accurate measurement of actual leakage rates is a crucial next step.

A recent paper by Alvarez et al. published in the Proceedings of the National Academy of Sciences identified the critical leak rates at which use of natural gas would produce climate benefits at all points in time. The study found that natural gas can always produce a greenhouse gas advantage over other fossil fuels for electric power and transportation, including the conversion of much of the nation’s 3.2 million big rig trucks, if methane leakage rates are capped at 1%.

Though methane is a far more potent climate disruptor than carbon dioxide, it is also more short-lived; it breaks down in the atmosphere over time. The permanent, long-term solution to climate change involves stabilizing CO2 emissions. However, the shorter time frames affected by methane emissions are also **crucially important because they** increase the risk of undesirable climate outcomes **in the near future.** **Accelerated rates of warming mean ecosystems and humans have less time to adapt to climate change**. Given the dire need for concerted global action on climate change, current energy policy should, at a minimum, abide by a "Do No Harm" policy: no policy should contribute to increased climate forcing on any time frame.

### AT: States Solve

#### They can’t win this arg without taking out the case---if states create the exact same regsand also require green completions which is what’s key to solve methane then they would also deck the industry---vote neg on presumption

#### AND even if they regulate, states fail at enforcement---only federal regulation solves public perception while maintain production

Levi 12 Michael Levi - senior fellow for energy and the environment at Council on Foreign Relations, director of CFR Program on Energy Security and Climate Change. “THINK AGAIN: THE AMERICAN ENERGY BOOM,” Foreign Policy, Jul/Aug2012, Issue 194, p55-59, Ebsco Host)

"**Strong Regulations Would Kill the Boom."** DEAD WRONG¶ THE TECHNOLOGY AT the heart of the U.S. oil and gas boom has become central to the battle between the environmental community and the oil and gas industry. Drillers and their allies have often resisted new regulation, insisting that the industry is already heavily regulated at the state level and that fears of fracking are overblown. Barry Smitherman, chairman of the Texas Railroad Commission, captures the sentiment well, warning that more regulation could "kill the technology that's taking us to energy independence." Green groups have hit back with demands for stricter oversight of fracking, highlighting threats to air and water and disruptions to local communities. The Sierra Club has gone so far as to launch a "Beyond Natural Gas" campaign to accompany its efforts to move "Beyond Coal" and "Beyond Oil."¶ Some warnings, like an alarm in early 2011 that Pittsburgh's tap water was radioactive, have been over the top. Executed properly, development of shale gas and oil can be done in ways that safeguard the environment and protect communities. But there are always bad apples and sloppy operators. **They require not only solid regulation, which often exists at the state level,** but also strong enforcement and penalties **to deter and punish violators, which too often do not exist.**¶This is not only about preventing bad behavior **-- it's a matter of building public trust**. Operators that refuse, for example, to support mandatory disclosure of the chemicals they use in fracking inevitably raise suspicions. That's true regardless of whether those chemicals actually endanger public health. Industry is at its best when it helps craft **regulations** that **protect people and the environment** while allowing robust development to proceed **apace**. But those who instinctively oppose stricter rules are sowing the seeds of their own misfortune: Robust regulation might add a few percentage points to the cost of producing natural gas, **but** weak regulation will sap confidence**, and if communities shut down drilling, the price of natural gas will rise a lot more.**

#### Some states have zero rules---they’re insufficient to solve environmental concerns

The Hill 12 (Ben Geman, 6/26/12. "Obama's Interior chief: State regulation of fracking ‘not good enough for me’," thehill.com/blogs/e2-wire/e2-wire/234737-salazar-state-fracking-oversight-is-not-good-enough-for-me)

Interior Secretary Ken Salazar is striking back at oil-and-gas companies that claim state-level regulation of “fracking” is strong enough to render federal rules that he's crafting a pointless layer of red tape.¶ Reuters caught up with Salazar off the coast of Norway, where he’s on a visit to meet with industry officials and his Norwegian counterparts about offshore drilling safety practices.¶ Salazar said **state-level oversight** of the onshore oil-and-gas development method called hydraulic fracturing, or "fracking," is not enough, and argued industry complaints about the planned rules are not valid.¶ “There are some who are saying that it's not something we ought to do; it should be left up to the states. That's not good enough for me, because states are at very different level**, some have zero,** some have decent **rules**,” Salazar told Reuters while aboard a Statoil platform in the North Sea.¶ Fracking involves high-pressure injections of water, chemicals and sand into shale formations to open seams that enable hydrocarbons to flow. The method is enabling a natural-gas production boom in the United States, but is bringing fears of pollution along with it.¶ Interior floated draft rules in May that require industry disclosure of chemicals used in the fracking process. The draft rules also address well integrity and management of so-called flowback water.

#### Federal regulations are key to solve pollution

Pooley 12 (Eric Pooley - senior VP @Environmental Defense Fund, Served as chief political correspondent of Time, managing editor of Fortune, and deputy editor of Bloomberg Businessweek. “Natural Gas – A Briefing Paper For Candidates,” August 10, 2012, http://blogs.edf.org/energyexchange/2012/08/10/natural-gas-a-briefing-paper-for-candidates/)

