### 1ac Plan

#### The United States Federal Government should reduce restrictions on offshore natural gas production in the United States.

### 1ac Manufacturing

#### Advantage one is Manufacturing

#### Fracking is unsustainable – access to new conventional natural gas is key

Dorsey 12 (Gregory, Managing Editor – Leeb’s Performance Letter, “Fractured Logic: The Myth of Abundant Natural Gas,” Leeb’s Market Forecast, 5-9, http://leebsmarketforecast.com/content/fractured-logic-myth-abundant-natural-gas)

A popular meme these days is the idea that natural gas is America’s salvation on the road to energy independence. Production of the clean burning fuel has reached record levels in this country and stockpiles are bursting at the seams. Natural gas prices recently dipped to their lowest level since the late 1990s below $2 before clawing their way back to $2.50. The supply glut has occurred thanks to an extraction technique known as hydraulic fracturing, or “fracking,” as it’s commonly known. In contrast to the conventional method where companies merely drill into the earth to exploit natural gas and oil deposits below the surface, fracturing entails pumping a highly pressurized mixture of water, sand and chemicals into the well. The highly pressurized cocktail opens up cracks in tight rock formations, facilitating the flow of natural gas and other hydrocarbons from the source rock. Since fracking was approved for energy production through its exemption from the 2005 Safe Drinking Water Act, its popularity has grown immensely. Fracking has allowed producers to exploit resources that were otherwise considered too difficult to access. However, we would **stop short of calling fracking a true energy revolution** for a number of reasons, just one of which we want to address today. What’s typically overlooked is the huge amount of water resources required for hydraulic fracturing. While many believe fresh water to be an abundant resource, it’s actually anything but. As we’ve pointed out in the past, natural resources tend to be inter-correlated through the energy required to extract and process them. As one resource becomes scarcer, it will affect the cost or availability of other resources as well. In the long run, we see natural gas extraction from unconventional sources as no exception. And fresh water is the key connection. The mainstream political opposition to fracking comes from the environmental concern that the chemicals injected into the ground can leak into the groundwater, contaminating an important source of drinking water. We’ll leave the environmental argument to the experts in that field, but what has become increasingly clear in our research is that the amount of fresh water required for large-scale hydraulic fracturing is massive, far surpassing any estimates put forward by the oil and gas industry today. Depending on which numbers you use, unconventional shale fracking uses between six and 50 times the amount of water as conventional gas drilling. And the bulk of that water is required up front, as opposed to being used throughout the extraction process. The higher figures come from actual operational data, while the lower estimates are just that: estimates. As a result, many of the US shale plays that have been lauded as an abundant source of clean energy may produce far less natural gas than current forecasted estimates after all costs and resource inputs are accounted for. If these unconventional shale plays require much more water than conventional wisdom expects, as we suspect they will, there will be much less gas coming on line in the future than expected. And the cost of much of the gas that may eventually be extracted will be much higher than anticipated. Either way, the result is the same, causing the natural gas market to tighten and prices to rise. So if you heat and cool your home with natural gas, enjoy the current bonanza while it lasts. The takeaway for investors, meanwhile, is not simply to pile into the energy stocks most leveraged to natural gas prices, as tempting as that may be from a contrarian perspective. Unconventional gas deposits that will require fracking now make up a large portion of total natural gas assets for many E&P companies. And while higher water requirements will drive natural gas prices northward, it will also drive up costs for unconventional producers. The result for those producers will not be pretty. We would therefore stick with conventional natural gas producers who will benefit from higher gas prices. For safety sake, companies that also have a healthy exposure to crude oil earn the highest honors.

#### Natural gas prices will increase—crushes the economy

Schwartzel, 13 [Erich Schwartzel, Pittsburgh Post-Gazette, Expert on Fracking, visited Pappas’ Public Policy Class and was part of a round table discussion that consisted of Barry Rabe, professor at UM and others, really funny too, “U.S. report predicts rising natural gas prices in 2013-14”, <http://www.post-gazette.com/stories/business/news/us-report-predicts-rising-natural-gas-prices-in-2013-14-669602/>]

The average price of natural gas is expected to increase by almost a dollar in 2013, hitting $3.74 per million British thermal units. That's a significant jump from the $2.75 average seen last year, when accelerated drilling created a glut in supply that caused prices to drop and made drilling in many places unprofitable. Increases are expected to continue into 2014, when prices are predicted to hit $3.90. The EIA report released Tuesday is the first look into 2014 for the domestic and international energy scene, and it includes projections that could affect gas and coal activity in Pennsylvania and surrounding states. Higher gas prices would send reverberations across multiple sectors, helping coal become competitive with natural gas again as an electricity source and allowing drillers to broaden their focus beyond shale formations that are rich in oil. In addition, the federal energy agency projects increased domestic oil production will break new records over the next couple of years and eventually lead to lower prices at the gasoline station. The report is the latest set of tea leaves for an industry that's been in flux: Enthusiasm for drilling was tempered in recent years by economic realities that made it risky for every rig to turn a profit. The low prices made natural gas an easy sell to large, industrial customers who consume a lot of energy, but slowed lease activity as companies waited for prices to rebound. If natural gas prices continue an upward trend toward $4 per mcf, companies that had drilled wells but weren't bringing the gas to market could decide it is worth hooking those wells up to pipelines and selling the gas, said Adam Sieminski, the EIA administrator. Natural gas consumption, meanwhile, is expected to be relatively flat in 2013, though the EIA forecasts an increase in its use to heat homes and offices over the next two years. Consumption in 2012 was low due to an unnaturally warm winter. Over the next several years, the EIA's projections call for a steady rise in natural gas prices, said Mr. Sieminski, "continuing to go up to $5 or $6 in the longer term." That would be welcome news to drillers who found the bargain-basement prices unsustainable for rapid-fire drilling in the Marcellus region, which includes much of Pennsylvania, and in other shale formations around the country. Companies in recent years have concentrated on shale regions where more lucrative oil and natural gas liquids are housed, and a rise in regular natural gas prices "might turn the drift from natural gas to oil around," said Mr. Sieminski. Pennsylvania gets one shout-out in the administration's Short-Term Energy Outlook, with researchers saying Marcellus production "continues at a strong pace as producers target oil-and-gas wells." Nationwide, the natural gas rig count was at 431 at the end of 2012 -- almost half of the 811 rigs seen in the beginning of the year. But domestic gas production is expected to remain relatively steady despite the drop in rig count, which the EIA said suggests greater rig efficiency in extracting more gas from a single location.

#### And, shale gas is physically and economically unsustainable—continued reliance dashes expectations of future supply

Heinberg, 10/22/12 [Richard, He is Senior Fellow-in-Residence of the Institute and is widely regarded as one of the world’s foremost Peak Oil educators, He has authored scores of essays and articles that have appeared in such journals as Nature, The Ecologist, The American Prospect, Public Policy Research, Quarterly Review, Z Magazine, Resurgence, The Futurist, European Business Review, Earth Island Journal, Yes!, Pacific Ecologist, and The Sun; and on web sites such as Alternet.org, EnergyBulletin.net, TheOilDrum.com, ProjectCensored.com, and Counterpunch.com.¶ He has appeared in many film and television documentaries, including Leonardo DiCaprio’s 11th Hour, is a recipient of the M. King Hubbert Award for Excellence in Energy Education, and in 2012 was appointed to His Majesty the King of Bhutan's International Expert Working Group for the New Development Paradigm initiative, “Gas Bubble Leaking, About to Burst”, <http://www.postcarbon.org/blog-post/1262435-gas-bubble-leaking-about-to-burst>]

In those early days almost no one wanted to hear about problems with the shale gas boom—the need for enormous amounts of water for fracking, the high climate impacts from fugitive methane, the threats to groundwater from bad well casings or leaking containment ponds, as well as the unrealistic supply and price forecasts being issued by the industry. I recall attempting to describe the situation at the 2010 Aspen Environment Forum, in a session on the future of natural gas. I might as well have been claiming that Martians speak to me via my tooth fillings. After all, the Authorities were all in agreement: The game has changed! Natural gas will be cheap and abundant from now on! Gas is better than coal! End of story! These truisms were echoed in numberless press articles—none more emblematic than Clifford Krauss’s *New York* *Times* piece, “[There Will Be Fuel](http://www.nytimes.com/2010/11/17/business/energy-environment/17FUEL.html?pagewanted=all),” published November 16, 2010. Now Krauss and the *Times* are singing a somewhat different tune. “[After the Boom in Natural Gas](http://www.nytimes.com/2012/10/21/business/energy-environment/in-a-natural-gas-glut-big-winners-and-losers.html?pagewanted=1&tntemail1=y&_r=1&emc=tnt),” co-authored with Eric Lipton and published October 21, notes that “. . . the gas rush has . . . been a money loser so far for many of the gas exploration companies and their tens of thousands of investors.” Krauss and Lipton go on to quote Rex Tillerson, CEO of ExxonMobil: “We are all losing our shirts today. . . . We’re making no money. It’s all in the red.” It seems gas producers drilled too many wells too quickly, causing gas prices to fall below the actual cost of production. Sound familiar? The obvious implication is that one way or another the market will balance itself out. Drilling and production will decline (drilling rates have already started doing so) and prices will rise until production is once again profitable. So we will have less gas than we currently do, and gas will be more expensive*.* Gosh, whoda thunk? The current Times article doesn’t drill very far into the data that make Berman and Hughes pessimistic about future unconventional gas production prospects—the high per-well decline rates, and the tendency of the drillers to go after “sweet spots” first so that future production will come from ever-lower quality sites. For recent analysis that does look beyond the cash flow problems of Chesapeake and the other frackers, see “[Gas Boom Goes Bust](http://www.theoildrum.com/node/8900)” by Jonathan Callahan, and Gail Tverberg’s latest essay, “[Why Natural Gas isn’t Likely to be the World’s Energy Savior](http://ourfiniteworld.com/2012/10/17/why-natural-gas-isnt-likely-to-be-the-worlds-energy-savior/)”. David Hughes is working on a follow-up report, due to be published in January 2013, which looks at unconventional oil and gas of all types in North America. As part of this effort, he has undertaken an exhaustive analysis of 30 different shale gas plays and 21 shale/tight oil plays—over 65,000 wells altogether. It appears that the pattern of rapid declines and the over-stated ability of shale to radically grow production is true across the U.S., for both gas and oil. In the effort to maintain and grow oil and gas supply, Americans will effectively be chained to drilling rigs to offset production declines and meet demand growth, and will have to endure collateral environmental impacts of escalating drilling and fracking. No, shale gas won’t entirely go away anytime soon. But expectations of continuing low prices (which drive business plans in the power generation industry and climate strategies in mainstream environmental organizations) are about to be dashed. And notions that the U.S. will become a major gas exporter, or that we will convert millions of cars and trucks to run on gas, now ring hollow.

#### The impact is price spikes

Maize, 12/1/12 [“Is Shale Gas Shallow or the Real Deal?”, Kennedy, Veteran Journalist¶ Kennedy Maize has spent the past 40 years working as a journalist, analyst, and manager in the private sector and federal government, with over 35 years of that focused on energy and environmental topics. Over that time, he has seen myriad examples of how group think, policy fads, and bad judgment can result in colossal failures, particularly in the field of atomic energy. Maize has seen, up close and personal, the demise of the U.S. Atomic Energy Commission, the arrival of the U.S. Nuclear Regulatory Commission, the birth of the U.S. Department of Energy, the failures of nuclear flight, the hubris of atomic earthmoving, the boom and bust uranium market, the birth and death of breeder reactors, and the 60-year wandering in the wilderness of nuclear waste policy. After graduating from Penn State and graduate study at the University of Maryland, Kennedy Maize worked for newspapers in Pennsylvania, New York, and Virginia and the Associated Press in Baltimore. He then spent five years in management at the National Institute of Health and the U.S. Nuclear Regulatory Commission before taking a job covering energy, environment, and business topics for Editorial Research Reports, a division of Congressional Quarterly, where his work appeared in over 1,000 daily newspapers in the U.S. during the mid-to-late 1970s. Maize became a staff writer and editor at The Energy Daily, a preeminent energy trade paper, on March 28, 1979, the day the Three Mile Island accident began outside Harrisburg, Pa. Over more than 10 years at The Energy Daily, he covered the nuclear and coal industries, including stories involving the Clinch River Breeder Reactor, the U.S. Synthetic Fuels Corp., the Powder River Basin coal leasing scandal, and the Chernobyl explosion. In 1993, he founded The Electricity Daily, where he was the editor for 14 years, writing about changes in the electricity business, the rise and fall of Enron, the stagnation of the nuclear power business, and the arrival of market forces in the utility field. Since 2006, he has been an editor at POWER magazine, and the founder of MANAGING POWER magazine, where he has written about the Fukushima catastrophe, the emergence of shale gas and decline of coal, and the often ill-advised push for renewable electricity technologies¶ http://www.powermag.com/gas/Is-Shale-Gas-Shallow-or-the-Real-Deal\_5188.html]

In an interview with POWER, Berman argued that the boom in drilling shale gas wells has obscured a long-term decline in conventional gas supply. But **a coming rapid decline in shale production**, he said, will soon reveal the overall limits to the gas boom, and volatility and upward pressure could return to natural gas prices. “It’s not a problem for today or tomorrow,” Berman said, “but it is coming. Once we work through the current oversupply, if capital is not forthcoming,” prices will spike. The gas supply bubble will burst.¶ Because of the current gas glut, with long prices in the range of $3 per million cubic feet (mcf), drilling shale gas wells has tanked, noted Berman. Chesapeake Energy, the most bullish of the shale gas players, is selling assets and shifting rigs to drilling for oil because the company just can’t make money on $3 gas. “I can see a time not too many months away when we could see gas supply in rather serious decline,” Berman said, noting that “there is plenty of gas, but it takes a long time to shift momentum back” to gas drilling. At a 2010 meeting in Washington, as low gas prices were resulting in a decline in new drilling, Berman commented, “Shale plays are marginally commercial at best.”¶ Greatly complicating the supply equation, said Berman, is the nature of shale gas wells. “Shale wells decline 30 to 40% per year,” he said. “Conventional wells decline 20 to 25%. What most don’t grasp is how many wells it takes just to keep supply flat.”¶ In the Barnett Shale in Texas, where Berman is most familiar with the geology, he calculates that the annual decline in the gas resource is 1.7 bcf/day. In order to add to the net Barnett production, Berman says, companies would have to drill 3,880 wells, at a cost of $12 billion.¶ “We are setting ourselves up for a potential reduction in supply and price will go up,” said Berman. “I don’t know how much it will go up, and there is a check-and-balance with coal. There will be gas-coal switching if prices do go much higher than now.”

#### Prefer our data collection—our authors account for drilling history and use an academic gold standard for resource estimation

Hurdle, 12/3/12 [Jon, Citing Berman, qualls above, AOL Energy, “Are US Shale Gas Resources Overstated? Part 1”, <http://energy.aol.com/2012/12/03/are-us-shale-gas-resources-overstated-part-1/?icid=trending1>]

A forthcoming book argues that the country's shale gas plays contain only about a quarter of the fuel that has been estimated by the US Energy Information Administration, and other widely used industry and academic assessments. "Cold, Hungry and in the Dark: Exploding the Natural Gas Supply Myth," by Bill Powers asserts that the quantity of unproved but technically recoverable natural gas in US shale plays is approximately 127 trillion cubic feet, or about a quarter of the 482 tcf estimated by the EIA in its Annual Energy Outlook for 2012. Powers, who publishes a newsletter for energy investors, argues that existing natural gas plays have **not been nearly as productive** as their backers predicted, and so cannot be expected to live up to **expectations** for future output. "Recent drilling success has been extrapolated into the future," said Powers, who also sits on the board of the Calgary oil and gas company Arsenal Energy. "That's not supported by drilling history." In Arkansas' Fayetteville Shale, 4,400 wells have produced 3.3 tcf since 2005, according to the Arkansas Oil & Gas Commission, or around a tenth of the 32 tcf that the EIA says is technically recoverable. In reality, Powers says, the Fayetteville contains a total recoverable resource (TRR) of just 10 tcf. In Louisiana, Arkansas and east Texas, the Haynesville Shale has produced around 5 tcf so far, Powers said. He predicted it has a total recoverable resource of 10-20 tcf, far short of the EIA's estimate of 75 tcf, a number Powers called "ridiculous." **Swimming Against the Current** He applies the same argument to Michigan's Antrim Shale, a play that has not been subject to the new wave of hydraulic fracturing and horizontal drilling that has made many shale beds economic, but whose long history since the mid-1980s shows production that he says has fallen short of expectations. The Antrim has so far produced 3 tcf from some 10,000 wells, and its output has been declining since 1998, according to the Michigan Public Service Commission. Powers predicted the shale contains a TRR of 2 tcf, sharply lower than the 20 tcf predicted by the EIA. Powers is the latest analyst to argue that the widely heralded shale-gas "revolution" may be overblown. Other skeptics include Houston-based petroleum consultant Arthur Berman who has long claimed that resource estimates are being overstated by energy companies seeking to defend their stock prices. Berman, who writes the foreword to Powers's book, said the national gas resource, including proven reserves, is likely to equal about 22 years of consumption at the current rate, or less than a quarter of the 100 years' worth that is often cited by analysts and policymakers including President Obama. Berman's forecast is based on an estimate of probable reserves published by the Potential Gas Committee at the [Colorado School of Mines](http://energy.aol.com/tag/Colorado%2BSchool%2Bof%2BMines/), a 100-strong panel of company representatives that Berman called the "gold standard" of natural gas resource estimation. "There is a great deal more uncertainty in this whole shale revolution than most people want to believe," Berman told AOL Energy. "There is definitely less gas than the propaganda says."

#### Maintaining low prices through adequate supply is key to lock in a massive economic benefit—that galvanizes key industries

Pirog and Ratner, 12 [November, Congressional Research Service, Natural Gas in the U.S. Economy: Opportunities for Growth Robert Pirog Specialist in Energy Economics Michael Ratner Specialist in Energy Policy, http://www.fas.org/sgp/crs/misc/R42814.pdf]

Expanded supply, coupled with low natural gas prices, has the potential to contribute to a **transformation of important sectors** of the U.S. economy. Increased output and employment, expanded investment, income growth, improved competitiveness, and a reduction in the foreign trade deficit are likely outcomes. These conditions in the natural gas markets are likely to **benefit** certain key industriesdirectly, while many other industries could experience indirect benefits. direct beneficiaries are those industries that use natural gas as a raw material or as an important input in a production process. Industries whose output is directly related to the expansion of natural gas exploration, development and production are also direct beneficiaries. Examples of industries that use natural gas directly are petrochemicals and fertilizers. The steel industry is an example of an industry whose output is linked to the pace of natural gas resource development. Industries experiencing indirect benefits might include construction and capital goods producers that contribute to the supply chain for the investment projects undertaken by expanding natural gas consumers. In addition, more spending by workers in all of these industries could increase the growth of a wide variety of consumer goods and retail firms. The economic benefits of shale gas development and production will also open areas not recently accustomed to natural gas production, for example, the Marcellus field in parts of Pennsylvania, Ohio, West Virginia, Maryland, Virginia, and New York. In the international economy, those U.S. industries directly affected by expanded supply and low natural gas prices are likely to experience a competitive advantage over the producers of similar goods in other countries, resulting in increased exports from, and decreased imports to the United States. These effects would likely improve the U.S. trade deficit position. **This advantage is likely to be maintained** over time if the U.S. price of natural gas remains below those observed in other world regional markets (see Figure 5).13 U.S. industry’s advantage could be reduced through a process of world natural gas price convergence, especially in the three leading regional markets. However, for this to occur, traditional long-run contract terms, specifically linking natural gas prices to oil prices, would need to be changed to a more market-oriented method.

#### Robust domestic production is key to manufacturing growth—that’s the basis for economic recovery

Duesterberg, 12 [Tom is Executive Director of the Manufacturing and Society in the 21st Century program at the Aspen Institute. He recently retired as President and CEO of The Manufacturers Alliance/MAPI, an economic research and executive education organization based in Arlington, Virginia with more than 500 manufacturing firms as members. Previous positions include:  Director of the Washington Office of The Hudson Institute, Assistant Secretary for International Economic Policy at the U.S. Department of Commerce, chief of staff to two members of Congress, and associate instructor at Stanford University. His commentary and analysis on manufacturing, economic performance, globalization, and related policy issues can be found in major news outlets. He holds a B.A. degree from Princeton and M. A. and Ph.D. degrees from Indiana University, “Impact of the Energy Boom on US Manufacturing”,

<http://www.aspeninstitute.org/about/blog/impact-energy-boom-us-manufacturing>]

The manufacturing sector has been leading the US economic recovery since the end of the Great Recession in 2009. One of the key drivers in the manufacturing recovery is the renaissance in domestic production of natural gas and, to a lesser extent, oil. On November 28, the Institute’s program on [Manufacturing and Society in the 21st Century](http://www.aspeninstitute.org/policy-work/manufacturing) will host an [event](http://www.aspeninstitute.org/events/2012/11/28/impact-energy-renaissance-us-manufacturing) exploring the ramifications of recent developments in energy and manufacturing, and the sustainability of the production boom for the future.¶ Growth in domestic energy production, driven by the deployment of new exploration and drilling technologies, has been aneconomic turning pointin the US for a number of reasons. Not the least of these is the possibility of reaching the US’ long-term goal of energy independence, a goal which arguably has already been reached, if North America is considered the proper unit for determining independence. The substitution of natural gas for coal in electricity production and process heat in manufacturing, as well as the growing use of natural gas in transportation, also contribute to lowering greenhouse gas emissions. The Department of Energy’s estimates of future carbon emissions show a 69 percent drop in expected emissions from 2002 to 2030 compared to projections from 1990. Finally, overall economic growth is strengthened considerably by the energy boom. Not only is the United States producing more energy, it will also be building more petrochemical refineries, will supply the equipment needed to build the exploration and refining infrastructure, and almost every energy user—from households to large manufacturers—will benefit from more secure supplies and lower costs.¶ Manufacturing is at a pivotal point in this emerging energy economy. It uses about one-third of all energy produced in the United States, so lower prices and more secure supply give almost all firms in the sector a competitive advantage overfirms in other nations. Relative to the United States, the spot price of natural gas is nearly three times more expensive in Europe and four times more expensive in most of Asia. This advantage is especially important in the chemicals industry, which is the second largest subsector of US manufacturing. Natural gas and associated liquids represent over 80 percent of the feedstock for US refineries, whereas in Europe and Asia the ratios are roughly two-thirds oil and one-third natural gas. When the price differential between natural gas and oil is taken into account, the advantage to the American chemicals sector comes into much sharper relief. The US manufacturing sector benefits in many other ways: lower process heat costs, a globally competitive advantage in building the energy and refinery infrastructure driving the renaissance, and the stability of supply which will help attract long-term investment in subsectors like steel, glass, aluminum, and metal working. Finally, a larger share of GDP for a growing manufacturing sector helps to improve living standards, since productivity growth is so strong in this sector. Since 1998, manufacturing productivity has grown at an annual rate of 3.5 percent, over twice as much as the 1.4 percent in the services sector.¶ In the last few decades, manufacturing -- which faces steadily growing foreign competition and must innovate to protect its market share -- has steadily improved the energy efficiency of production. Total carbon emissions in this sector have fallen by nearly one-fourth since 1998, even though total output has increased by about a third. As a result, carbon emissions per dollar of output in manufacturing have fallen by 36 percent since 1998, compared to only 20 percent in the overall economy. This is due in part to the substitution of natural gas, in part due to productivity increases, and in part due to higher use of renewable energy—manufacturing uses 90 percent more renewables than the transportation sector.

#### Manufacturing loss cascades throughout the economy

Pisano and Shih, 12 [September, Producing Prosperity: Why America Needs a Manufacturing Renaissance [Kindle Edition], Harry E. Figgie Professor of Business Administration at the Harvard Business School. He has been on the Harvard faculty for 23 years, Professor of Management Practice. He joined the Technology and Operations Management Unit in January 2007, p. amazon kindle]

The rough and tumble of international competition means we should expect industries to come and go. Even if this is sometimes painful, it is, in fact, a healthy process by which resources flow to their most productive uses. When a commons erodes, however, it represents a deeper and more systematic problem. It means the foundation upon which future innovative sectors can be built is crumbling. When the semiconductor production business moved to Asia in the 1980s, it brought with it a whole host of capabilities—electronic-materials processing, deposition and coating, and sophisticated test and assembly capabilities—that formed an industrial commons needed to produce a whole host of advanced, high-valued-added electronic products such as flat-panel displays, solid-state lighting, and solar PV. In this book, we will examine the dynamics that underlie both the rise and decline of commons, and the consequence of those declines. Our argument is built around three core themes. Theme 1: When a Country Loses the Capability to Manufacture, It Loses the Ability to Innovate Innovation and manufacturing are often viewed as residing at the opposite ends of the economic spectrum—innovation being all about the brain (knowledge work) and manufacturing all about brawn (physical work). Innovation requires highly skilled, highly paid workers, and manufacturing requires low-skilled, low-paid workers; innovation is a high-valued-added specialty, and manufacturing is a low-value-added commodity; innovation is creative and clean, and manufacturing is dull and dirty. Such a view of manufacturing is a myth and is based on a profound misunderstanding of how the process of innovation works and the link between R&D and manufacturing. R&D is a critical part of the innovation process, but it is not the whole thing. Innovation is about moving the idea from concept to the customer’s hands. For some highly complex products (flat-panel displays, PV cells, and biotechnology drugs, to name a few) the transfer from R&D into production is a messy affair, requiring extremely tight coordination and the transfer of learning between those who design and those who manufacture. If you do not understand the production environment, you have a harder time designing the product. In these settings, there are strong reasons to co-locate R&D and production. It is a lot easier for an engineer to walk across the street to the plant or drive down the road than to fly halfway around the world to troubleshoot a problem. This helps to explain why the American company Applied Materials, a leading maker of equipment for manufacturing semiconductors and solar panels, moved its chief technical officer from the United States to China.14 Because most of its large customers are now in China, Taiwan, and South Korea, it makes sense for the company to do its research close to the factories that use its equipment. Applied Materials is now moving much of its manufacturing operations to Asia as well. In chapter 4, we will offer a framework for determining when it matters whether R&D and manufacturing are located near each and when it does not. Theme 2: The Industrial Commons Is a Platform for Growth The industrial commons perspective suggests that a decline of competitiveness of firms in one sector can have implications for the competitiveness of firms in another. Industries and the suppliers of capabilities to the industries need each other. Kill a critical industry, and the suppliers probably will not survive for long; other industries in the region that depend on those suppliers will then be jeopardized. When the auto industry declines, it causes an atrophy of capabilities (such as casting and precision machining) that are also used in industries such as heavy equipment, scientific instruments, and advanced materials. The unraveling of a commons is a vicious circle. As capabilities erode, it is harder for companies that require access to stay in business. They are forced to move their operations or their supplier base to the new commons. As they move, it is harder for existing suppliers to sustain themselves. Ultimately, they must either close shop or move their operations. Even worse, the loss of a commons may cut off future opportunities for the¶ emergence of new innovative sectors if they require close access to the same capabilities. Four decades ago, when US consumer electronics companies decided to move production of these “mature” products to Asia, who would have guessed that this decision would influence where the most important component for tomorrow’s electric vehicles—the batteries—would be produced? But that is what happened.15 The offshoring of consumer electronics production (often contracted to then-little-known Japanese companies such as Sony and Matsushita) led to the migration of R&D in consumer electronics to Japan (and later to South Korea and Taiwan). As consumers demanded ever-smaller, lighter, and more powerful (and power hungry!) mobile computers and cell phones, electronics companies were pushed to innovate in batteries. In the process, Asia became the hub for innovation in the design and manufacturing of compact, high-capacity, rechargeable, lithium ion batteries, a technology that was invented in America. This explains why Asian suppliers have become the dominant source of the lithium ion battery cells used in electric vehicles.

#### Natural gas production directly correlates with growth and innovation—unique spillover effects

Carey, 12/13/12 [Julie M, Julie M. Carey is an energy economist with Navigant Economics who provides consulting and testifying services Navigant’s unconventional oil and gas offerings include advisory services for strategic business decision analysis, construction risk management, economic and antitrust analyses, investment banking and restructuring advisory services, and expert services for disputes and investigations, “How Unconventional Oil And Gas Is Supercharging The U.S. Economy”, http://www.forbes.com/sites/energysource/2012/12/13/how-unconventional-oil-and-gas-is-transforming-the-u-s-economy/]