**EDF sees five areas in which strong rulemaking is necessary:** ¶Mandating greater transparency in industry operations. Having good data is a prerequisite to understanding and mitigating risks, and it’s the first step toward winning back a badly damaged public trust. Regulators should require, and companies should embrace, disclosure policies that mandate reporting of not only the chemicals used in hydraulic fracturing, but also chemicals used in drilling and operating wells – as Ohio Governor John Kasich has advocated. Transparency should also be brought to other aspects of industry operations, such as detailed reporting of air emissions, chemical characterization of waste streams and tracking and reporting of water use and waste disposition. Company compliance histories should also be catalogued and reported, so companies with good records can get the credit they deserve and bad actors can be identified and pushed to improve performance. ¶ **Modernizing rules for well construction and operation**. Poor well construction and operation can lead to groundwater contamination and to blowouts that can endanger lives and foul the surface environment. In response, EDF is working with regulators and key stakeholders to strengthen rules for proper construction and operation of hydraulically fractured wells. While stronger regulatory oversight of well construction is needed, no one should try to suggest that hydraulic fracturing itself is risk free. Both aspects of well development need strong oversight.¶ **Strengthening regulations for waste and water management**. Poor handling, storage and disposal of production fluids and other wastes is a major issue; chemical spillage is the leading cause of groundwater contamination from gas development activities. In response, EDF is pressing for measures to reduce spills, improve the use and handling of chemicals, and assure proper disposal (or recycling) of produced water. As mentioned above, a key missing ingredient here is better data on the chemical composition of waste streams. To be confident that handling, treatment and disposal practices are sufficient, authorities must know what substances are being handled. Finally, headline-grabbing reports of earthquakes connected to shale gas development have been linked to the waste disposal method known as deep well injection, not to hydraulic fracturing itself. This issue points to the need for improved seismic analysis prior to permitting of deep injection wells. ¶ **Improving regulations to protect local and regional air quality**. Air emissions resulting from the production, storage, processing, and transportation of natural gas can threaten public health. Leaks and routine venting during the extraction, processing and transportation of natural gas result in emissions of greenhouse gases and, depending on the local composition of unprocessed gas, other pollutants that contribute to locally- and regionally-elevated air pollution. In 2009, an SMU study estimated that the combined amounts of volatile organic compounds (VOC) and nitrogen oxide (NOx) emissions from oil and natural gas production in the Barnett Shale of North Texas were comparable to amounts of those emissions from the roughly 4 million cars and trucks in the adjoining Dallas Fort-Worth metro area. Fortunately, widely available and cost-effective remedies exist: repairing worn equipment, using “green” well completion techniques and eliminating venting are just a few. In the past five years, for example, Southwestern Energy says it has cut the cost of capturing stray emissions from $20,000 a well to close to zero. The company is capturing an average of 16 million cubic feet of gas that would otherwise have been released or flared. Southwestern also uses special pop-off valves to make sure natural gas is not released into the air from well casings. If pressure causes a valve to open, the gas is captured in a closed loop that returns it to the system, saving the resource. These systems cost just $600 to $1200 a piece. ¶ Developing innovative strategies to reduce community impacts. The cumulative impact of infrastructure development, traffic, noise, lights, and the like can overwhelm communities and intrude on sensitive ecosystems and habitats; none of this is easily addressed through conventional regulatory approaches. Instead, EDF recommends that states and local governments bring together stakeholders for scientifically based, bottom-up planning processes designed to address unique local needs. Likewise, the right of local communities to regulate the location of gas development through local zoning ordinances must be preserved. Gas operations shouldn’t receive special carve-outs from traditional local powers that other industrial activities must comply with. ¶ President Obama has voiced his commitment to domestic energy production through safe and responsible natural gas development, declaring that “America will develop this resource without putting the health and safety of our citizens at risk.” EDF would like to see Governor Romney and other candidates across the land call for the same careful balance. Far from being an example of regulation that chokes economic growth, strong oversight of natural gas development is necessary to ensure the sector's continued growth, by avoiding the public backlash that could slow or even derail natural gas development. ¶ The Role of Regulation¶ EDF is pushing for rapid regulatory reform in the states where the vast majority of onshore natural gas production is occurring, and relying on federal action in key areas where agencies have specific authority and capacity to act. Our goal is to make sure that the carbon benefits ascribed to natural gas are real and sustained, and that the rush to develop the nation’s natural gas reserves does not trample environmental quality or the health of communities.¶ **The United States needs stronger state and federal oversight of natural gas production; such regulation must evolve as technology evolves.** With a keen focus on the 14 states that have about 85% of onshore gas reserves, EDF recommends that candidates speak in favor of getting the rules right at the state level. Depending on their point of view, national candidates may see this state-level rulemaking as a necessary prelude to comprehensive federal regulation, or as a state-level process that obviates the need for federal regulation. Either way, it is clear that if states fail to implement effective oversight, an increased federal role will become inevitable.¶ In reality, the federal government and the states have a shared responsibility to ensure that our air, land and water are safe wherever hydraulically fractured wells are drilled. While much more remains to be done to ensure shale gas development is safe for people and the environment, important progress is currently underway at the federal, state and local levels.¶ **The EPA, for example, has adopted rules to reduce** air pollution **from oil and gas development activities that, while needing improvement, are an important step**. Likewise, some states have moved quickly to update their oil and gas rules. The wave of state regulations requiring disclosure of hydraulic fracturing fluid chemicals is an example of how states can quickly address concerns when the right motivation is in place. Appropriately, states are beginning to recognize the need to quickly address other concerns. Ohio, for example, recently adopted strong rules for the construction and operation of both production wells and disposal wells. Pennsylvania recently did the same. Wyoming and Colorado have been leaders on controlling air pollution from oil and gas operations. None of these rules is perfect, but they show that progress is possible with the right leadership.

### AT: Bridge Fuel

#### Now, their bridge fuel argument is a joke---if it’s true that natural gas will be so abundant and cheap absent the plan then there would be no incentive to develop clean energy---Trenbath says gas immediately causes clean energy companies to go bankrupt---it’s a bridge to nowhere

#### Tradeoff with renewables guarantees increased CO2 emissions

Schwartz 12 Peter Schwartz - cofounder of the Global Business Network, an elite corporate strategy firm, specializing in future-think and scenario planning. 08/21/12, “Abundant Natural Gas and Oil Are Putting the Kibosh on Clean Energy,” <http://www.wired.com/business/2012/08/mf_naturalgas/2/>)

The third impact will be on greenhouse gas emissions. Most new power plants will run on natural gas. While methane is cleaner than coal, it is obviously dirtier than nuclear, wind, and solar. And although some aging coal plants will be replaced, decreasing overall CO2 output**, far more nuclear, solar, and wind plants will be deferred or canceled in favor of gas operations**. All told, moving to a gas-based power grid will almost certainly result in more greenhouse gas emissions over time. **This is especially true when you factor in the inevitable gas that leaks in the production, shipping, and distribution process**. As an agent of global warming, methane is 25 times more potent than C02 so even a little leakage can have a large impact.