It’s an exciting time to be in the energy industry in America. The impact of unconventional oil and gas development on the U.S. economy is considerable, with potentially hundreds of billions of dollars in investments, millions of new jobs, and a renaissance of American ingenuity and innovation. In thinking about what is to come, looking back five years helps set the stage. January 2008: The energy sector was facing the great recession, high current and future expected natural gas prices, and job losses to China. There was **a generally poor outlook for the energy industry** and the economy. Few could have predicted the changes that were to come. Unforeseen happenings include the North Dakota oil rush, liquefied natural gas facilities being used as export facilities (instead of as import facilities as originally planned), railroads hauling crude oil, and jobs coming back from China. And, this is just the beginning. The commencement of the crude oil and natural gas revolution can be boiled down to one simple equation: [Surprise Side Effect Of Shale Gas Boom: A Plunge In U.S. Greenhouse Gas Emissions](http://www.forbes.com/sites/energysource/2012/12/07/surprise-side-effect-of-shale-gas-boom-a-plunge-in-u-s-greenhouse-gas-emissions/) Forbes Staff Contributor Abundant resources + cost effective extraction = high production levels of unconventional oil and gas. The net effect is a reshaping of the U.S. energy industry and our economy. Additionally, the country’s increased reliance on natural gas (displacing coal) has already benefited the environment, and will continue to do so in the future. Carbon emissions hit a 20-year low (in the first quarter 2012 according to EIA) and some industry observers believe that the U.S. could meet the Kyoto agreement standards by 2020 (even though the U.S. did not sign it). The emergence of unconventional oil and gas will have tremendous impacts on both the energy industry and the economy. The outlook for unconventional gas is exceptionally bright—with expectations for relatively low future natural gas prices, enough supply to meet domestic needs, and surplus enough to export to other countries. While the unconventional oil story continues to unfold and evolve, an abundance of domestic crude oil is expected. And, thus, an opportunity to not only significantly reduce the country’s dependence on oil imports, but to also increase energy security. Currently, crude oil prices are out of balance as new supply regions are isolated, making it difficult to get crude oil to market. That is expected to change once the necessary infrastructure is built to handle the new-found supply. As a result of these infrastructure needs, and the tremendous opportunities associated with unconventional oil and gas, U.S. economic activity is rising. Rising levels of economic activity can be divided into three distinct but overlapping waves of capital investment. The first wave of capital investment targets new and expanding oil and gas production areas. Sustained investment in the upstream sector – including wellheads, drilling and production – will be required to keep pace with increases in demand for the foreseeable future. The second wave of investment will focus on infrastructure to address new supply locations, delivering the product to market, and capitalizing on the near term opportunities arising from lower energy costs. Billions of dollars of investments specifically targeting capital projects in this wave are being announced weekly. Substantial investment in crude oil, natural gas and natural gas liquids pipelines will be required in order to build, expand, and reverse pipelines to address the new supply source locations. Natural gas processing plants that separate natural gas liquids (NGL) from natural gas will be required to address the growing production levels and new supply regions. In addition, LNG facilities will begin to export natural gas, and there is a potential opportunity for natural gas-to-diesel plants. In addition to these traditional areas of investment, creative market solutions are also emerging, such as rail transportation of crude oil. While railroads may serve primarily as a near to mid-term solution in the wake of long-lead time pipeline solutions, they are nimble competitors with small capital requirements that can be quickly deployed to utilize the country’s far-reaching rail networks. With only a few years needed to recover capital costs on investment, the competitive landscape changes and rail transportation rates could be reduced after pipelines enter the market to keep railroads competitive and still profitable. These factors suggest that railroads could be in the crude oil transportation business for the long haul. During this second wave, there will be amanufacturing resurgence, in part because of **lower** expected **energy** costs. Other macroeconomic factors will also be at work—including relative improvement in U.S. labor rates as labor markets tighten in China and other countries. Petrochemical plants will become cost effective competitors in the worldwide market and will be a significant component of the manufacturing investment story. Manufacturing facilities will be built to manufacture pipes, drill bits, valves and other required infrastructure materials. In addition, other manufacturing plants will likely be built solely as a play on the expectation of relatively low **energy** costs into the future. Such suspects could include those whose energy costs are large portion of production costs: semiconductors, plastics, and LCD televisions. The trend includes linking production and energy resources in an efficient manner, and moving production closer to market demand in order to minimize transportation related costs. The last wave of investment – which won’t begin to heat up for a few years – focuses on the consumers segment. In this wave, additional natural gas-fired power plants will be built to replace retiring coal plants and meet future increases in demand. Of course, new gas fired power plants will initially be built in regions with less excess capacity (post coal plant retirement). Another impact of U.S. unconventional oil and gas development will be increased in electricity demand (occurring more dramatically in various localized pockets), directly resulting from investment in waves one and two. New production areas and locations for processing and manufacturing plants will observe higher load growth. For example, localized areas within the Bakken region expect energy demand to double in the next five years. As a result of very specific changes to the economic activity and corresponding energy consumption levels, a more granular analyses will be required than is previously provided by traditional load forecasting methods. This third wave will also see a significant number of new heavy-duty natural gas vehicles, including bus and truck fleets. Greater reliance on natural gas-fueled light duty vehicles is possible but will require more time due to greater infrastructure requirements and technological innovation. Other creative opportunities being explored include natural gas pumps (hooked up to the home) to fuel natural gas vehicles, and light duty vehicles relying on fuel cells (which manufacturers hope to begin building by 2015). While it’s not currently clear who the winners will be, it’s safe to say that positive market forces and ample opportunity will lead to innovative solutions. The near-term outlook for total capital investment (from primarily first and second wave projects) is immense. The table below provides a snapshot analysis of the short term outlook (through 2020) for domestic (lower 48 state) based capital investment. These estimates are conservative and based largely on publicly reported company business plans. For example, Table 1 includes only a portion of expected U.S. LNG projects going forward, as compared to the full list of DOE applications. The estimate also excludes the massive $65 billion proposed Alaska pipeline/export facility project and third wave investments targeting natural gas fired power plants and natural gas vehicles. Even with just a portion of total investment included, the conservative estimate of short term investment reaches more than $300 billion. **Estimate of U.S. Unconventional Oil and Gas Capital Expenditures and Job Creation (Through 2020)** These investments have a huge economic impact on the U.S. economy—impacting jobs, economic growth and energy security. Some studies indicate that the U.S. has avoided retreating into an economic recession as a result of **activity in the** unconventional oil and gas sector. Production areas for unconventional oil and gas have observed very low unemployment and stronger GDP and tax revenues as compared to the rest of the U.S. As a result of the significant near term investments associated with unconventional oil and gas, it’s possible that up to 3.5 million jobs will be created from the infrastructure build out and related opportunities (including both direct and indirect jobs).

#### Domestic manufacturing is key to overall resilience

Ettlinger, 11 [Michael, Vice President for Economic Policy at the Center for¶ American Progress Prior to joining the Center, he spent six years at the Economic¶ Policy Institute directing the Economic Analysis and Research Network.¶ Previously, he was tax policy director for Citizens for Tax Justice and the Institute¶ on Taxation and Economic Policy for 11 years. He has also served on the staff of¶ the New York State Assembly. “The Importance and Promise¶ of American Manufacturing Why It Matters if We Make It in America and Where We Stand Today”, http://www.americanprogress.org/wp-content/uploads/issues/2011/04/pdf/manufacturing.pdf]

Manufacturing is critically important to the American economy. For generations,¶ the strength of our country rested on the power of our factory floors—both the¶ machines and the men and women who worked them. We need manufacturing¶ to continue to be a bedrock of strength for generations to come. Manufacturing¶ is woven into the structure of our economy: Its importance goes far beyond what¶ happens behind the factory gates. The strength or weakness of American manufacturing¶ carries implications for the entire economy, our national security, and the¶ well-being of all Americans.¶ Manufacturing today accounts for 12 percent of the U.S. economy and about¶ 11 percent of the private-sector workforce. But its significance is even greater¶ than these numbers would suggest. The direct impact of manufacturing is only a¶ part of the picture.¶ First, jobs in the manufacturing sector are good middle-class jobs for millions of¶ Americans. Those jobs serve an important role, offering economic opportunity to¶ hard-working, middle-skill workers. This creates upward mobility and broadens¶ and strengthens the middle class to the benefit of the entire economy.¶ What’s more, U.S.-based manufacturing underpins a broad range of jobs that¶ are quite different from the usual image of manufacturing. **These are higher-skill**¶ **service jobs** that include the accountants, bankers, and lawyers that are associated¶ with any industry, as well as a broad range of other jobs including basic research¶ and technology development, product and process engineering and design, operations¶ and maintenance, transportation, testing, and lab work.¶ Many of these jobs are critical to American technology and innovation leadership.¶ The problem today is this: Many multinational corporations may for a¶ period keep these higher-skill jobs here at home while they move basic manufacturing¶ elsewhere in response to other countries’ subsidies, the search for cheaper¶ labor costs, and the desire for more direct access to overseas markets, but eventually¶ many of these service jobs will follow. When the basic manufacturing leaves, the feedback loop from the manufacturing floor to the rest of a manufacturing¶ operation—a critical element in the innovative process—is eventually broken.¶ To maintain that feedback loop, companies need to move higher-skill jobs to¶ where they do their manufacturing. And with those jobs goes American leadership in technology and innovation. This¶ is why having a critical mass of both manufacturing and associated service jobs in¶ the United States matters. The “industrial commons” that comes from the crossfertilization¶ and engagement of a community of experts in industry, academia, and¶ government is vital to our nation’s economic competitiveness.¶ Manufacturing also is important for the nation’s economic stability. The experience¶ of the Great Recession exemplifies this point. Although manufacturing¶ plunged in 2008 and early 2009 along with the rest of the economy, it is on the¶ rebound today while other key economic sectors, such as construction, still¶ languish. Diversity in the economy is important—and manufacturing is a particularly¶ important part of the mix. Although manufacturing is certainly affected¶ by broader economic events, the sector’s internal diversity—supplying consumer¶ goods as well as industrial goods, serving both domestic and external markets—¶ gives it great potential resiliency.¶ Finally, supplying our own needs through a strong domestic manufacturing sector¶ **protects us from international** economic and political **disruptions**. This is most¶ obviously important in the realm of national security, even narrowly defined¶ as matters related to military strength, where the risk of a weak manufacturing¶ capability is obvious. But overreliance on imports and substantial manufacturing¶ trade deficits weaken us in many ways, **making us vulnerable** **to everything from**¶ **exchange rate fluctuations to** trade embargoes to **natural disasters**.

#### Economic collapse causes competition for resources and instability that escalates and goes nuclear

Harris and Burrows, 9 – \*counselor in the National Intelligence Council, the principal drafter of Global Trends 2025, \*\*member of the NIC’s Long Range Analysis Unit “Revisiting the Future: Geopolitical Effects of the Financial Crisis”, Washington Quarterly, http://www.twq.com/09april/docs/09apr\_burrows.pdf)

Increased Potential for Global Conflict

Of course, the report encompasses more than economics and indeed believes the future is likely to be the result of a number of intersecting and interlocking forces. With so many possible permutations of outcomes, each with ample opportunity for unintended consequences, there is a growing sense of insecurity. Even so, history may be more instructive than ever. While we continue to believe that the Great Depression is not likely to be repeated, the lessons to be drawn from that period include the harmful effects on fledgling democracies and multiethnic societies (think Central Europe in 1920s and 1930s) and on the sustainability of multilateral institutions (think League of Nations in the same period). There is no reason to think that this would not be true in the twenty-first as much as in the twentieth century. For that reason, the ways in which the potential for greater conflict could grow would seem to be even more apt in a constantly volatile economic environment as they would be if change would be steadier.

In surveying those risks, the report stressed the likelihood that terrorism and nonproliferation will remain priorities even as resource issues move up on the international agenda. Terrorism’s appeal will decline if economic growth continues in the Middle East and youth unemployment is reduced. For those terrorist groups that remain active in 2025, however, the diffusion of technologies and scientific knowledge will place some of the world’s most dangerous capabilities within their reach. Terrorist groups in 2025 will likely be a combination of descendants of long established groups inheriting organizational structures, command and control processes, and training procedures necessary to conduct sophisticated attacks and newly emergent collections of the angry and disenfranchised that become self-radicalized, particularly in the absence of economic outlets that would become narrower in an economic downturn.

The most dangerous casualty of any economically-induced drawdown of U.S. military presence would almost certainly be the Middle East. Although Iran’s acquisition of nuclear weapons is not inevitable, worries about a nuclear-armed Iran could lead states in the region to develop new security arrangements with external powers, acquire additional weapons, and consider pursuing their own nuclear ambitions. It is not clear that the type of stable deterrent relationship that existed between the great powers for most of the Cold War would emerge naturally in the Middle East with a nuclear Iran. Episodes of low intensity conflict and terrorism taking place under a nuclear umbrella could lead to an unintended escalation and broader conflict if clear red lines between those states involved are not well established. The close proximity of potential nuclear rivals combined with underdeveloped surveillance capabilities and mobile dual-capable Iranian missile systems also will produce inherent difficulties in achieving reliable indications and warning of an impending nuclear attack. The lack of strategic depth in neighboring states like Israel, short warning and missile flight times, and uncertainty of Iranian intentions may place more focus on preemption rather than defense, potentially **leading to escalating crises**.

Types of conflict that the world continues to experience, such as over resources, could reemerge, particularly if protectionism grows and there is a resort to neo-mercantilist practices. Perceptions of renewed energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could result in interstate conflicts if government leaders deem assured access to energy resources, for example, to be essential for maintaining domestic stability and the survival of their regime. Even actions short of war, however, will have important geopolitical implications. Maritime security concerns are providing a rationale for naval buildups and modernization efforts, such as China’s and India’s development of blue water naval capabilities. If the fiscal stimulus focus for these countries indeed turns inward, one of the most obvious funding targets may be military. Buildup of regional naval capabilities could lead to increased tensions, rivalries, and counterbalancing moves, but it also will create opportunities for multinational cooperation in protecting critical sea lanes. With water also becoming scarcer in Asia and the Middle East, cooperation to manage changing water resources is likely to be increasingly difficult both within and between states in a more dog-eat-dog world.

#### Our impact has a strong statistical basis – rally around the flag

Royal 10 – Jedediah Royal, Director of Cooperative Threat Reduction at the U.S. Department of Defense, 2010, “Economic Integration, Economic Signaling and the Problem of Economic Crises,” in Economics of War and Peace: Economic, Legal and Political Perspectives, ed. Goldsmith and Brauer, p. 213-214

Less intuitive is how periods of economic decline may increase the likelihood of external conflict. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson's (1996) work on leadership cycle theory, finding that rhythms in the global economy are associated with the rise and fall of a pre-eminent power and the often bloody transition from one pre-eminent leader to the next. As such, exogenous shocks such as economic crises could usher in a redistribution of relative power (see also Gilpin. 1981) that leads to uncertainty about power balances, increasing the risk of miscalculation (Feaver, 1995). Alternatively, even a relatively certain redistribution of power could lead to a permissive environment for conflict as a rising power may seek to challenge a declining power (Werner. 1999). Separately, Pollins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland's (1996, 2000) theory of trade expectations suggests that 'future expectation of trade' is a significant variable in understanding economic conditions and security behaviour of states. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However, if the expectations of future trade decline, particularly for difficult to replace items such as energy resources, the likelihood for conflict increases, as states will be inclined to use force to gain access to those resources. Crises could potentially be the trigger for decreased trade expectations either on its own or because it triggers protectionist moves by interdependent states.4 Third, others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess (2002) find a strong correlation between internal conflict and external conflict, particularly during periods of economic downturn. They write: The linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favour. Moreover, the presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other. (Blomberg & Hess, 2002. p. 89) Economic decline has also been linked with an increase in the likelihood of terrorism (Blomberg, Hess, & Weerapana, 2004), which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a sitting government. "Diversionary theory" suggests that, when facing unpopularity arising from economic decline, sitting governments have increased incentives to fabricate external military conflicts to create a 'rally around the flag' effect. Wang (1996), DeRouen (1995). and Blomberg, Hess, and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997), Miller (1999), and Kisangani and Pickering (2009) suggest that the tendency towards diversionary tactics are greater for democratic states than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that periods of weak economic performance in the United States, and thus weak Presidential popularity, are statistically linked to an increase in the use of force. In summary, recent economic scholarship positively correlates economic integration with an increase in the frequency of economic crises, whereas political science scholarship links economic decline with external conflict at systemic, dyadic and national levels.5 This implied connection between integration, crises and armed conflict has not featured prominently in the economic-security debate and deserves more attention.

### 1ac Please Don’t Read Ahead Yo

#### Advantage Two is Canada

#### Relations on the brink – striking a balance between energy independence and active engagement is key

Freeman, 1/18/13 [Sunny, Sunny Freeman is The Huffington Post Canada's national business reporter covering economics and business stories that make a difference in Canadians' lives. Sunny was previously a business reporter at The Canadian Press and has also worked at media outlets including The Toronto Star and The Vancouver Sun. You can find her on twitter @SunnyFreeman.

Canada Looks To Obama For Leadership On Oil, Environment, http://www.huffingtonpost.ca/2013/01/18/obama-canada-oil-environment\_n\_2467978.html]

Many Canadians -- including Harper, who has indicated that his climate change policy will follow the U.S. example -- are looking to Obama to lead thecharge. And the president has already hinted that addressing climate change is on his second-term agenda. For the six in 10 Canadians who, according to a recent Ipsos Reid poll, do not believe Harper is doing a good job protecting Canada’s environment, a renewed focus on environmental stewardship from the Obama administration would likely be viewed as long overdue. The events of 2012, now officially the hottest year on record -- from droughts in the U.S. to superstorm Sandy -- have sent American concern for the environment close to the level reported by Canadians, Scott says. “It’s becoming more clear this is the No. 1 issue,” he said. Scott, who believes Obama will reject Keystone to show that he is serious about the environment, is optimistic that the president will crack down on greenhouse-gas emissions, forcing Canada to develop its own clean energy strategy. “Canada’s oil-only policy isn’t going to fly anymore,” he said. “Canada’s going to have to move into the new economy and start thinking about energy efficiency and renewable energy and clean energy.” But Don Abelson, director of the Canada-U.S. Institute at Western University in London, Ontario, says there is room to strike a balance between energy and environmental imperatives. Energy independence, including through Keystone, can be achieved in an environmentally responsible way, according to Abelson. He believes that approval of Keystone, which would appease congressional Republicans, could actually give Obama leverage in pushing at least some of his environmental agenda through. Obama’s decision on Keystone will be among the first and most significant steps indicating his direction on an environmental policy that could change the North American economy. For now, however, most Canadians are focused on more immediate economic concerns. If there is no agreement in the U.S. on raising its debt ceiling or mitigating the impact of slated severe spending cuts, U.S. demand for Canadian exports could dry up. That would mean a severe hit to economic growth and Canadian jobs at a time of slowing domestic demand from debt-burdened consumers and a cooling housing market. A second recession in Canada would be possible. Foreign Affairs Minister John Baird’s office believes there is great opportunity ahead to expand the North American economy. “We will continue to engage constructively with the Obama administration as we look to create more jobs, hope and opportunity in our two great nations,” press secretary Rick Roth said. But, Abelson notes that even top government officials can do little more than urge the president and U.S. lawmakers to put aside their partisan differences and move ahead with crucial issues that will affect the Canadian economy. “We have to do our best to advance our concerns and to suggest areas of co-operation, but in the end we are the outsiders looking in,” he said.

#### Otherwise, lingering disagreements escalate ­– institutionalizing cooperation key

Bergh, 12 [SIPRI is an independent international institute dedicated to research into conflict, armaments, arms control and disarmament. Established in 1966, SIPRI provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public, THE ARCTIC POLICIES OF CANADA AND THE UNITED STATES: DOMESTIC MOTIVES AND INTERNATIONAL CONTEXT kristofer bergh, No. 2012/1\_July 2012]

V. Conclusions While Canada has fairly comprehensive strategies to deal with its own Arctic areas as well as wider foreign policy in the region, the presidential directive that guides US policy is quite limited. However, the scope of the two policy documents also testifies to the importance of the Arctic as a political issue in both countries. The Arctic has become a region of great political importance in Canada. However, the Canadian Government’s statements about identity and sov- ereignty may not be conducive to international cooperation. Although US public and political interest remains low and the USA’s capacity to operate in the region leaves much to be desired, changes are visible in terms of US foreign and defence policy. While the USA has not particularly distinguished itself in the inter- national cooperation over the Arctic—although it seems that this is now changing—Canada has repeatedly made clear that it is seeking a leadership role. The lingering disagreements between the two countries may, however undermine their ability to pursue their interests in the region. The future of the Arctic will require close cooperation between Canada and the USA, not least if human activity in the area increases as it becomes more accessible. Increased traffic in the Northwest Passage will present a challenge to both Canadian and US capacity to operate in the region, not least if responsibili- ties in the area are unclear. The two countries’ inability to agree on key issues such as the legal status of the Northwest Passage and the maritime bound- ary in the Beaufort Sea is affecting not only their domestic abilities but also their abilities to exercise international leadership in the region. In terms of boundary issues, for example, Norway and Russia, rather than Canada and the USA, have set a positive example and created a model for future delimita- tions. Canada and then the USA will chair the Arctic Council for two years each starting in 2013. Coordination between the two countries, along the lines of the common platform of the chairmanships of Norway, Denmark and Sweden, could be an attractive option for Canada and USA that would strengthen their positions in Arctic cooperation by formulating a North American Arctic policy. In order for this to happen, the two countries would have to approach each other on issues such as admitting observers to the Council and the role of the five Arctic littoral states. Moreover, they would have to agree on a common set of priorities to pursue in the Council for the coming years. The two countries’ abilities and willingness to address the challenges posed by the changing Arctic will depend on a range of circumstances, including geography and history; the shape of political systems; the presence of economic and strategic interests; and public engagement. The bilateral relationship between Canada and the USA will also be a key factor for the two countries’ abilities to meet the challenges in the rapidly changing region.

#### And, that makes cooperation ineffective

Meyer, 12 [Julia, Meyer, In Depth News, The Arctic: Simmering Tensions Between Canada and USA, <http://www.indepthnews.info/index.php/global-issues/1069-the-arctic-simmering-tensions-between-canada-and-usa>]

STOCKHOLM (IDN) - The focus of international attention on melting polar ice is hiding simmering tensions between Canada and the USA – two of the eight states with Arctic territory – which need be urgently resolved to avoid complications in a new emerging geopolitical situation, says a new study. "Both countries need to pay attention to the challenges in the Arctic but should also be wary of how their domestic posturing in the region is affecting their international relations, including with each other," says the study by the prestigious Stockholm International Peace Research Institute (SIPRI). Authored by Kristofer Bergh, the study says: "The abilities of Canada and the USA to pursue their interests in the region will rely on them cooperating closely, not least because from 2013 they will hold successive chairmanships of the Arctic Council. Canadian-US relations will thus be an important factor in the future of a changing Arctic. Resolving key disagreements and identifying common priorities would strengthen both countries’ positions in the region." Together with Denmark, Finland, Iceland, Norway, Russia, Sweden, Canada and the USA are members of the Arctic Council. The Council, which includes the representatives of the region's indigenous populations, has evolved into a decision-making organization with a permanent secretariat and budget. Subsequently it attracts more attention from the rest of the world.

#### Resource development is the best avenue to cooperative management

Jelinski, 10 [Cameron Jelinski, M.A, The University of British Columbia (Vancouver) Diplomacy and the Lomonosov Ridge: Prospects for International Cooperation in the Arctic, https://circle.ubc.ca/bitstream/handle/2429/28128/ubc\_2010\_fall\_jelinski\_cameron.pdf?sequence=1%29]

Possibilities for cooperation: Joint development zones While this paper focuses on interim solutions that may help lead to final delimitation of boundaries, it is important to mention in brief the possibilities for alternative solutions. As noted in the discussion above, the more conventional approach is for countries to enter into bilateral or multilateral delimitation negotiations in order to determine the final boundaries between them. As Vivian Forbes asserts, ―[t]he settlement of boundary disputes involving resources has traditionally centred on the demarcation of specific lines ... dividing the disputed resource area between the States involved.‖xcvi In addition to this approach, however, another option exists—one that has been adopted by several countries worldwide when faced with continental shelf delimitation disagreements. Specifically, it is possible for two or more states to effectively share jurisdiction indefinitely, by enacting arrangements that are variously called joint development zones, areas, or regimes. Joint development has been defined as ―cooperation between States with regard to the exploration for and exploitation of certain deposits ... of non-living resources, which ... lie in an area of overlapping claims.‖xcvii It is informative to examine in brief several existing examples of joint development before discussing the prospects of such a regime in the central Arctic Ocean. A number of joint development regimes exist in various situations of maritime or continental shelf delimitation disputes worldwide, such that Forbes posits that these regimes ―have gained universal acceptance. ‖xcviii An oft-cited example concerns the overlapping claims to the continental shelf that existed between Australia and Indonesia, and now between Australia and East Timor.xcix After years of disagreement over control of the 29 resources in this area, Australia and Indonesia reached in 1989 ―an elaborate compromise: the two sides set aside the question of permanent boundaries and agreed, instead, to the establishment of a zone of joint development‖ under which any government revenues from petroleum exploitation were equally shared by the two countries.c Thus, while this agreement did not determine final areas of exclusive sovereignty, it did effectively neutralize a longstanding dispute by creating an arrangement that could be adhered to indefinitely. In other words, while final delimitation was not achieved, delimitation was no longer seen as a pressing matter as long as the joint development agreement was respected. When East Timor gained independence from Indonesia, it renegotiated the treaty in such a way that the concept of joint development was maintained, albeit in a manner far more beneficial to this small developing country.ci In another example, Thailand and Malaysia formally created a Joint Development Area (JDA) in 1990.cii Forbes points out that the two countries’ belief that hydrocarbon resources existed in the area made delimitation more difficult, but that the perceived ―economic benefits‖ of exploitation was a driving factor behind the states’ willingness to pursue a joint development arrangement.ciii This factor may be relevant in the case of the central Arctic Ocean, as discussed below. Finally, a third example of joint development may be mentioned – this one on the southern fringes of the Arctic. In 1980, when negotiations on a maritime boundary between Iceland and Jan Mayen (Norway) failed to delimit the continental shelf, a Conciliation Commission recommended the creation of a joint development zone for ―an area of the shelf which had the greatest resource potential .‖civ Since adopting the recommendations, cooperation between the two states typically ―takes the form of joint venture contracts. ‖cv In short, then, the concept of joint development is well-established in 30 relations between countries, and in several cases has effectively removed from contention disputes over the continental shelf. In light of these concrete examples, it is possible to discuss the feasibility of a joint development regime as a method of defusing any disputes in the central Arctic Ocean. On the one hand, some of the factors that seem to facilitate joint development are present in the central Arctic Ocean, including areas of potentially overlapping claims, belief that resources may be found in these areas, and a history of some cooperation. Therefore, if eventual delimitation negotiations are found to be intractable, a joint development regime in the Arctic could attain the benefits that such regimes have facilitated elsewhere, particularly by providing ―a management tool in situations which otherwise would lead to disputes and confrontations. ‖cvi Such a regime could be established through a series of bilateral agreements, or through one multilateral agreement. On the other hand, however, it was noted above that the perceived economic benefits of joint exploitation were in at least one case a major factor behind thepush for a joint developmentarea**.** cvii Given that few oil and gas resources may exist in the area of potential overlap, and that their exploitation would be very costly, the drive for a joint development zone may be less urgent along the Lomonosov Ridge in the near term. It should be noted, however, that while resource exploitation is typically the main reason for joint development regimes of shared jurisdiction, other issues may be covered by such agreements. For example, Francisco Orrego Vicuna points out that some agreements on shared development jurisdiction ―have included clauses on cooperation regarding living resources, the environment, scientific research, search and rescue, and other issues.‖cviii Thus, even if 31 shared resource exploitation does not present an immediately compelling reason for pursuing a zone of joint jurisdiction, such an agreement could also increase the possibility of cooperation on other matters in the central Arctic Ocean. It should be noted as well that as in the case of a provisional delimitation arrangement, more information on the seabed may be needed in the central Arctic Ocean before the establishment of a joint development regime is feasible. In short, then, several potential forms of political cooperation could be pursued in the central Arctic Ocean. In an assertion that addresses potential concerns about the difficulties of diplomatic relations, Riddell-Dixon argues that ―[t]he prospects of dealing with [probable overlaps] in an orderly manner appear promising in light of the high degree of cooperation evident in Canada’s relations with Denmark, the United States, and Russia in the preparations of their respective submissions.‖cix While she does not advocate one form of cooperation or another, by formalizing such cooperation by means of a joint or coordinated submission, through a provisional delimitation agreement, or potentially through a joint development zone in the future, the concerned states could further enhance the prospects of dealing with overlaps peacefully and fairly.

#### Offshore gas production is key—unique spillover effects

Parfomak and Ratner, 11 [June 17, 2011 The U.S.-Canada Energy Relationship: Joined at the Well Paul W. Parfomak Specialist in Energy and Infrastructure PolicyMichael Ratner Analyst in Energy Policy, <http://www.fas.org/sgp/crs/row/R41875.pdf>]

Summary The United States and Canada, while independent countries, effectively comprise a single integrated market for petroleum and natural gas. Canada is the single largest foreign supplier of petroleum products and natural gas to the United States—and the United States is the dominant consumer of Canada’s energy exports. The value of the petroleum and natural gas trade between the two countries totaled nearly $100 billion in 2010, helping to promote general economic growth and directly support thousands of energy industry and related jobs on both sides of the border. Increased energy trade between the United States and Canada—a stable, friendly neighbor—is viewed by many as a major contributor to U.S. energy security. The U.S.-Canada energy relationship is increasingly complex, however, and is undergoing fundamental change, particularly in the petroleum and natural gas sectors. Congress has been facing important policy questions in the U.S.-Canada energy context on several fronts, including the siting of major cross-border pipelines, increasing petroleum supplies from Canadian oil sands, increasing natural gas production from North American shales, and the construction of new facilities for liquefied natural gas (LNG) exports. Legislative proposals in the 112th Congress could directly influence these developments. These proposals include H.R. 1938, which would expedite consideration of the Keystone XL pipeline proposal, H.R. 909, which would encourage petroleum and natural gas production on the outer continental shelf and in the Arctic National Wildlife Refuge, and S. 304, which would support a program to train workers involved with oil and gas infrastructure in Alaska. Other proposals in Congress affecting hydraulic fracturing operations for natural gas production, offshore drilling, or U.S. oil shale development could also affect the U.S.-Canada energy relationship. Traditionally, the energy trade between the United States and Canada, while intertwined, has been uncomplicated—taking the form of a steadily growing southward flow of crude oil and natural gas to markets in the U.S. Midwest and Northeast. But recent developments have greatly complicated that energy relationship creating new competition and interconnections. Consequently, while energy policies in one country have always inevitably affected the other, their cross-cutting effects in the future may not be widely understood and, in some cases, may be largely unanticipated. For example, policies affecting U.S. shale gas production could affect North American natural gas prices overall, and thus, the costs of producing petroleum from oil sands (which requires large volumes of natural gas for heating). Changing oil sands costs could, in turn, affect Canadian petroleum supplies to the United States, affecting north-south pipeline use and changing U.S. petroleum import requirements from overseas. Changing natural gas prices would also change the economics of Arctic natural gas, however, and influence the development of the Arctic natural gas pipelines, which could provide an alternative source of economic natural gas for oil sands production in Alberta. How such scenarios could play out in reality is open to debate, but they illustrate the tangled web policymakers in both countries must navigate as they consider future energy, environmental, and transportation decisions. As Congress debates legislative proposals affecting the petroleum and natural gas industries, it may be helpful to consider these proposals in the broadest possible North American context, recognizing that the energy sector in Canada may be moved in one direction or another based on policies in Washington, DC. To date, the judgment of Congress has favored a growing U.S.- Canada energy partnership—but ensuring that this relationship continues to be as mutually beneficial as possible will likely remain a key oversight challenge for the next decades.