#### Natty gas can’t bridge to renewables---creates sunk costs and disincentivizes switch

Jones 12 (Christopher F. Jones - Ph.D, Ciriacy-Wantrup Fellow at Berkeley, previously fellow @ Harvard U. Center for the Environment. 8/29/12, " Natural Gas: Bridge or Dead End? ," Huffington Post, [www.huffingtonpost.com/christopher-f-jones/bridge-or-dead-end\_b\_1837015.html?utm\_hp\_ref=energy](http://www.huffingtonpost.com/christopher-f-jones/bridge-or-dead-end_b_1837015.html?utm_hp_ref=energy))

Critics of natural gas have typically focused on issues of pollution rather than infrastructure. First, there has been widespread opposition to 'fracking' shale gas reserves, a process that may contaminate drinking water, trigger minor earthquakes, and produce many other environmental consequences. Second, there are debates over whether natural gas really has a beneficial impact on climate. It may produce less greenhouse gas, but leaks of methane might more than offset these gains. These are important issues, but it is also worth examining the impact that expanding natural gas infrastructure will have on renewable energy systems.¶ Building a natural gas bridge will require a significant expansion of infrastructure: drilling wells for production, pipelines for distribution, and a range of devices for consumption including power plants, home furnaces, and industrial ovens. **Investing in these systems will increase the supply of natural gas** and lower its costs through economies of scale. As a result, consumers will find it cheaper and easier to use natural gas. This is a straightforward account of what infrastructure does -- it facilitates certain types of behaviors.¶ What is less appreciated is the fact that **infrastructure cuts two ways**. These systems will not simply provide an advantage for natural gas; **they will make it progressively harder and more expensive to transition to renewables.** We can examine this point by **think**ing **about relative prices and sunk costs.**¶ **Relative prices** often **matter more than absolute prices for energy transitions**. For consumers, it is not simply the price of an energy source that matters; it is how much more or less that energy source costs than other options. Right now, natural gas is already cheaper than solar and wind for electricity production in most analyses. With significant investments in natural gas infrastructure, this price gap is only likely to grow. Therefore, even though the absolute price of renewable energy will not change, wind and solar will become less attractive to consumers because they will cost relatively more.¶ What's more, these inequalities are likely to become more extreme over time **due to sunk costs**. Most of the systems designed to burn natural gas, like furnaces and electrical generating equipment, are **expensive and designed to last for decades.** Once large sums have been paid to purchase such systems, short-term price changes matter far less to consumers. Even if natural gas triples in price, **prior investments in these systems will still act as a disincentive for switching to renewables.** The sunk costs in infrastructure, therefore, further suggest that **once we get on the bridge, it will be hard to get off.**

### AT: Coal Internal Link

#### Coal won’t trigger warming---first all the methane outweighs evidence proves we have a comparatively stronger internal link---second the squo solves---Keller says new EPA regs will cause record coal retiring, especially of the dirtiest plants.

#### EPA regulations will cause coal plants to close or retrofit to reduce emissions.

Cover 12—Matt Cover, CNS News, 8/22/12, EPA Regulations Will Close Coal Plants, Raise Electricity Prices, GAO Says, August 22, 2012, http://cnsnews.com/news/article/epa-regulations-will-close-coal-plants-raise-electricity-prices-gao-says

(CNSNews.com) – New regulations issued by the Environmental Protection Agency will lead to the closure of older, coal-fired power plants and boost electricity prices in some parts of the country, according to a new report from the Government Accountability Office.¶ The GAO, at the behest of Sen. Jay Rockefeller (D-W.Va.), reviewed a host of information from government sources such as the EPA and Energy Information Agency (EIA) as well as private energy-sector forecasters to determine the likely impact of four new EPA regulations aimed at coal-fired power plants.¶ None of the regulations has taken effect yet and two have yet to be finalized by EPA. In fact, one of the regulations – the Cross-State Air Pollution Rule – was struck down by a federal court on Tuesday, after the GAO issued its findings.¶ (In a 2-1 decision, a panel of the U.S. Court of Appeals for the District of Columbia Circuit said the EPA’s cross-state air pollution rule – which sought to reduce downwind pollution from power plants -- exceeded the agency's statutory authority. The court faulted the EPA for imposing "massive emissions reduction requirements" on upwind states without regard to limits imposed by law.)¶ GAO found that as many as 12 percent of coal-fired power plants may be closed because the EPA regulations make it too expensive for power companies to operate them, despite coal being one of world’s cheapest fuels.¶ “It is uncertain how power companies may respond to four key Environmental Protection Agency (EPA) regulations, but available information suggests companies may retrofit most coal-fueled generating units with controls to reduce pollution, and that 2 to 12 percent of coal-fueled capacity may be retired,” GAO said.¶ These changes – either installing expensive retrofits or closing power plants – will drive up electricity prices by as much as 13.5 percent in some areas of the country.

#### New regulations are already closing coal-fired plants and more stringent standards are inevitable.

Pyle 12—Thomas J. Pyle, president of the Institute for Energy Research, 11/5/12, Obama's War on Coal Will Only Get Worse if He Is Re-Elected, <http://www.usnews.com/opinion/blogs/on-energy/2012/11/05/president-obama-is-trying-to-destroy-the-us-coal-industry>

According to data from the U.S. Energy Information Administration, U.S. coal production in the first half of 2012 is down 11 percent compared to the first half of 2007. More importantly, the war on coal is not about production alone. It is also important to consider the proposed federal regulations, which impact both the use and production of this vital energy resource. Here are just two of the regulations that affect coal: ¶ New Source Performance Standards for greenhouse gas emissions from new coal-fired power plants. These regulations ban new coal-fired power plants that do not capture carbon dioxide emissions—and none can. Existing plants don't have to comply right away under the rule, but EPA fixes them with the next regulation, MATS.¶ Mercury and Air Toxics Standards (MATS). This regulation, formerly called the Utility MACT rule, mandates a reduction in mercury and other emissions from power plants. According to EPA's own optimistic assumptions, the cost of this regulation is $10 billion a year, but the benefits from reducing mercury and air toxics is only $6 million a year (and that is likely overstating the benefits). Existing plants may be treated as "new plants" if they make these changes, and then be forced to meet the carbon dioxide emissions standards of the previous rule (EPA assures that this isn't the case, however, EPA does not have a strong legal case to make that argument). The combination of the two regulations could mean no coal plants, period.¶ These regulations alone show that the Obama administration is waging a war on coal consistent with his statement in 2008 to the San Francisco Chronicle that under his administration, "If someone wants to build a coal-powered plant, they can. It's just that it will bankrupt them."¶ One reason the Obama administration has not acted more forcefully and imposed draconian regulations on existing power plants is because Obama is waging a tactical war. It takes years to implement new regulations and if the president gets re-elected, we can surely expect him to move forward with a host of regulations that are waiting in the wings. Given the unpopularity of his war on coal, the administration is imposing the regulations it believes it can implement without too much immediate political impact.¶ In a second term, the administration will be able to dramatically limit or even halt the use of coal in the United States as confirmed by Carol Browner, his former energy and climate czar and now senior fellow at the far-left Center for American Progress.¶ The United States has the world's largest coal resources, but the Obama administration has nevertheless declared war on coal. With enough time, they can dramatically limit and possibly ban coal-fired power plants. While some people like Brown may try to ignore that Obama administration's policies, once you consider total U.S. coal production and the regulatory tidal wave arrayed against coal, it's obvious that the Obama administration's goal is to end the use and production of coal in the United States.

#### Cheap alternatives and increased regulations are causing a huge decline in coal.

Plummer 12—Brad Plummer, Washington Post, 10/15/12, U.S. coal industry would face decline even without Obama’s policies, http://www.washingtonpost.com/blogs/wonkblog/wp/2012/10/15/the-coal-industry-would-be-in-decline-even-without-obamas-policies/

Two things about coal are true right now. First, the U.S. coal industry really is in decline — the nation is burning far less coal to generate electricity than it did five years ago. Second, the Environmental Protection Agency under President Obama really has enacted a bunch of new rules that will require coal-fired power plants to curb their pollution. Those rules will cost money, and some utilities are now retiring their aging coal plants rather than installing expensive new scrubbers

### China

#### China’s transitioning to clean tech now---political commitment from CCP leadership

Luke Schoen 10-19, Associate in the Climate & Energy Program at WRI Insights, 10/19/12, “Policy Experts Provide Insights Into China’s Leadership Transition,” <http://insights.wri.org/news/2012/10/policy-experts-provide-insights-chinas-leadership-transition>

Deborah Seligsohn, a climate and energy advisor to WRI, rounded out the call by highlighting that China’s economic restructuring can be compatible with environmental protection, including around action to address climate change. China’s efforts to control emissions will be “good for climate change, the planet, and other environmental issues that they have to grapple with,” Seligsohn said.

She discussed the main drivers behind China’s energy and climate actions, including the country’s desire to: restructure its economy; increase innovation and development of new technologies; move toward greater environmental protections; and meet its targets in the 12th five-year plan.

Seligsohn concluded that “there is strong agreement [among Chinese officials] that part of development is being both cleaner and more technologically sophisticated and having a more diverse economy.”

China’s Energy Future

The discussions held during the call point to one key takeaway: Together, these underlying factors may indeed push China toward a lower-carbon energy future. These changes are unlikely to occur quickly, but we’ll all be watching closely to see if China’s new leadership is able to manage a transition to clean energy while ensuring the country stays on a solid growth pathway.

#### Unchecked Chinese coal emissions lock in catastrophic warming

Elizabeth Economy 7, the C.V. Starr Senior Fellow and Director, Asia Studies, Council on Foreign Relations, March 2007, “The Case of China and the Global Environment,” http://china.usc.edu/App\_Images/Economy.pdf

China’s domestic environmental problems are playing out dramatically on the world stage. China has become the first or second largest contributor to many of the world’s most vexing environmental challenges: climate change, the illegal timber trade, and marine pollution. At the same time, China’s strong engagement with the international community provides it with access to new technologies, financing and policy approaches that enhance its ability to change course. To date, China’s record in utilizing this access effectively to address global environmental issues is mixed, suggesting that only a strong economic incentive embedded in the environmental policy approach itself—one that is clearly and immediately realized—is enough to overcome both the drive to develop and the institutional weaknesses within the political system.

Climate Change

Climate change has the potential to wreak havoc on the economic and social well-being of much of the world. It promises changing agricultural patterns, rising sea levels, melting glaciers, increased pestilence, more frequent and severe storms, and drought among other economic and environmental challenges. While over time, the world’s most industrialized countries and regions—the United States, Japan and the EU—have been the dominant contributors of the greenhouse gases that cause climate change, China has emerged as perhaps the most significant actor for determining the future course of this global environmental challenge. As a result of its reliance on coal to fuel its economy, China’s emissions of CO2 have tripled over the past thirty years and are now second only to those of the United States. The International Energy Agency has indicated that China will surpass the U.S. as the largest contributor of CO2 by 2009, a full decade earlier than anticipated. 16 China already uses more coal than the United States, the European Union and Japan combined. (India, which lags well behind China in its overall consumption of coal, is nonetheless on track to become a major CO2 contributor over the next 10 years, and is already the 5 th largest contributor of greenhouse gases globally.) Indeed, unless China takes dramatic action to reconstitute its energy mix or takes advantage of the most advanced clean coal technologies, the increase in global warming gases from China’s coal use will probably exceed that for all industrialized countries combined over the next 25 years, surpassing by five times the reduction in such emissions that the Kyoto Protocol seeks.17

#### Building new coal capacity in China is the single most important variable for solving warming---locking in new current-gen coal plants makes it impossible for carbon sequestration to be developed in time

KC Golden 12, Policy Director at Climate Solutions, 5/16/12, “Coal export violates Rule 1 for winning the climate solutions game: “Don’t Lose”,” http://griponclimate.org/2012/05/16/coal-export-violates-rule-1-for-winning-the-climate-solutions-game-dont-lose/

The climate game is asymmetrical. Winning it is a long haul; it’ll take 50 years or more of patient investment to unwind ourselves from our fossil fuel infrastructure and build a sustainable energy economy. It’s great work, but quick it is not. Losing the game, however, is easy. We could do it in a heartbeat. That’s what Jim Hansen’s talking about when he calls tar sands development “game over” for the climate.

And tar sands aren’t the only way to lose. The single variable that will probably have the biggest impact on the world’s carbon emission trajectory and the fate of the climate is the number of coal-fired power plants that China and India build in the next decade or so. This factor looms so large because coal plants are so big, so long-lived, and so capital-intensive. And China and India will build a whole lot of them if they think that’s best way to power economic development for another 1.5 billion people.

A coal plant is a commitment. You don’t build one (let alone hundreds) unless you’re planning to run them for decades. So one of the most important questions you ask yourself before plunking down all that capital is: How much will the fuel cost – not just today, but 10, 20, 30 years from now? Fuel price forecasting is notoriously risky business, but at a minimum you want to know that there’s a lot of fuel available, and that there will be enough different suppliers to give buyers some competitive leverage.