#### Relations key to cyber threat management

Carafano et al 2010 – James Jay Carafano, Ph.D., is Deputy Director of the Kathryn and Shelby Cullom Davis Institute for International Studies and Director of the Douglas and Sarah Allison Center for Foreign Policy Studies, a division of the Davis Institute, at The Heritage Foundation. Jena Baker McNeill is Policy Analyst for Homeland Security and Ray Walser, Ph.D., is Senior Policy Analyst for Latin America in the Allison Center at The Heritage Foundation. Richard Weitz, Ph.D., is Senior Fellow and Director of the Center for Political–Military Analysis at Hudson Institute (“Expand NORAD to Improve Security in North America,” http://www.heritage.org/research/reports/2010/07/expand-norad-to-improve-security-in-north-america)

Addressing the wide range of threats confronting America’s security interests in North America will require NORAD’s involvement. Umar Farouk Abdulmutallab’s failed attempt to blow up a U.S.-bound jetliner was al-Qaeda’s most recent effort to cause mass casualties in America.[[22]](http://www.heritage.org/research/reports/2010/07/expand-norad-to-improve-security-in-north-america%22%20%5Cl%20%22_ftn22) In addition, threats to energy, communication, and computer networks persist. Malicious third parties can attack the United States through vulnerable intermediaries, such as Canada, which offers a huge backdoor into the U.S. computer networks. Much of the infrastructure of the two nations—from railroads to aviation to pipelines and electrical systems—is inextricably intertwined. Canada is also America’s largest trading partner, accounting for many links in U.S. supply chains. NORAD and NORTHCOM have partnered with a number of agencies—including the U.S. Defense Security Cooperation Agency, U.S. Department of Homeland Security, and U.S. Strategic Command— to protect U.S. networks. This cooperation will help NORAD to secure U.S. systems against potential attack, but NORAD does not currently have a lead cyber-security role.[23] The United States needs to deepen cooperation with its North American partners on cyber security. Both the Canadian and U.S. economies depend on a secure and functioning cyberspace. Computer systems and infrastructure in both countries are linked and a substantial amount of bilateral trade is conducted through the Internet. Since cyber terrorists and criminals can operate from anywhere, integration of cyber-security efforts is essential to protect computer infrastructure. Integration is especially necessary for Canada because its 200 law enforcement and 2,500 military personnel dedicated to cyber security are insufficient to prevent cyber attacks effectively. Through NORAD, Canada and the United States could coordinate cyber security with the various military commands and civilian agencies.[24] Cooperation with Mexico as its economy and cyber infrastructure develop is also vital, as the U.S. and Mexican governments acknowledged by creating the Working Group on Cyber-Security in 2004.[25]

#### Nuke war

**Tilford 12** Robert, Graduate US Army Airborne School, Ft. Benning, Georgia, "Cyber attackers could shut down the electric grid for the entire east coast" 2012, http://www.examiner.com/article/cyber-attackers-could-easily-shut-down-the-electric-grid-for-the-entire-east-coa

To make matters worse a cyber attack that can take out a civilian power grid, for example could also cripple the U.S. military.¶ The senator notes that is that the same power grids that supply cities and towns, stores and gas stations, cell towers and heart monitors also power "every military base in our country."¶ "Although bases would be prepared to weather a short power outage with backup diesel generators, within hours, not days, fuel supplies would run out", he said.¶ Which means military command and control centers could go dark.¶ Radar systems that detect air threats to our country would shut Down completely.¶ "Communication between commanders and their troops would also go silent. And many weapons systems would be left without either fuel or electric power", said Senator Grassley.¶ "So in a few short hours or days, the mightiest military in the world would be left scrambling to maintain base functions", he said.¶ We contacted the Pentagon and officials confirmed the threat of a cyber attack is something very real.¶ Top national security officials—including the Chairman of the Joint Chiefs, the Director of the National Security Agency, the Secretary of Defense, and the CIA Director— have said, "preventing a cyber attack and improving the nation~’s electric grids is among the most urgent priorities of our country" (source: Congressional Record).¶ So how serious is the Pentagon taking all this?¶ Enough to start, or end a war over it, for sure (see video: Pentagon declares war on cyber attacks http://www.youtube.com/watch?v=\_kVQrp\_D0kY%26feature=relmfu ).¶ A cyber attack today against the US could very well be seen as an "Act of War" and could be met with a "full scale" US military response.¶ That could include the use of "nuclear weapons", if authorized by the President.

#### Canadian relations solve global nuclear war

Lamont, 94 [Lansing, national political correspondent for Time Magazine’s Washington bureau from 1961-1968, chief Canada correspondent and United Nations bureau chief from 1971-1975, member of the Council on Foreign Relations “Breakup: The coming end of Canada and the stakes for America”, 1994, p. 233-5]

Of graver import would be the will and capability of Canada itself to continue supporting the North American defense structure. With its ongoing debt crisis, its traditional aversion to U.S. military initiatives, and the fading of the Soviet threat, Canada might reduce even further its NORAD and NATO commitments. It might choose to believe that through its control of territory crucial to the Western alliance, plus its vital natural resources, it could continue to wield disproportionate influence on international and continental security planning. More likely, if Ottawa continued to stint on its defense spending and became increasingly unable to patrol or secure its own borders, the United States would feel compelled to step in and do the job itself. In that event America would rekindle all the deepest passions about Canadian sovereignty, especially in the Arctic. Its development in the late 1980s proved a signal advance in continental security, although some Canadians believed that new radar technology would render the network obsolete by the end of the century. Others feared it would draw Canada further into the Star Wars strategizing of Pentagon planners. Paved Paws did not assuage the larger fear of military analysts that by the early 1990s, after the START Treaty had been signed by the United States and Russia, Canada the front line of any nuclear attack on North America, stood to face an expanded armory of Russian cruise missile which could be launched southward from the Arctic through Canadian airspace. A provision in the treaty to rescue both superpowers nuclear stockpiles ironically permitted the Russians, as part of a trade-off to increase their cruise missiles arsenal by nearly half. Thus, instead of landbased ICBMs, easier to track and shoot down with their predictable trajectories, Canada now faces the possibility of some day having to track one or more cigar-shaped cruises streaking at tree level over Canadian territory toward a designated target. That prospect, however dim at the moment, could take on sharper tones in the context of these possible developments: Quebec’s separation and the emergence to America’s north of a fragmented Canada, neither event enhancing the continent’s security; Canada’s military inadequacies and an erosion of Canada-U.S. relations, which might send signals inviting aggression by the Western alliance’s adversaries; or a political upheaval in the former Soviet Union, which would precipitate an interna­tional crisis. Any prolonged crisis, as security analysts know, involves not only heightened tensions and escalating suspicions but a shift in emphasis to preparing for a very rapid response if hostilities erupt. In such situations the usual safeguards are sometimes apt to be disregarded or even removed.

### 1ac Solvency

Offshore gas is abundant and ensures economic growth – permanently lifting the moratorium solves

Mason, 09 [Joseph R. Mason\*, Hermann Moyse Jr./Louisiana Bankers Association Endowed Chair of Banking, Louisiana State University, E. J. Ourso College of Business. The Economic Contribution of Increased¶ Offshore Oil Exploration and Production to Regional and National Economies, <http://www.americanenergyalliance.org/images/aea_offshore_updated_final.pdf>]