This is one of the most important reasons why we are compelled to stop coal export from the Powder River Basin (PRB), through Northwest ports, to Asian markets. The PRB is among the largest coal deposits in the world, and the cheapest to extract. The all-important question that this coal answers is not “Where will China and India get coal tomorrow?” The question is “Will China and India have unlimited to access to all the world’s coal supplies, giving them enough confidence in future prices to justify construction of a whole generation of new coal plants?” And if the answer is yes, well, Jim Hansen’s going to say that scary thing again.

Notes:

1) Now, we can’t very well say to China and India: “Sorry, the atmosphere is already full of the carbon that created our prosperity, so you’re out of luck.” But we also can’t say “Go ahead and build out coal-fired economies; and here, take our coal,” because then we are all toast, scientifically speaking. The only fair way forward is for the developed economies to pioneer a new, sustainable prosperity that works for us for the long haul and for the billions more who will surely follow the best path to prosperity available to them. That’s what we’re trying to do in the Pacific Northwest. And coal export is, well, the opposite of that.

2) James Fallows and others contend that there’s no way around the coal, so the only hope is rapid development of carbon capture and sequestration (CCS) technology. The jury is out on whether it will prove more cost-effective to clean up an inherently dirty resource, compared to technology that more efficiently and cheaply captures clean energy. But if you’re betting on CCS, then the LAST thing you want is for a whole new generation of coal plants to be built now, with neither the technical nor the geological requirements for CCS. If we lock ourselves in to conventional fossil infrastructure now, then breakthroughs in CCS or clean energy technology will be too little, too late.

#### Chinese pollution causes CCP collapse and lashout

Yee & Storey 2 - Herbert Yee, Professor of Politics and International Relations at the Hong Kong Baptist University; and Ian Storey, Lecturer in Defence Studies at Deakin University, 2002, The China Threat: Perceptions, Myths and Reality, p. 5

The fourth factor contributing to the perception of a China threat is the fear of political and economic collapse in the PRC, resulting in territorial fragmentation, civil war and waves of refugees pouring into neighbouring countries. Naturally, any or all of these scenarios would have a profoundly negative impact on regional stability. Today the Chinese leadership faces a raft of internal problems, including the increasing political demands of its citizens, a growing population, a shortage of natural resources and a deterioration in the natural environment caused by rapid industrialisation and pollution. These problems are putting a strain on the central government's ability to govern effectively. Political disintegration or a Chinese civil war might result in millions of Chinese refugees seeking asylum in neighbouring countries. Such an unprecedented exodus of refugees from a collapsed PRC would no doubt put a severe strain on the limited resources of China's neighbours. A fragmented China could also result in another nightmare scenario - nuclear weapons falling into the hands of irresponsible local provincial leaders or warlords.2 From this perspective, a disintegrating China would also pose a threat to its neighbours and the world.

#### Chinese lashout goes nuclear

The Epoch Times, Renxing San, 8/4/2004, 8/4, http://english.epochtimes.com/news/5-8-4/30931.html

Since the Party’s life is “above all else,” it would not be surprising if the CCP resorts to the use of biological, chemical, and nuclear weapons in its attempt to extend its life. The CCP, which disregards human life, would not hesitate to kill two hundred million Americans, along with seven or eight hundred million Chinese, to achieve its ends. These speeches let the public see the CCP for what it really is. With evil filling its every cell the CCP intends to wage a war against humankind in its desperate attempt to cling to life. That is the main theme of the speeches. This theme is murderous and utterly evil. In China we have seen beggars who coerced people to give them money by threatening to stab themselves with knives or pierce their throats with long nails. But we have never, until now, seen such a gangster who would use biological, chemical, and nuclear weapons to threaten the world, that all will die together with him. This bloody confession has confirmed the CCP’s nature: that of a monstrous murderer who has killed 80 million Chinese people and who now plans to hold one billion people hostage and gamble with their lives.

## Economy Advantage

### 2NC No War

#### Economic collapse doesn’t cause war---that’s Jervis---if the current downturn didn’t cause global war then the factors cited in their evidence aren’t sufficient to cause hot wars

#### No conflicts resulted from the recession – disproves the impact

Barnett 9**—**senior managing director of Enterra Solutions LLC (Thomas, The New Rules: Security Remains Stable Amid Financial Crisis, 25 August 2009, http://www.aprodex.com/the-new-rules--security-remains-stable-amid-financial-crisis-398-bl.aspx)

When the global financial crisis struck roughly a year ago, the blogosphere was ablaze with all sorts of scary predictions of, and commentary regarding, ensuing conflict and wars -- a rerun of the Great Depression leading to world war, as it were. Now, as global economic news brightens and recovery -- surprisingly led by China and emerging markets -- is the talk of the day, it's interesting to look back over the past year and realize how globalization's first truly worldwide **recession has had** virtually **no impact** whatsoever **on** the **international security** landscape. None of the more than three-dozen ongoing conflicts listed by GlobalSecurity.org can be clearly attributed to the global recession. Indeed, the last new entry (civil conflict between Hamas and Fatah in the Palestine) predates the economic crisis by a year, and three quarters of the chronic struggles began in the last century. Ditto for the 15 low-intensity conflicts listed by Wikipedia (where the latest entry is the Mexican "drug war" begun in 2006). Certainly, the Russia-Georgia conflict last August was specifically timed, but by most accounts the opening ceremony of the Beijing Olympics was the most important external trigger (followed by the U.S. presidential campaign) for that sudden spike in an almost two-decade long struggle between Georgia and its two breakaway regions. Looking over the various databases, then, we see a most familiar picture: the usual mix of civil conflicts, insurgencies, and liberation-themed terrorist movements. Besides the recent Russia-Georgia dust-up, the only two potential state-on-state wars (North v. South Korea, Israel v. Iran) are both tied to one side acquiring a nuclear weapon capacity -- a process wholly **unrelated to** global **economic trends**. And with the United States effectively tied down by its two ongoing major interventions (Iraq and Afghanistan-bleeding-into-Pakistan), our involvement elsewhere around the planet has been quite modest, both leading up to and following the onset of the economic crisis: e.g., the usual counter-drug efforts in Latin America, the usual military exercises with allies across Asia, mixing it up with pirates off Somalia's coast). Everywhere else we find serious instability we pretty much let it burn, occasionally pressing the Chinese -- unsuccessfully -- to do something. Our new Africa Command, for example, hasn't led us to anything beyond advising and training local forces. So, to sum up: •No significant uptick in mass violence or unrest (remember the smattering of urban riots last year in places like Greece, Moldova and Latvia?); •The usual frequency maintained in civil conflicts (in all the usual places); •Not a single state-on-state war directly caused (and no great-power-on-great-power crises even triggered); •No great improvement or disruption in great-power cooperation regarding the emergence of new nuclear powers (despite all that diplomacy); •A modest scaling back of international policing efforts by the system's acknowledged Leviathan power (inevitable given the strain); and •No serious efforts by any rising great power to challenge that Leviathan or supplant its role. (The worst things we can cite are Moscow's occasional deployments of strategic assets to the Western hemisphere and its weak efforts to outbid the United States on basing rights in Kyrgyzstan; but the best include China and India stepping up their aid and investments in Afghanistan and Iraq.) Sure, we've finally seen global defense spending surpass the previous world record set in the late 1980s, but even that's likely to wane given the stress on public budgets created by all this unprecedented "stimulus" spending. If anything, the friendly cooperation on such stimulus packaging was the most notable great-power dynamic caused by the crisis. Can we say that the world has suffered a distinct shift to political radicalism as a result of the economic crisis? Indeed, no. The world's major economies remain governed by center-left or center-right political factions that remain decidedly friendly to both markets and trade. In the short run, there were attempts across the board to insulate economies from immediate damage (in effect, as much protectionism as allowed under current trade rules), but there was no great slide into "trade wars." Instead, the World Trade Organization is functioning as it was designed to function, and regional efforts toward free-trade agreements have not slowed. Can we say Islamic radicalism was inflamed by the economic crisis? If it was, that shift was clearly overwhelmed by the Islamic world's growing disenchantment with the brutality displayed by violent extremist groups such as al-Qaida. And looking forward, austere economic times are just as likely to breed connecting evangelicalism as disconnecting fundamentalism. At the end of the day, the economic crisis did not prove to be sufficiently frightening to provoke major economies into establishing global regulatory schemes, even as it has sparked a spirited -- and much needed, as I argued last week -- discussion of the continuing viability of the U.S. dollar as the world's primary reserve currency. Naturally, plenty of experts and pundits have attached great significance to this debate, seeing in it the beginning of "economic warfare" and the like between "fading" America and "rising" China. And yet, in a world of globally integrated production chains and interconnected financial markets, such "diverging interests" hardly constitute signposts for wars up ahead. Frankly, I don't welcome a world in which America's fiscal profligacy goes undisciplined, so bring it on -- please! Add it all up and it's fair to say that this global financial crisis has proven the great resilience of America's post-World War II international liberal trade order.

#### History proves

Ferguson 6— Laurence A. Tisch prof of History at Harvard. William Ziegler of Business Administration at Harvard. MA and D.Phil from Glasgow and Oxford (Niall, “The Next War of the World,” September/October 2006, http://www.realclearpolitics.com/articles/2006/09/the\_next\_war\_of\_the\_world.html)

Nor can economic crises explain the bloodshed. What may be the most familiar causal chain in modern historiography links the Great Depression to the rise of fascism and the outbreak of World War II. But that simple story leaves too much out. Nazi Germany started the war in Europe only after its economy had recovered. Not all the countries affected by the Great Depression were taken over by fascist regimes, nor did all such regimes start wars of aggression. In fact, no general relationship between economics and conflict is discernible for the century as a whole. Some wars came after periods of growth, others were the causes rather than the consequences of economic catastrophe, and some severe economic crises were not followed by wars.

#### Robust studies prove

Miller 2k – Professor of Management, Ottawa (Morris, Poverty As A Cause Of Wars?, http://www.pugwash.org/reports/pac/pac256/WG4draft1.htm)

Thus, these armed conflicts can hardly be said to be caused by poverty as a principal factor when the greed and envy of leaders and their hegemonic ambitions provide sufficient cause. The poor would appear to be more the victims than the perpetrators of armed conflict. It might be alleged that some dramatic event or rapid sequence of those types of events that lead to the exacerbation of poverty might be the catalyst for a violent reaction on the part of the people or on the part of the political leadership who might be tempted to seek a diversion by finding/fabricating an enemy and going to war. According to a study undertaken by Minxin Pei and Ariel Adesnik of the Carnegie Endowment for International Peace, there would not appear to be any merit in this hypothesis. After studying 93 episodes of economic crisis in 22 countries in Latin America and Asia in the years since World War II they concluded that Much of the conventional wisdom about the political impact of economic crises may be wrong... The severity of economic crisis---as measured in terms of inflation and negative growth---bore no relationship to the collapse of regimes. A more direct role was played by political variables such as ideological polarization, labor radicalism, guerilla insurgencies and an anti-Communist military... (In democratic states) such changes seldom lead to an outbreak of violence (while) in the cases of dictatorships and semi-democracies, the ruling elites responded to crises by increasing repression (thereby using one form of violence to abort another.

#### Econ collapse saps resources from military aggression

Bennett 2k– PolSci Prof, Penn State (Scott and Timothy Nordstrom, Foreign Policy Substitutability and Internal Economic Problems in Enduring Rivalries, Journal of Conflict Resolution, Ebsco)

Conflict settlement is also a distinct route to dealing with internal problems that leaders in rivalries may pursue when faced with internal problems. Military competition between states requires large amounts of resources, and rivals require even more attention. Leaders may choose to negotiate a settlement that ends a rivalry to free up important resources that may be reallocated to the domestic economy. In a “guns versus butter” world of economic trade-offs, when a state can no longer afford to pay the expenses associated with competition in a rivalry, it is quite rational for leaders to reduce costs by ending a rivalry. This gain (a peace dividend) could be achieved at any time by ending a rivalry. However, such a gain is likely to be most important and attractive to leaders when internal conditions are bad and the leader is seeking ways to alleviate active problems. Support for policy change away from continued rivalry is more likely to develop when the economic situation sours and elites and masses are looking for ways to improve a worsening situation. It is at these times that the pressure to cut military investment will be greatest and that state leaders will be forced to recognize the difficulty of continuing to pay for a rivalry. Among other things, this argument also encompasses the view that the cold war ended becausethe Unionof Soviet Socialist Republics could no longer compete economically with the United States.