Until recently, Congressional and Presidential leasing¶ moratoria have withdrawn from production oil and¶ natural gas resources lying between 3 and 200 miles off¶ the coast of 20 U.S. states.1 These moratoria have recently¶ expired, however, and several policymakers have¶ argued that the federal moratoria should be renewed.¶ Before renewing those restrictions, however, it makes¶ sense to take a hard look at not only the resources that¶ are held back, but also at the total potential economic¶ growth that will be foregone.¶ The present study therefore estimates the total¶ economic benefits associated with allowing natural¶ resource production in previously unavailable Outer¶ Continental Shelf (“OCS”) Planning Areas. The study¶ uses data from the U.S. Commerce Department, the¶ U.S. Department of the Interior, and the U.S. Treasury¶ Department to estimate the total increase in output,¶ employment, and wages in both coastal states and the¶ entire U.S. that can be expected to result from increased¶ OCS production.¶ The estimates suggest that permanently lifting the¶ OCS moratoria would produce broad economic benefits.¶ Those benefits are analyzed on both short- and¶ long-term bases. Short-run effects are represented as¶ expected annual effects during the first years of the¶ investment (pre-production) phase; Long-run effects¶ are represented as expected annual effects during the¶ production phase. A summary of the estimated shortand¶ long-run effects is presented in Table 1.¶ Summarizing the results, increased offshore investment¶ and production would support hundreds of¶ thousands of new careers and provide billions of dollars¶ in new wages and tax revenues. By the present estimates,¶ increased production is likely to contribute an¶ additional 0.5 percent of GDP in immediate new economic¶ activity each year and will ultimately contribute¶ more than 2 percent of GDP each year for thirty or¶ more years of production. That magnitude of economic¶ growth is expected to contribute federal and¶ state and local tax revenue from production equivalent¶ to approximately $350 per person over the age of¶ eighteen per year over a similar time horizon. The total¶ incremental contribution of increased OCS Planning¶ Area production to GDP ismore than $8 trillion (in¶ current dollars), and total tax benefits amount to some¶ $2.2 trillion. Total royalty revenues amount to over¶ $400 billion.¶ Importantly, those benefits would be realized without¶ any increase in direct government spending. Rather, increased¶ OCS output would refill national, state, and local¶ government coffers—currently depleted by the real estate¶ and credit crises—without additional government¶ outlays. The effects of such a stimulus are particularly¶ attractive in the face of a severe economic downturn.¶ Table 1: Summary of Estimated Annual Effects¶ offshore oil and natural gas production has long been¶ recognized as a national imperative. In 2006, the U.S.¶ Minerals Management Service (MMS) reported to¶ Congress that “much of the growth in the Nation’s energy¶ demand will have to be met by OCS…if further increases¶ of imported supplies are to be avoided.”2 MMS¶ also estimated that “OCS oil production could account¶ for as much as 40 percent of domestic oil production¶ by 2010.”3 Furthermore, the MMS indicated that the¶ OCS natural gas resources would become an essential¶ source of energy as imports from other countries —¶ particularly Canada—decline.4¶ Apart from national energy concerns, however, economic¶ considerations also favor increased development¶ of OCS energy resources. Specifically, the boost¶ provided to local onshore economies by offshore¶ production would be particularly welcome in the present¶ economic climate. Similar to fiscal alternatives¶ currently being pursued, OCS development would provide¶ a long-run economic stimulus to the U.S. economy¶ because the incremental output, employment, and¶ wages provided by OCS development would be spread¶ over many years. Unlike those policies, however, this¶ stimulus would not require government expenditures¶ to support that long-term growth.¶ A. The Current State of Offshore¶ U.S. Oil and Gas Production¶ Despite its importance, U.S. oil and natural gas production¶ in offshore areas is currently limited to only a¶ few regions. At the present time, oil and gas is only¶ actively produced off the coast of six U.S. states:¶ Alabama, Louisiana, Mississippi, Texas, California, and¶ Alaska.5 The Energy Information Administration¶ (EIA) reports that Alabama, Louisiana, Mississippi,¶ and Texas are the only coastal states that provide¶ access to all or almost all of their offshore energy¶ resources. Only two additional states — Alaska and¶ California — are producing any offshore energy supplies.¶ All California OCS Planning Areas and most¶ Alaska OCS Planning Areas, however, were not open¶ to any new facilities until the recent end of the Congressional¶ and Presidential moratoria.6 The remaining¶ 16 coastal states are not open to new production and are¶ not currently extracting any offshore energy resources.7¶ Even without those remaining sixteen states, plus¶ California and Alaska, the OCS is already the most important¶ source of U.S. energy supplies. According to¶ the MMS, “the Federal OCS is a major supplier of oil¶ and natural gas for the domestic market, contributing¶ more energy (oil and natural gas) for U.S. consumption¶ than any single U.S. state or country in the¶ world.”8 That is, OCS production currently meets more¶ U.S. energy demand than any other single source,¶ including Saudi Arabia.¶ B. Offshore Oil Production¶ Stimulates Onshore Economies¶ Offshore oil and gas production has a significant effect¶ on local onshore economies as well as the national¶ economy. There are broadly three “phases” of development¶ that contribute to state economic growth: (1) the¶ initial exploration and development of offshore facilities;¶ (2) the extraction of oil and gas resources; and (3)¶ refining crude oil into finished petroleum products.¶ Industries supporting those phases are most evident in¶ the sections of the Gulf of Mexico that are currently¶ open to offshore drilling.¶ For example, the U.S. shipbuilding industry —¶ based largely in the Gulf region – benefits significantly¶ from initial offshore oil exploration efforts.9 Exploration¶ and development also requires specialized exploration¶ and drilling vessels, floating drilling rigs, and¶ miles and miles of steel pipe, as well as highly educated¶ and specialized labor to staff the efforts.¶ The onshore support does not end with production.¶ A recent report prepared for the U.S. Department of¶ Energy indicates that the Louisiana economy is “highly¶ dependent on a wide variety of industries that depend¶ on offshore oil and gas production”10 and that offshore¶ production supports onshore production in the chemicals,¶ platform fabrication, drilling services, transportation,¶ and gas processing.11 Fleets of helicopters and U.S.-¶ built vessels also supply offshore facilities with a wide¶ range of industrial and consumer goods, from industrial¶ spare parts to groceries. As explained in Section¶ IV.G, however, the distance between offshore facilities¶ and onshore communities can affect the relative¶ intensity of the local economic effects.¶ The economic effects in the refining phase are even¶ more diffuse than the effects for the two preceding¶ phases. Although significant capacity is located in California,¶ Illinois, New Jersey, Louisiana, Pennsylvania,¶ Texas, and Washington, additional U.S. refining capacity¶ is spread widely around the country.12 As a result,¶ refinery jobs, wages, and tax revenues are even more¶ Figure 1: Percent of Mortgages 90+ days Delinquent, by County, 2008Q2¶ likely to extend into other areas of the country, including¶ non-coastal states like Illinois.¶ C. Economic Stimulus from OCS Drilling¶ Can Significantly Benefit Coastal Economies¶ Stressed by the Mortgage Crisis and Recession¶ Figure 1 illustrates the percent of mortgages ninety or¶ more days delinquent by county in the third quarter¶ 2008. It is easy to see that most of the hard-hit regions¶ are in the coastal states, including especially those close¶ to restricted OCS resources. States like California and¶ Florida, especially hard hit with mortgage foreclosures¶ and facing fiscal crises resulting from decreased property,¶ sales, and income taxes, could benefit dramatically¶ from OCS development.¶ Even interior states like Illinois, Pennsylvania, and¶ Indiana stand to benefit, however, as those are home¶ to many refining and chemical industries that ride the¶ economic coattails of oil exploration and extraction. In¶ summary, the benefits of OCS development, while particularly¶ focused on coastal states, are to be found nationwide.¶ The rest of this paper is devoted to estimating¶ the magnitude of those benefits to provide valuable¶ economic estimates to be used in rational decision¶ making on the costs and benefits of OCS development.¶ III. Present Offshore Oil¶ and Gas Resource Estimates¶ To determine the economic effect of increased offshore¶ oil and gas production on each state, it is first necessary¶ to determine each state’s recoverable resources. The most¶ reliable estimates of total offshore recoverable resources¶ are provided by Energy Information Administration¶ (EIA). The EIA estimates these data for each Outer¶ Continental Shelf Planning Area. Because several OCS¶ Planning Areas adjoin more than one state, the EIA¶ does not provide state-by-state resource estimates.¶ This paper takes a two-step approach to estimating¶ state-by-state resources. First, OCS Planning Areas are¶ apportioned to the adjoining states by assuming that a¶ state’s share of oil and gas resources (and hence the¶ benefits of utilizing those resources) is proportional to¶ its share of the U.S. coastline that adjoins an OCS Planning¶ Area. Then, the value of the state resources are¶ estimated by applying the long-run average price of oil¶ and gas to each resource state’s share.¶ A. Estimating State Offshore Oil and Gas Resources¶ Significant oil and gas resources lie under the U.S. Outer¶ Continental Shelf. According to the EIA, the OCS (including¶ Alaskan OCS Planning Areas) contains approximately¶ 86 billion barrels of recoverable oil and¶ approximately 420 trillion cubic feet of recoverable natural gas.13 As noted by the White House, however, the OCS estimates are conservative.14 Of the total OCS resources,¶ a significant portion was unavailable to exploration until¶ recently. Specifically, Presidential and Congressional¶ mandates banned production from OCS Planning Areas¶ covering approximately 18 billion barrels of recoverable oil¶ and 77.61 trillion cubic feet of recoverable natural gas.15¶ These bans covered approximately 31 percent of the total¶ recoverable OCS oil resources and 25 percent of the total¶ recoverable OCS natural gas resources. Figure 2, which¶ was originally produced by the EIA, visually demonstrates¶ the areas (in blue) that were previously unavailable. As¶ noted previously, the estimated resources illustrated in¶ Figure 2 should be considered very conservative lower¶ bounds of recoverable energy resources.¶ To estimate the state-by-state impact of increased¶ oil and gas production in the OCS, the OCS Planning¶ Area resources are apportioned to each coastal state¶ based on the local communities that provide labor, materials,¶ and support services for offshore production.¶ The analysis of economic impact therefore hypothesizes¶ that the economic benefits associated with offshore¶ oil and gas production accrue onshore firstly in¶ the local communities that provide the most convenient¶ labor, materials, and support services for offshore¶ production. In other words, if distance is important,¶ communities closer to the oil or gas field are more¶ The Economic Contribution of Increased Offshore Oil Exploration and Production to Regional and National Economies • 5¶ likely to provide goods and services than are communities¶ further away. Thus, OCS Planning Area resources¶ — and the local economic benefits associated with¶ exploiting those resources — are apportioned by each¶ state’s share of the ocean coastline bordering an OCS¶ Planning Area.¶ State coastline data is available from the Congressional¶ Research Service (CRS).16 Based on this apportionment,¶ the available and total offshore resources¶ associated with each state are illustrated in Table 2. As¶ previously noted, a large portion of currently unavailable¶ resources in Figure 2 lie off the coast of states —¶ such as California and Florida — that have been hard¶ hit by the recent real estate crisis.¶ B. Estimating the Value of State¶ Offshore Oil and Gas Resources¶ An economic analysis of increased offshore oil and gas¶ production also requires estimates of the value of likely¶ resources. As noted above, economic benefits of utilizing¶ OCS resources accrue from three primary sources:¶ (1) exploration/platform investments; (2) production;¶ and (3) refining. Sources (1) and (3) produce initial¶ effects — that is, new industry expenditures — today;¶ in contrast, source (2) produces economic effects only¶ once production begins. The analysis therefore considers¶ “initial” economic effects as those that flow from¶ exploration or investments in new refining capacity¶ and long-term economic effects as those that flow from¶ production and ongoing refining.¶ 1. Exploration and Offshore Facility Development¶ In contrast to other industries, the high fixed investment¶ costs associated with offshore oil and gas production¶ produce large initial investments that reverberate¶ throughout the economy. Once oil or gas resources are¶ located, billions of additional dollars must be spent before¶ the well produces even $1 of revenue. For example,¶ oil exploration costs can amount to between $200,000¶ and $759,000 per day per site.17 Additional production¶ in the U.S. will also require a costly expansion in refining¶ capacity as well. Taken together, the fixed expenditures¶ that precede actual offshore oil and gas¶ production can amount to billions of dollars.¶ For example, Chevron’s “Tahiti” project in the Gulf¶ of Mexico is representative of the large investments¶ that firms must make before production is achieved. In¶ 2002, Chevron explored the Tahiti lease — which lies¶ 17. See Statement of John Hofmeister, President, Shell Oil Company, Before the U.S. House Select Committee on Energy Independence and Global¶ Warming, Apr. 1, 2008 [hereinafter Shell Testimony], at 7-8 (discussing the run-up in Gulf of Mexico exploration costs).¶ The Economic Contribution of Increased Offshore Oil Exploration and Production to Regional and National Economies • 7¶ 100 miles off the U.S. coast at a depth of 4,000 feet —¶ and found “an estimated 400 million to 500 million¶ barrels of recoverable resources.”18 Chevron estimates¶ that it will take seven years to build the necessary¶ infrastructure required to begin production at Tahiti.19¶ The firm estimates that its total development costs will¶ amount to “$4.7 billion — before realizing $1 of return¶ on our investment.”20¶ As a typical U.S. offshore project, the Tahiti project¶ provides a wealth of information regarding the¶ up-front investment costs, length of investment, and¶ lifespan of future OCS fields. As noted above, the Tahiti¶ field is estimated to hold between 400 million and 500¶ million barrels of oil and oil equivalents (primarily¶ natural gas) and is expected to require an initial fixed¶ investment of $4.7 billion. Using the mid-point resource¶ estimate of 450 million barrels of oil equivalent,¶ up-front development costs amount to approximately¶ $10.44 per barrel of oil resources or $1.86 per 1,000¶ cubic feet of natural gas resources.21 These costs will be¶ spread over 7 years, resulting in average up-front¶ development expenditures equal to $1.49 per barrel of¶ oil and $0.27 per 1,000 cubic feet of natural gas.22¶ Chevron also estimates that the Tahiti project will produce¶ for “up to 30 years”.23 Although investment and¶ production times vary widely,24 the analysis that¶ follows uses the Tahiti project numbers — an average¶ initial investment period of seven years followed by an¶ average production period of 30 years — as indicative¶ of the “typical” offshore project. I will thus assume an¶ average initial investment period of seven years followed¶ by an average production period of 30 years.¶ The speed of OCS development also factors into the¶ analysis. Because most areas of the U.S. OCS have been¶ closed to new exploration and production for almost¶ forty years, it is unclear how quickly firms would move¶ to develop new offshore fields. Given its large potential¶ resources, however, the OCS is sure to attract significant¶ investment. Without the benefit of government data, a¶ rough estimate suggests that annual total investment in¶ OCS fields would be $9.09 billion per year.25¶ Assuming a constant investment flow, the annual¶ investment costs in each state’s OCS planning area¶ share are illustrated in Table 3. Recall that these annual¶ expenditures are expected to last, on average, the full¶ seven years of the development phase. Notice in Table¶ 2 that additional investment in states that already support¶ significant production — Alabama, Louisiana,¶ Mississippi, and Texas — are limited. Some of the greatest¶ benefits accrue to areas that are home to enormous —¶ but unavailable — total resources: California and Florida.¶ While other states’ benefits appear small in comparison,¶ that is only because of the sheer magnitude of the benefits¶ available to California and Florida. North Carolina¶ would be associated with some half-billion dollars of¶ development expenditures per year for seven years, and¶ Virginia some quarter-billion dollars of development¶ expenditures. In aggregate, the annual expenditures¶ associated with developing new offshore resources in¶ the OCS amount to approximately $9.09 billion per¶ year for a seven-year development horizon.¶ 2. Production¶ The likely value of state recoverable oil and gas resources¶ is estimated using the likely lifetime revenue that could¶ be generated by the project. In that case, average¶ wholesale energy prices provide the information necessary¶ to translate resources into revenues. Taking the¶ simple average of the EIA’s latest inflation-adjusted¶ energy price forecasts through 2030 as provided by its¶ Annual Energy Outlook 2009, the average inflationadjusted¶ price of oil will be $110.64 per barrel and the¶ average inflation-adjusted price of natural gas will be¶ $6.83 per thousand cubic feet.26 At these prices, the¶ estimated state resources have the potential values¶ indicated in Table 4.¶ The value of each state’s available resources are¶ calculated as the sum of (1) its share of available OCS¶ Planning Area oil resources times $110.64 per barrel¶ and (2) its share of available OCS Planning Area natural¶ gas resources times $6.83 per thousand cubic feet. The¶ same method applies to the valuation of total state¶ OCS resources. At these prices, the OCS resources¶ apportioned to coastal states have the following dollar¶ values reported in Table 3.¶ As in Table 1, Table 4 is constructed to show both¶ states’ available resources and the total resources at¶ their disposal. By the estimates in Table 4, states such¶ Table 3: Annual Investment Costs and New Capacity in New OCS Resources¶ as California, facing a budget crisis in the current¶ recession, have an estimated $1.65 trillion in resources¶ available in nearby OCS planning areas. Florida, while¶ not facing as dire a fiscal crisis, has about $0.55 trillion¶ in resources available in nearby OCS planning¶ areas. Table 4 suggests that a permanent relaxation of¶ all federal OCS production moratoria would unlock¶ more than $3.4 trillion in new production among all¶ the coastal states.¶ 3. Investments in Incremental Refining Capacity¶ Since U.S. refineries are currently operating near maximum¶ capacity increased offshore oil and gas production¶ would also spur investment in new refineries. The¶ U.S. refining industry is presently operating at 97.9¶ percent of capacity27 and can no longer depend on¶ excess foreign refining to meet production shortfalls¶ arising from seasonality or repairs.28 In response, many¶ large refiners are already considering refinery expansions:¶ ConocoPhillips announced that it planned to¶ spend $6.5 billion to $7 billion on capacity expansion¶ at its U.S. facilities; Chevron has also considered a¶ major refinery expansion29; and while Shell is completing¶ a $7 billion expansion at its Port Arthur, Texas, refinery¶ it is considering further expansion elsewhere.30¶ Future refinery investments are likely to occur in¶ the few U.S. states that already host significant U.S.¶ refineries. This result is largely due to environmental¶ restrictions that severely limit the placement of new¶ refining capacity.31 Table 5 presents operating oil¶ refining capacity for each U.S. state and for the U.S. as¶ a whole.32 Note that capacity is primarily concentrated¶ in California, Louisiana, and Texas.¶ Table 5 suggests that any substantial increase in U.S.¶ offshore oil production would require a commensurate¶ increase in U.S. refining capacity. The U.S. presently¶ has an operating refining capacity of approximately¶ 6.287 billion barrels of crude oil per year. According to¶ the rough investment figures presented in Table 3,¶ which represent a conservative view of likely new¶ offshore development, new OCS capacity would add¶ approximately 3.773 billion barrels per year. That new¶ OCS production, which represents only a small fraction¶ of the total OCS resources, would amount to about¶ sixty percent of current U.S. operating refinery capacity.¶ Because some OCS refining production would most¶ likely substitute for foreign production, however, the¶ analysis conservatively assumes that only one-quarter¶ of this new OCS production necessitates additional¶ U.S. refinery capacity. That is, I estimate that U.S.¶ refinery demand would increase by 943.25 million barrels¶ per year, or 15 percent of current installed capacity.33¶ Even this modest capacity increase would require¶ substantial new investments. In response to existing¶ capacity constraints, Shell is already increasing the¶ capacity of its Port Arthur, Texas, refinery. This expansion¶ will take approximately two and one-half years to¶ complete and cost $7 billion. The facility will add¶ 325,000 barrels per day (or 118.6 million barrels per¶ year) in new capacity, at a cost of approximately $59.02¶ per barrel of new annual capacity.34,35¶ As noted above, since tough environmental regulations¶ effectively limit new refinery capacity to a few¶ states, refinery investments are likely to be limited to¶ only a few states with large existing capacity. These¶ states can be reasonably assumed to be the same states¶ the already have large installed refinery capacity.¶ Hence, incremental refinery capacity will be added predominantly¶ in states already home to large refining capacity—¶ those with a present capacity of more than 200¶ million barrels per year. There are seven such states:¶ California, Illinois, Louisiana, New Jersey, Pennsylvania,¶ Texas, and Washington. Assigning new capacity investments¶ proportionally based on their present capacity,¶ new refining capacity investments and associated¶ investment costs are illustrated in Table 6.¶ Based on this apportionment, expected increases in¶ offshore oil production will induce approximately $22¶ billion in refining capacity investments each year for¶ two and one half years. California, Texas, and Louisiana¶ will receive the bulk of this investment, but investments¶ of more than $1 billion annually can be expected in¶ Illinois, New Jersey, Pennsylvania, and Washington.¶ IV. Increased Investments in Offshore Oil¶ and Gas Production Will Cause Substantial¶ Increases in Wages, Employment, and Taxes,¶ and Profound Effects on Communities¶ Throughout the Nation¶ Onshore state and local economies benefit from the development¶ of OCS resources by providing goods and¶ services to offshore oil and gas extraction sites. Onshore¶ communities provide all manner of goods and¶ services required by offshore oil and gas extraction. A¶ variety of industries are involved in this effort: shipbuilders¶ provide exploration vessels, permanent and¶ movable platforms, and resupply vessels; steelworkers¶ fashion the drilling machinery and specialized pipes¶ required for offshore resource extraction; accountants¶ and bankers provide financial services; and other¶ onshore employees provide groceries, transportation,¶ refining, and other duties. These onshore jobs, in turn,¶ support other jobs and other industries (such as retail¶ and hospitality establishments).¶ The statistical approach known as an “input-output”¶ analysis measures the economic effects associated¶ with a particular project or economic development¶ plan. This approach, which was pioneered by Nobel¶ Prize winner Wassily Leontif, has been refined by the¶ U.S. Department of Commerce. The most recent version¶ of the Commerce Department’s analysis is known¶ as the Regional Input-Output Modelling System, or¶ “RIMS II.” The RIMS II model provides a variety of¶ multipliers that measure how an economic development¶ project — such as offshore drilling — would “trickle down” through the economy providing new jobs,¶ wages, and government revenues. This analysis can be¶ broken down into two parts: (1) a “direct” analysis¶ measuring the benefits that arise from industries that¶ directly supply offshore oil and gas exploration and (2)¶ the “final” analysis that measures the direct and indirect¶ benefits associated with offshore exploration.¶ The RIMS II model is the standard method¶ governmental authorities use to evaluate the benefits¶ associated with an economic development project.¶ According to the Commerce Department, the RIMS II¶ model has been used to evaluate the economic effects¶ of many projects, including: opening or closing military¶ bases, tourist expenditures, new energy facilities,¶ opening or closing manufacturing plants, shopping¶ malls, sports stadiums, and new airport or port facilities.¶ 36 State and local governments have also used the¶ RIMS II model to perform economic analyses. For¶ example, the Kansas Geological Survey (KGS) used the¶ RIMS II model to evaluate the impact of oil and gas¶ production on the Kansas economy.37 Using the RIMS¶ II multipliers for Kansas, the KGS estimated that the¶ increased value of oil and gas production between 1998¶ and 2001 induced $500 million in new output, generated¶ $64.3 million in new earnings, and produced¶ 4,742 new jobs in the state of Kansas.38¶ The following analysis mirrors the KGS study by¶ using Commerce Department multipliers to perform¶ an economic analysis of the benefits associated with¶ increased offshore oil and gas production. Unlike some¶ other studies, the effects estimated here are net effects.¶ Specifically, the BEA multipliers used here ensure that¶ the approach provides the total net increase in wages,¶ employment, and government revenues.39¶ A. The Bureau of Economic Analysis Multipliers¶ Allow Researchers to Estimate the Economic¶ Effects of Industry Growth¶ The Bureau of Economic Analysis RIMS II model provides¶ multipliers that allow researchers to consider two¶ types of effects of any industry or growth: (1) the initial¶ (“direct”) effects and (2) the comprehensive (“final-demand”)¶ effects. The two types of analysis require¶ different information. For example, the initial effect on¶ income or employment can be measured if the user has¶ information regarding the income or employment that¶ is expected to be created by a given economic development¶ project.40 In contrast, the comprehensive effect¶ on output, income, or employment can be measured if¶ the user has information on changes in final demand.41¶ Because specific extraction projects have not been¶ developed for currently unavailable OCS resources, no¶ data presently exist that can be used to estimate the¶ initial (“direct”) effects associated with increased OCS¶ extraction. The straightforward estimates of the total¶ value of the resources, however, can be used as a measure¶ of the increase in final demand that would occur¶ over the lifetime of all currently unavailable OCS oil¶ and gas fields.¶ Three final demand multipliers are applied to the¶ resource estimates in Table 4. First, BEA output multipliers¶ measure the total increase in economic activity —¶ including the effect on all other industries — resulting¶ from $1 of new industrial activity in a particular¶ geographic region.42 Next, BEA earnings multipliers¶ measure the increase in wages resulting from $1 of new¶ industrial activity.43 Finally, BEA employment multipliers¶ measure the increase in employment (in fulltime¶ equivalent jobs) associated with a $1,000,000¶ increase in industrial activity.44 Important to understanding¶ the results that follow, each BEA multiplier¶ measures the changes that are expected to occur within¶ one year.45¶ The BEA multipliers are based on actual changes in¶ output, wages, and employment that result from¶ changes in economic activity.46 If a state does not have¶ any expenditures for a particular industry — such as¶ oil and gas extraction — the BEA calculates a multiplier¶ of zero.47 Although the BEA suggests that a “billof-¶ goods” approach can be applied instead to¶ accurately predict changes in output,48 this approach¶ requires very specific data for each and every project¶ in each state. Because specific bill-of-goods data is not¶ available for future OCS oil and gas extraction projects,¶ a bill-of-goods approach cannot be applied here.