#### Growth causes war

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If this limits-to-growth analysis is at all valid, the implications for the problem of global peace and conflict and security are clear and savage. If we all remain determined to increase our living standards, our level of production and consumption, in a world where resources are already scarce, where only a few have affluent living standards but another 8 billion will be wanting them too, and which we, the rich, are determined to get richer without any limit, then nothing is more guaranteed than that there will be increasing levels of conflict and violence. To put it another way, if we insist on remaining affluent we will need to remain heavily armed. Increased conflict in at least the following categories can be expected. First, the present conflict over resources between the rich elites and the poor majority in the Third World must increase, for example, as ‘development’ under globalisation takes more land, water and forests into export markets. Second, there are conflicts between the Third World and the rich world, the major recent examples being the war between the US and Iraq over control of oil. Iraq invaded Kuwait and the US intervened, accompanied by much high-sounding rhetoric (having found nothing unacceptable about Israel’s invasions of Lebanon or the Indonesian invasion of East Timor). As has often been noted, had Kuwait been one of the world’s leading exporters of broccoli, rather than oil, it is doubtful whether the US would have been so eager to come to its defence. At the time of writing, the US is at war in Central Asia over ‘terrorism’. Few would doubt that a ‘collateral’ outcome will be the establishment of regimes that will give the West access to the oil wealth of Central Asia. Following are some references to the connection many have recognised between rich world affluence and conflict. General M.D. Taylor, US Army retired argued ‘... US military priorities just be shifted towards insuring a steady flow of resources from the Third World’. Taylor referred to ‘… fierce competition among industrial powers for the same raw materials markets sought by the United States’ and ‘… growing hostility displayed by have-not nations towards their affluent counterparts’.62 ‘Struggles are taking place, or are in the offing, between rich and poor nations over their share of the world product; within the industrial world over their share of industrial resources and markets’.63 ‘That more than half of the people on this planet are poorly nourished while a small percentage live in historically unparalleled luxury is a sure recipe for continued and even escalating international conflict.’64 The oil embargo placed on the US by OPEC in the early 1970s prompted the US to make it clear that it was prepared to go to war in order to secure supplies. ‘President Carter last week issued a clear warning that any attempt to gain control of the Persian Gulf would lead to war.’ It would ‘… be regarded as an assault on the vital interests of the United States’.65 ‘The US is ready to take military action if Russia threatens vital American interests in the Persian Gulf, the US Secretary of Defence, Mr Brown, said yesterday.’66 Klare’s recent book Resource Wars discusses this theme in detail, stressing the coming significance of water as a source of international conflict. ‘Global demand for many key materials is growing at an unsustainable rate. … the incidence of conflict over vital materials is sure to grow. … The wars of the future will largely be fought over the possession and control of vital economic goods. … resource wars will become, in the years ahead, the most distinctive feature of the global security environment.’67 Much of the rich world’s participation in the conflicts taking place throughout the world is driven by the determination to back a faction that will then look favourably on Western interests. In a report entitled, ‘The rich prize that is Shaba’, Breeze begins, ‘Increasing rivalry over a share-out between France and Belgium of the mineral riches of Shaba Province lies behind the joint Franco– Belgian paratroop airlift to Zaire. … These mineral riches make the province a valuable prize and help explain the West’s extended diplomatic courtship …’68 Then there is potential conflict between the rich nations who are after all the ones most dependent on securing large quantities of resources. ‘The resource and energy intensive modes of production employed in nearly all industries necessitate continuing armed coercion and competition to secure raw materials.’69 ‘Struggles are taking place, or are in the offing, between rich and poor nations over their share of the world product, within the industrial world over their share of industrial resources and markets …’70 Growth, competition, expansion … and war Finally, at the most abstract level, the struggle for greater wealth and power is central in the literature on the causes of war. ‘… warfare appears as a normal and periodic form of competition within the capitalist world economy. … world wars regularly occur during a period of economic expansion. ’71 ‘War is an inevitable result of the struggle between economies for expansion.’72 Choucri and North say their most important finding is that domestic growth is a strong determinant of national expansion and that this results in competition between nations and war.73 The First and Second World Wars can be seen as being largely about imperial grabbing. Germany, Italy and Japan sought to expand their territory and resource access. Britain already held much of the world within its empire … which it had previously fought 72 wars to take! ‘Finite resources in a world of expanding populations and increasing per capita demands create a situation ripe for international violence.’74 Ashley focuses on the significance of the quest for economic growth. ‘War is mainly explicable in terms of differential growth in a world of scarce and unevenly distributed resources … expansion is a prime source of conflict. So long as the dynamics of differential growth remain unmanaged, it is probable that these long term processes will sooner or later carry major powers into war.’75 Security The point being made can be put in terms of security. One way to seek security is to develop greater capacity to repel attack. In the case of nations this means large expenditure of money, resources and effort on military preparedness. However there is a much better strategy; i.e. to live in ways that do not oblige you to take more than your fair share and therefore that do not give anyone any motive to attack you. Tut! This is not possible unless there is global economic justice. If a few insist on levels of affluence, industrialisation and economic growth that are totally impossible for all to achieve, and which could not be possible if they were taking only their fair share of global resources, then they must remain heavily armed and their security will require readiness to use their arms to defend their unjust privileges. In other words, if we want affluence we must prepare for war. If we insist on continuing to take most of the oil and other resources while many suffer intense deprivation because they cannot get access to them then we must be prepared to maintain the aircraft carriers and rapid deployment forces, and the despotic regimes, without which we cannot secure the oil fields and plantations. Global peace is not possible without global justice, and that is not possible unless rich countries move to ‘The Simpler Way’.