¶ To circumvent this limitation, the present analysis¶ estimates a RIMS II multiplier for each state with a¶ BEA value of zero by applying the simple average¶ multiplier for all other coastal states with valid BEA¶ multipliers. This approach is not meant to be definitive;¶ rather, it is an attempt to roughly estimate the¶ effect that new industry would have on states that do¶ not presently have any oil and gas extraction industries.¶ This treatment is applied to five coastal states¶ that adjoin OCS Planning Areas: Georgia, Maine, New¶ Hampshire, Rhode Island, and Washington. The final¶ demand multipliers used for the analysis are presented¶ in Appendix Table A3.¶ The direct effect associated with additional oil and¶ gas extraction varies by state. For example, in Delaware¶ an extra $1,000,000 of oil and gas extraction translates¶ into $1,437,700 of additional annual output, $339,300¶ in additional annual wage income, and approximately¶ 4.5 additional full-time jobs for the year. In Texas, however,¶ the same $1,000,000 translates into $2,072,100¶ in additional output, $508,500 in additional wage income,¶ and approximately 8.25 additional full-time¶ jobs. To determine the economic effect of providing¶ new refining capacity, I use the BEA multipliers for the¶ seven affected states (see Appendix Table A4). In the¶ following sections, I apply these two multipliers to¶ their respective investment costs to determine the¶ state-by-state and overall effect of increased offshore¶ oil and natural gas production on the U.S. economy.¶ B. Opening OCS Planning Areas Would Unleash¶ More Than $11 Trillion in Economic Activity¶ The broadest measure of the incremental effect of¶ increased OCS oil and natural gas extraction is the¶ effect on total economic output. Output is generally¶ expressed as Gross Domestic Product (GDP), which¶ measures the total production of goods and services in¶ a given country. The corollary at the state level is¶ known as Gross State Product (GSP). BEA’s final¶ demand output multipliers can be used to perform two¶ analyses. First, the multipliers are applied to initial¶ investment costs in Table 3 to determine the likely¶ annual benefits that would accrue in the first years the¶ OCS is open to development. Then, the multipliers are¶ applied to the resource value estimates in Table 4 to¶ measure the expected total increase in output over the¶ lifetime of the projects. Estimates are provided for both¶ coastal states and the U.S., as a whole. In total, the¶ investment and production phases together can be¶ expected to contribute over $11 trillion in GDP over the¶ project lifespan.¶ Until OCS production begins, onshore communities¶ will realize only the benefits associated with offshore¶ investment. These benefits take two forms: (1) the¶ development of the offshore facilities themselves and¶ (2) the expansion of onshore refining capacity. These¶ two effects, taken together, provide a rough approximation¶ of the additional output that would be created¶ by allowing greater access to offshore resources. Using¶ the investment estimates from Table 3 and Table 6 and¶ BEA multipliers in Table A3 above, the estimated¶ increase in coastal state economic output is presented¶ in Table 7.¶ The figures in Table 7 only provide the increase in¶ output that is generated in the same state as the¶ increase in production. As an integrated economy, however,¶ output in one state is tied to output in other states.¶ For example, Alabama workers building a facility off the¶ Alabama shore might use steel produced in Illinois and¶ fabricated into pipes in Missouri. These effects may be¶ considered “secondary” effects because they spread¶ from one state to other states. Using the individual multiplier¶ for Alabama would thus under-report the total¶ effect associated with production off the coast of¶ Alabama. Using the total U.S. multipliers (2.2860 for¶ refining and 2.3938 for extraction), the total increase¶ in U.S. output is estimated to be about $0.5 trillion, or¶ approximately $73 billion per year for the first seven¶ years the OCS is open. For comparative purposes, a $73¶ billion stimulus amounts to approximately 0.5 percent¶ ondary effects, being greater than any of the individual¶ state multipliers.50 As a result, the state-by-state analysis¶ in Table 8 misses approximately $2.45 trillion in secondary¶ output. The total increase in output in the United¶ States is estimated to total approximately $8.2 trillion or¶ about $273 billion per year, which amounts to just over¶ two percent of GDP.¶ C. Opening OCS Planning Areas Could¶ Create Millions of New Jobs¶ An economic expansion tied to increased OCS resource¶ production would also create millions of new jobs both¶ in the extraction industry and in other sectors that¶ serve as suppliers or their employees. The analysis¶ below estimates employment increases that can be¶ expected from opening up previously unavailable OCS¶ Planning Areas. As before, effects are estimated for¶ coastal states and the nation using the applicable BEA¶ multipliers. Following that analysis, the paper compares¶ the types of jobs that will be created in terms of¶ the wage structure and seasonality relative to other¶ existing jobs in coastal states.¶ 1. BEA Multiplier Analysis¶ As above, the analysis estimates both the immediate and¶the total economic effects associated with increased OCS¶ oil and gas production. Using the investment multipliers¶ (denominated in job-years per $1 million change in¶ final demand) in Table A3 and total investment costs in¶ Table 3, the expected coastal state changes in employment¶ are represented in Table 9.51 The annual increase¶ in coastal state employment from initial investments in¶ previously unavailable OCS planning areas and additional¶ refining capacity is estimated to be 185,320 fulltime¶ jobs per year.¶ Again, this number does not consider the secondary¶ effects of investment in productive capacity and refining¶ to other U.S. states. To estimate the total increase¶ in employment tied to production in previously unavailable¶ OCS Planning Areas, the BEA’s final-demand¶ employment multiplier is applied to the estimated total¶ resource value estimates in Table 4. The total increase¶ in U.S. employment from the investment phase is¶ approximately 271,570 full-time jobs per year.¶ Applying the BEA multipliers to the estimated production¶ value results in the employment estimates in¶ Table 10.52 According to Table 10, approximately 870,000¶ Table 10: Increase in Annual Coastal State Employment¶ from ¶ coastal state jobs would be created in addition to the jobs¶ created during the initial investment phase.¶ Again, the state BEA multipliers do not account for¶ increases in employment outside of the target state. As¶ a result, secondary jobs created in one state based on¶ OCS production in another state are omitted from the¶ totals in Table 10. The total increase in U.S. employment¶ in all states that results from increased OCS¶ production is estimated by applying the overall U.S.¶ employment multiplier (10.4152 job-years per $1 million)¶ to the total value of the additional OCS resources¶ ($3,427,667,487,135), suggesting that approximately¶ 35,700,000 total job-years would be created over the¶ course of production in newly opened OCS Planning¶ Areas. If we again assume a 30 year production horizon,¶ approximately 1,190,000 jobs would be sustained for¶ the entire production period, approximately 340,000¶ of which are secondary jobs outside the coastal regions.¶ 2. Evaluation of the Types of New Employment¶ The BEA data also allow an analysis of the types of¶ employment that would be supported by increased¶ offshore oil and gas extraction. Increased investment and¶ production in previously unavailable OCS oil and gas¶ extraction and the ancillary industries that support the¶ offshore industry would produce thousands of new jobs¶ in stable and valuable industries. As above, the immediate¶ and the long-run benefits are considered separately.¶ The benefits are broken down using specific BEA multipliers¶ for each industry, which can be used to determine¶ which industries will benefit the most from increased offshore¶ oil and gas production. Table 11 reports the expected¶ total increase in annual employment over the first years¶ of the investment phase using the multipliers in Table A5.¶ Table 11 gives a sense of the distribution of the 271,572¶ jobs created in the investment phase and sustained during¶ Table 12: Changes in Annual Employment from¶ the first seven years of the investment cycle. The majority¶ of new positions (162,541 jobs, or 60 percent) would be¶ created in high-skills fields, such as health care, real estate,¶ professional services, manufacturing, administration,¶ finance, education, the arts, information, and management.¶ Table 12 reports the increase in annual employment¶ over the life of the production phase. That is, the jobs¶ in Table 12 would be created in the first year of production¶ and maintained for 30 years. These gains thus¶ represent new full-time careers rather than just one¶ new job for one year.¶ Although the largest total increase in employment¶ would occur (quite naturally) in the mining industry,¶ significant numbers of jobs would be created in other¶ industries. Again, many of these new jobs would be¶ created in high-skills fields. These high-skills sectors¶ represent approximately 49 percent of all new jobs and¶ approximately 61 percent of all new non-mining jobs.53¶ D. Opening OCS Planning Areas Can Release Trillions¶ of Dollars of Wages to Workers Hit by Recession¶ The BEA multipliers also allow an analysis of the effect¶ Table 13: Increase in Annual Wages from¶ of increased OCS production on wages in affected¶ states. To estimate how initial investments increase¶ wages, the BEA’s final demand earnings (wage) multipliers¶ are applied to the investment estimates. Table 13¶ reports the results.¶ As Table 13 indicates, initial increases in investment¶ would yield approximately $10.7 billion in new wages¶ each year for the first few years of investment.¶ To estimate the total wage effects associated with OCS¶ oil and gas production over a thirty-year period, the BEA¶ multipliers in Table A3 are applied to the total value of¶ the incremental OCS resources that would be newly¶ opened to production. Table 14 reports the results.¶ Table 14 indicates that increased OCS production¶ would yield approximately $1.406 trillion in additional wage income to workers in coastal states over the lifetime¶ of the fields (or $46 billion per year over 30 years).¶ The estimates in Tables 13 and 14 again do not capture¶ secondary effects. Applying the total U.S. wage¶ multipliers to the initial investment, suggests that the¶ increased investment would generate approximately¶ $15.7 billion in additional annual wages per year for¶ the first seven years. Applying the total U.S. wage multiplier¶ (0.6109) to the total value of applicable OCS¶ resources ($3.4 trillion), suggests that the increased¶ production would generate approximately $70 billion¶ per year for the next thirty years, or approximately $2.1¶ trillion in additional wage income.54¶ As with employment, the increase in wages can also¶ be understood by examining specific industries that¶ would benefit from increased offshore oil and gas production.¶ Tables 11 and 12 indicated millions of new jobs¶ would be created and that most of those would be in¶ professional fields. The U.S. Bureau of Labor Statistics¶ (BLS) 2007 Occupational Employment and Wage Estimates¶ suggest that the new employment in the Oil¶ and Gas Extraction Industry would generally pay¶ higher wages than similar occupations in other industries.¶ As Table 15 indicates, the average wage in the Oil¶ and Gas Extraction industry is 64 percent higher than¶ the average U.S. wage. Furthermore, the Oil and Gas¶ Extraction industry pays higher average wages for 16¶ of the 17 job classifications.¶ BLS data also suggest that all four broad industry¶ classifications related to oil and gas extraction pay¶ higher wages and similar jobs in other industries. Table¶ 16 shows that jobs in: (1) Oil and Gas Extraction, (2)¶ Pipeline Transportation of Crude Oil, (3) Petroleum¶ and Coal Products Manufacturing, and (4) Support¶ Activities for Mining, indicated in Table 16, typically¶ pay higher wages than the average American job.¶ Taking this broader measure,55 the average job created¶ by increased offshore oil and gas production pays¶ approximately 28 percent more than the average U.S. job.¶ E. Opening OCS Planning Areas Can Contribute Trillions¶ of Dollars in Taxes and Other Public Revenues to¶ Local, State, and Federal Governments¶ Greater output, more jobs, and higher wages translate¶ into higher tax collections and increases in other sources¶ of public revenues. The MMS Report to Congress suggests¶ that public revenues derived from OCS extraction¶ are significant — the U.S. federal government has collected¶ more than $156 billion in lease and levy payments¶ for OCS oil and natural gas production.56 Note that this¶ amount counts only lease and royalty payments and¶ thus does not include any sales and income taxes paid by¶ firms or workers supported by OCS production.¶ The present analysis expands the MMS’s analysis by¶ taking a broad measure of the total tax revenues (from¶ all sources) that federal, state, and local governments¶ would enjoy from increased OCS oil and natural gas¶ production. Conservative estimates suggest that seven¶ years of initial annual exploration and refining investments¶ would produce approximately $4.8 billion annually¶ in coastal state and local tax revenue and $11.1¶ billion in U.S. federal tax income.57 Over thirty years of¶ production, I estimate that the extraction phase of OCS¶ development would yield approximately $561 billion¶ ($18.7 billion per year) in coastal state and local tax¶ revenue and approximately $1.64 trillion ($54.7 billion¶ per year) in new U.S. federal tax income.¶ To estimate the increase in state and local tax revenue¶ attributable to expanded OCS production, the¶ analysis follows the approach outlined by the Federal¶ Reserve Bank of Boston to determine annual state and¶ local tax burdens as a share of Gross State Product¶ (GSP).58 For each state and the District of Columbia,¶ the state and local tax burden can be calculated by¶ dividing annual state and local tax revenue by annual¶ Gross State Product. Data for state and local tax revenues¶ are released by the U.S. Census Bureau annually¶ with a two year lag. As such, the state and local tax burden¶ calculations are based on the most recent available¶ fiscal year, 2006.59 Those data produce the average¶ state and local tax burden in 2006 in each state. To¶ simplify the analysis, it is assumed that these state and¶ local tax rates continue at the 2006 level indefinitely¶ into the future. The effective tax burdens are applied¶ to both the initial investments and to the total lifetime¶ production support revenues.¶ Initially, state and local tax revenues will flow from¶ investments in new offshore facilities and onshore¶ refineries. Applying the state and local tax burdens to¶ the investment figures, incremental annual state and¶ local tax revenues are reported in Table 17.¶ Table 17 indicates that states and localities would¶ receive approximately $4.8 billion in annual incremental¶ tax revenues during the first few years of the investment¶ stage. As before, those tax revenues do not include taxes¶ levied on “secondary” revenues.60¶ Additional tax revenues will flow from the extraction¶ phase of production. Applying the same state and¶ local effective tax rates to the estimates of the total¶ change in Gross State Product, the analysis estimates¶ 60. It is impossible to quantify these benefits because state and local taxes differ from state to state and because the BEA does not provide a means to¶ allocate the secondary revenues to particular states. To be conservative, the analysis estimates only the revenues that can be accurately assigned¶ and measured.¶ that oil and natural gas extraction in previously¶ unavailable OCS Planning Areas will generate approximately¶ $18.7 billion in annual incremental coastal¶ state and local tax revenue, or over $545 billion over¶ the thirty-year extraction period, as indicated in Table¶ 18. Again, note that this tax revenue is the incremental¶ tax revenue produced by allowing resource extraction¶ in previously unavailable OCS Planning Areas. That is,¶ $0 in additional state and local tax revenue would be¶ created if the recent moratoria are extended indefinitely.¶ As above, the state and local tax estimates in¶ Table 18 do not include taxes levied on secondary¶ revenues. The estimates thus represent a lower bound¶ 22 • The Economic Contribution of Increased Offshore Oil Exploration and Production to Regional and National Economies¶ on potential state and local tax revenues generated¶ from increasing offshore oil and gas production.¶ The increase in economic activity generated by OCS¶ exploration and drilling would also produce significant¶ additional federal tax revenues. According to the IRS,¶ the average effective tax rate in the United States in¶ FY2007 was 20.02 percent of GSP. 61 Applying this rate¶ to the total annual investment expenditures ($55.5 billion)¶ suggests that U.S. federal tax receipts would increase by¶ $11.1 billion per year during the seven years of the investment¶ phase. Applying the same rate to the total increase¶ in U.S. output ($8.2 trillion) suggests that increased offshore¶ oil and gas extraction would yield approximately¶ $54.7 billion in annual incremental federal tax receipts,¶ totaling about $1.64 trillion in additional federal tax¶ revenue over the lifetime of the applicable fields.¶ In total, therefore, opening OCS planning areas to¶ exploration and drilling can generate initial tax revenues¶ of about $16 billion per year, rising to almost $75¶ billion per year in the production phase. Dividing the¶ benefit equally among all US taxpayers (population 18¶ years of age or older) yields an immediate benefit of¶ about $75 annually per taxpayer, rising to almost $350¶ per taxpayer in the production phase. Unlike typical¶ U.S. tax “rebates,” however, this tax reduction does not¶ come at the expense of increased U.S. borrowing.¶ Rather, these amounts represent net tax reductions.¶ Increased offshore oil and gas production would also¶ increase federal lease and royalty payments. The U.S. Department¶ of the Interior enforces a royalty rate on OCS¶ oil and gas projects that generally varies between 12.5¶ percent and 18.75 percent.62 Conservatively applying the¶ lower bound of this range, 12.5 percent, to the value of¶ incremental resources implies that total future royalty¶ payments would amount to approximately $428.5 billion.¶ 63 Amortized over a 30 year period, these payments¶ would amount to an additional $14.3 billion per year in¶ federal royalty revenue.64 If the federal royalty revenue is¶ considered with the federal tax receipts, increased offshore¶ oil and gas extraction would yield about $2.07 trillion¶ in additional federal revenue, or an extra $69 billion¶ each year for 30 years.¶ A portion of federal lease and royalty payments are¶ reserved for environmental and historical causes.¶ Specifically, MMS disburses revenues from offshore oil¶ and gas production to states under the Coastal Impact¶ Assistance Program (CIAP), to the Land and Water¶ Conservation Fund (LWCF), and to the National Historic¶ Preservation Fund (HPF). Payments to all three¶ organizations are constant each year: CIAP receives¶ $250 million, the LWCF receives $900 million, and¶ the HPF receives $150 million.65 Although these payments¶ are capped at the moment, a portion of the¶ incremental federal revenue derived from increased¶ OCS production could be added to future CIAP, LWCF,¶ If the federal royalty revenue is considered with¶ the federal tax receipts, increased offshore oil and¶ gas extraction would yield about $2.07 trillion¶ in additional federal revenue, or an extra¶ $69 billion each year for 30 years.¶ The Economic Contribution of Increased Offshore Oil Exploration and Production to Regional and National Economies • 23¶ and HPF funds. Incremental federal revenue could¶ also be used to increase the payments presently made¶ to states that adjoin OCS territories.66¶ F. Communities Nationwide Will Benefit¶ from Increased Health, Education, Welfare,¶ and Social Services¶ Communities around the country would also realize¶ knock-on effects associated with increased offshore oil¶ and gas production. These effects flow from the increase¶ in high-wage, high-skills employment associated with¶ the expansion. For example, a new offshore facility may¶ induce the development of onshore support facilities¶ such as shipyards and refineries. Employees in these¶ new industries, in turn, would increase community¶ demand for health care, education, and other community¶ services that are available to all residents (whether¶ they are employed by the offshore industry or not), as¶ well as tax revenues to fund those expansions.¶ The estimated increase in employment in the health¶ and education fields is but one indication of the tertiary¶ effects associated with increased offshore oil and¶ gas production. As indicated in Table 11, an increase in¶ offshore oil and gas production would initially support¶ 20,760 new health care providers and 5,149 new teachers¶ per year. Over the long term, offshore production¶ would produce 3,762,893 new health care job-years¶ and 950,492 new education job-years (Table 12).¶ Assuming a 30 year production span, increased offshore¶ production would yield 125,000 new health care¶ providers and 32,000 new teachers per year. Considering¶ that many of these jobs would be based in small¶ coastal towns like Port Fourchon, Louisiana (which is¶ home to substantial resources serving Gulf of Mexico¶ offshore production), these estimates represent large¶ relative increases.67 Indeed, in some communities the¶ increase in demand associated with new jobs tied to¶ offshore production may mean the difference between¶ having a local hospital and school or driving several¶ hours to a facility in the next town or the next county.¶ G. The Economic Effects Associated with¶ Increasing U.S. Offshore Oil and Gas Production¶ Vary by Drilling Distance from Shore¶ Government sources indicate that the economic effects¶ associated with increased OCS oil and gas production¶ are likely to vary with the distance from shore. This¶ dynamic has important implications for the analysis¶ because increasing OCS development includes a mix¶ of both shallow and deep water projects. Deep water¶ projects are far more expensive than shallow water¶ projects, however, so far fewer are undertaken.68¶ According to the MMS, the cost of developing a¶ deep water field can exceed $1 billion.69 This cost far¶ exceeds the cost of developing a shallow field, which¶ the MMS places at approximately $100 million.70¶ While some argue that deep water fields are significantly¶ larger than shallow water fields, that is based on¶ an observational bias arising in part because firms will¶ only bear the high cost of development for sufficiently¶ large fields.71 Nonetheless, while it is estimated that¶ Applied to the total volume of incremental¶ OCS resources, total future lease and royalty payments¶ could amount to approximately $169 billion¶ in additional revenue. Amortized over a 30-year¶ period, this revenue would amount to an additional¶ $5.6 billion in federal revenue per year.¶ 24 • The Economic Contribution of Increased Offshore Oil Exploration and Production to Regional and National Economies¶ deep and ultra deep water oil resources are some 35-60¶ times the magnitude of shallow water resources, the¶ economics of exploration and development, as well as¶ production, dictate that deep and ultra deep projects¶ will not generate sufficient production to relieve the¶ importance of shallow water projects any time soon.¶ As Table 19 indicates, while deep water oil production¶ accounted for an increased share of total U.S. offshore¶ production in recent years, the trend is likely to subside¶ as expensive projects are curtailed in the current¶ low oil price environment.¶ The increased cost and offshore distance associated¶ with deep water operations has several implications for¶ the above economic analysis. While the increased cost¶ of development translates into increased purchases of¶ goods and services in local communities, as distance¶ increases shore operations can be more easily centralized¶ into a few communities that serve many deep¶ water fields. Thus the local economic effects associated¶ with deep water production are likely to be greater and¶ more concentrated than they are for shallow water production.¶ Port Fourchon, Louisiana, is a leading indicator of¶ how deep water production may concentrate economic¶ benefits into a few communities. The Greater¶ Lafourche Port Commission was first organized in¶ 1960.72 At that time, the surrounding Lafourche Parrish¶ had a population of 55,381.73 Since then, the port and¶ the surrounding area have experienced significant¶ growth tied to Port Fourchon’s central role in offshore¶ oil and gas production. Today, Port Fourchon services¶ half of all drilling rigs presently operating in the Gulf of¶ Mexico.74 Furthermore, current plans call for more¶ than half of all new deep water drilling platforms in the¶ Eastern and Central Gulf of Mexico to use Port Fourchon¶ as their service base.75 Economic development¶ has swollen the population of Lafourche Parrish, to¶ 95,554 in 2006.76 Over the period 1960-2006, the¶ Lafourche Parrish population grew by 72.5 percent¶ whereas the State of Louisiana population grew 31.6¶ percent.77 Given the concentration of deep water Gulf¶ of Mexico operations at Port Fourchon, it is reasonable¶ to assume that similar deep water service concentrations¶ may arise in other areas.¶ Furthermore, the costs of deep water exploration¶ and drilling continue to be subsidized by the U.S.¶ government in its deep water royalty relief program.78¶ Federal subsidies diminish the potential public¶ revenue gains from opening OCS Planning Areas and¶ subtract from wage, employment, and quality of life¶ gains to citizens that can be expected to arise as a result¶ of such development.¶ Over the life span of development, OCS planning¶ areas will contribute approximately $8.7 trillion¶ dollars to U.S. economic growth, of which some $2.2¶ trillion can be expected to be paid out in wages to employees¶ in almost 38 million annual jobs, many in¶ high-paying professional career fields.¶ That economic growth will also generate more than¶ $1.6 trillion in Federal tax revenues, almost $0.6 trillion¶ in state and local tax revenue, and $0.4 trillion in royalty¶ revenue that will be split between federal and state¶ governments. Those revenues will contribute to schools,¶ health centers, and infrastructure projects that will¶ contribute substantially to the quality of life in not only¶ coastal regions directly affected by the development,¶ but nationwide. Immediate revenues from exploration¶ can also help many coastal states weather the effects¶ of the present recession and mortgage crisis without¶ Federal aid.¶ While some are suggesting limiting OCS Planning¶ Area development to areas located more than one hundred¶ miles offshore, it is important to point out that¶ such limitations substantially curtail the benefits of¶ OCS development. Not only are the costs of such deep¶ and ultradeep water development often prohibitive,¶ but production in such areas is more volatile as a¶ result and Federal subsidies substantially diminish the¶ potential public revenue gains from opening OCS¶ Planning Areas.¶ In summary, investment and development in OCS¶ Planning Areas can increase economic growth with¶ attendant effects on jobs, wages, taxes, and other public¶ revenues, helping to both invigorate and stabilize¶ economic growth while reducing oil price volatility.¶ The resulting economic growth and public revenues¶ are particularly attractive to local economies close to¶ previously prohibited OCS planning areas like those off¶ the coasts of California and Florida, which are experiencing¶ the full force of recession and mortgage¶ foreclosures. Jobs in these areas can be particularly¶ powerful in resuscitating the economy and restoring¶ economic growth. It makes no sense to consciously¶ choose to forego such a substantial source of economic¶ growth in a recession.¶ In closing, a caveat. The present analysis is only¶ meant to be a starting point for discussing the economic¶ effects of unavailable OCS resources rather than¶ an exact estimate of the economic effects of OCS Planning¶ Area development and operation. Clearly there¶ will be debate about many of the parameters used in¶ the analysis. No amount of debate, however, should¶ detract from the simple reality that reaffirming the¶ OCS moratoria will leave valuable economic growth¶ opportunities on the table precisely at a time when the¶ country owes its citizens access to jobs and wages that¶ can help them weather the current recession.¶ V. Summary and Conclusions¶ This paper estimates the net local and national economic effects that can be expected from opening OCS Planning Areas.¶ In contrast to previous analyses of offshore development, this study estimates economic growth and output associated¶ with the production phase, but also estimates the economic effects of the exploration and development phases as well.¶ In truth, exploration and development involve a great deal of economic activity, suggesting that opening OCS Planning¶ areas can increase economic growth, provide jobs, increase aggregate wages, and add to public revenues both today and¶ for years in the future.