**Causes extinction by 2025**

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(Christopher and Bruce, *The Future of Global Conflict*, ed. Bornschier and Chase-Dunn, pg 43)

While the onset of a period of hegemonic rivalry is in itself disturbing, the picture becomes even grimmer when the influence of long-term economic cycles is taken into account. As an **extensive body of research** documents (see especially Van Duijn, 1983), the 50 to 60 year business cycle known as the Kondratieff wave (K-wave) has been in synchronous operation on an international scale for at least the last two centuries. Utilizing data gathering by Levy (1983) on war severity, Goldstein (1988) demonstrates that there is a corresponding 50 to 60 year cycle in the number of battle deaths per year for the period 1495-1975. Beyond merely showing that the K-wave and the war cycle are linked in a systematic fashion, Goldstein’s research suggests that severe core wars are **much more likely to occur** late **in the upswing** phase of the K-wave. This finding is interpreted as showing that, while states always desire to go to war, they can afford to do so only when **economic growth** is providing them with sufficient resources. Modelski and Thompson (1996) present a more complex interpretation of the systemic relationship between economic and war cycles, but it closely resembles Goldstein’s hypothesis. In their analysis, a first economic upswing generates the economic resources required by an ascending core state to make a bid for hegemony; a second period of economic growth follows a period of global war and the establishment of a new period of hegemony. Here, again, specific economic upswings are associated with an increased likelihood of the outbreak of core war. It is **widely accepted** that the current K-wave, which entered a downturn around 1967-73, is probably now in the process of beginning a new upturn which will reach its apex around 2025. It is also widely accepted that by this period US hegemony, already unraveling, will have been definitively eroded. This convergence of a plateauing economic cycle with a period of political multicentricity within the core should, if history truly does repeat itself, result in the outbreak of full-scale warfare between the declining hegemon and the ascending core powers. Although both Goldstein (1991) and Modelski and Thompson (1996) assert that such a global war can (somehow) be avoided, other theorists consider that the possibility of such a core war is sufficiently high that **serious steps should be taken to ensure that** such **collective suicide does not occur** .

#### We outweigh on probability and magnitude---wars during growth are more likely and worse

Mager 86 [Nathan, economist, *The Kondratieif* *Waves*, p 197-8]

The overall trend of the economy shapes perceptions as to its strength and direction. In a hull market, "experts" are almost uniformly optimistic; in a bear market the owlish analysts almost universally suggest caution. It is during the upward swings, soon after a trough and just before a peak, thatwars become more likely. It should be noted that peak wars are the result of a different kind of socioeconomic psychological pressure and have quite different economic results than trough wars. Nations become socially and politically unsettled after a long period of boom and expansion, perhaps because in their final stages, peoples' expectations begin to outrun actual growth in the general level of prosperity. War then becomes the ultimate destination. Inasmuch as all nations arc attempting to expand simultaneously, the intense competition for resources and markets leads eventually to military confrontations, which become contagious. One explanation suggested is that during trough wars the public is still largely concerned with private considerations and their own wellbeing. They tend to be less interested in international disputes, world crusades, or campaigns involving large investment of cash, effort, and the nervous energy needed to pursue projects to a conclusion. Trough wars tend to be short. They are more a matter of choice and sudden decision by the stronger power. Inasmuch as peak wars are the result of frustration of expectations {usually with economic elements), peak wars tend to be more desperate, more widespread, and more destructive.

#### ---Magnitude—increased capabilities mean wars are worse in the upswing

**Modelski** **& Thompson** **96** [professor of political science, professor of political science, George and William, *Leading Sectors and World Powers*, pg 20-22]

Goldstein (1985, 1987, 1988, 1991a) has probably contributed more than anyone else to reviving the question of how wars and prosperity are linked. His 1988 analysis went some way in summarizing many of the arguments concerning economic long waves and war. His 1991 analysis is one of the more sophisticated empirical studies to emerge after nearly a century of controversy (spatiotemporal boundaries: world system from the mid-eighteenth to the mid-twentieth centuries). The basic perspective that emerges from his analyses, outlined in figure 2.2, sees **economic upswings increasing the probability of** severe wars. Severe wars usher in a phase of stagnation from which the world economy eventually recovers leading to another resurgence of robust economic growth. Goldstein’s analysis suggests that this process has gone on since at least 1495. Economic upswings create economic surpluses and full war chests. The ability to wage war makes severe wars more likely. Severe wars, in turn, consume the surpluses and war chests and put an end to the growth upswing. Decades are required to rebuild. While there may be some gains registered in terms of resource mobilization for combat purposes, these gains are offset by the losses brought about by wartime distortions and destruction. Goldstein is careful to distinguish between production and prices. Prices, in his view, are functions of war. Other things being equal, the severity of the war greatly effects the rate of war-induced inflation—in other words, the greater the severity, then the higher the rate of inflation. When prices rise, real wages decline. Yet he also notes that production (production waves are said to precede war/price waves by some ten to fifteen years) is already stagnating toward the end of the upswing. This phenomenon is explained in terms of demand increases outstripping supply. As a result, inflation occurs. The lack of clarity on this issue may be traceable to the lack of specification among innovation, investment, and production. Cycles in innovation and investment are viewed as reinforcing the production long wave. Increases in innovation facilitate economic growth but growth discourages further innovation. Investment increases on the upswing but, eventually, over investment results. Investors retrench and growth slows down as a consequence. What is not exactly specified is whether innovation, investment, war, or some combination of the three processes is responsible for ending the upswing. Goldstein also raises the question of how these economic/war cycles impact the distribution of capabilities among the major powers. War severity increases capability concentration. Relative capabilities then begin a process of diffusion as they move toward equality among the major powers. Another bout of severe war ensues and the cycle repeats itself. In addition to war, differential rates of innovation and production influence relative capability standings. Presumably, all three factors share some responsibility for generating the fluctuations in capability concentration.

### AT Diversionary Conflicts

#### Diversionary theory is crap---180 empirics disprove it

**Gelpi 97** (Christopher, Center for International Affairs @ Harvard, "Democratic Diversions," Sage)

Students of international politics have often argued that state leaders initiate the use of force internationally to divert attention away from domestic problems. The author contends that these arguments concerning relationship between domestic unrest and international conflict are **not supported empirically** because they focus too narrowly on the incentives state leaders have to use external force as a diversionary tactic without considering alternative solutions to quieting domestic unrest. It is hypothesized that democratic leaders will respond to domestic unrest by diverting attention by using force internationally. On the other hand, authoritarian leaders are expected to repress the unrest directly, and these acts of repression will make them less likely to use force internationally. An analysis of the initiation of force by the challenging states **in 180 international crises** between 1948 and 1982 **strongly supports these hypotheses**. The results of the analyses and their implications for the literature on diversionary conflicts and the rapidly growing literature on democratic peace are discussed.