#### 85% of gas is off limits now

Luthi, 11/9/12 [Luthi is the president of the National Ocean Industry Association, representing more than 275 companies engaged in all aspects of the exploration and production of both traditional and renewable energy resources on the nation’s outer continental shelf, “Let's find agreement on new offshore access”, http://thehill.com/blogs/congress-blog/energy-a-environment/267089-lets-find-agreement-on-new-offshore-access]

Now that the election is (finally) behind us, President Obama has an opportunity to set the nation more forcefully on the road to energy independence. We’re well on our way thanks in large part to new techniques and technologies that have unlocked vast deposits of shale oil and natural gas. But we could and should be doing much more. Back in June, the Interior Department issued its five-year Outer Continental Shelf (OCS) oil and gas leasing plan. Despite high expectations encouraged by President Obama’s self-described “all-of-the-above” approach to the nation’s energy policy and the absence of long-standing Administrative and Congressional exploration bans that were lifted in 2008, theplan failed to open any new offshore areas to oil and natural gas exploration and production. The industry is still limited to the same 15 percent of the acreage on the OCS that’s been available for decades, leaving 85 percent untouchable. Don’t get me wrong. That 15 percent has been incredibly productive. In fact, the Gulf of Mexico region, which is the heart of America’s offshore oil and gas industry, has yielded six times more oil than 1980s resource estimates predicted it held. Production in the Gulf is finally ramping back up now that permitting rates are bouncing back from historic lows following the Macondo spill in 2010. We have every reason to believe that the areas where we can explore and produce will continue to support and create jobs and contribute to America’s energy security for years and even decades to come. For this reason, we will continue to advocate that the Obama Administration streamline and accelerate permitting on these acres of the OCS. We will also fight to put to rest once and for all the erroneous claims that the industry is “sitting on” offshore tracts, a red herring that surfaced again during the presidential debates. In fact, the success industry has crafted out of the 15 percent of the OCS currently open to exploration and production underscores why the Interior Department’s 5-Year Leasing Plan was so disappointing. Think of how much energy awaits us in the 85 percent of the offshore areas where we currently cannot explore or produce. One report by the Interstate Oil and Gas Compact Commission, conducted several years ago, estimates recoverable resources in “U.S. moratorium areas” of 19.29 billion barrels of oil and 83.5 trillion cubic feet of natural gas. If history is any guide, these estimates will prove to be very conservative. The frustrating truth is we have no idea how much is waiting for us there, because we’re not allowed to go look.

#### And, the plan creates certainty for offshore production—balances supply

Griles 3 [Lisa, Deputy Secretary, Department of the Interior, “Energy Production on Federal Lands,” Hearing before the Committee on Energy and Natural Resources, United States Senate]

Mr. GRILES. America’s public lands have an abundant opportunity for exploration and development of renewable and nonrenewable energy resources. Energy reserves contained on the Department of the Interior’s onshore and offshore Federal lands are very important to meeting our current and future estimates of what it is going to take to continue to supply America’s energy demand. Estimates suggest that these lands contain approximately 68 percent of the undiscovered U.S. oil resources and 74 percent of the undiscovered natural gas resources. President Bush has developed a national energy policy that laid out a comprehensive, long-term energy strategy for America’s future. That strategy recognizes **we need to raise domestic production of energy**, both renewable and nonrenewable, to meet our dependence for energy. For oil and gas, the United States uses about 7 billion barrels a year, of which about 4 billion are currently imported and 3 billion are domestically produced. The President proposed to open a small portion of the Arctic National Wildlife Refuge to environmentally responsible oil and gas exploration. Now there is a new and environmentally friendly technology, similar to directional drilling, with mobile platforms, self-containing drilling units. These things will allow producers to access large energy reserves with almost no footprint on the tundra. Each day, even since I have assumed this job, our ability to minimize our effect on the environment continues to improve to where it is almost nonexistent in such areas as even in Alaska. According to the latest oil and gas assessment, ANWR is the largest untapped source of domestic production available to us. The production for ANWR would equal about 60 years of imports from Iraq. The National Energy Policy also encourages development of cleaner, more diverse portfolios of domestic renewable energy sources. The renewable policy in areas cover geothermal, wind, solar, and biomass. And it urges research on hydrogen as an alternate energy source. To advance the National Energy Policy, the Bureau of Land Management and the DOE’s National Renewable Energy Lab last week announced the release of a renewable energy report. It identifies and evaluates renewable energy resources on public lands. Mr. Chairman, I would like to submit this for the record.\* This report, which has just come out, assess the potential for renewable energy on public lands. It is a very good report that we hope will allow for the private sector, after working with the various other agencies, to where can we best use renewable resource, and how do we take this assessment and put it into the land use planning that we are currently going, so that right-of-ways and understanding of what renewable resources can be done in the West can, in fact, have a better opportunity. The Department completed the first of an energy inventory this year. Now the EPCA report, which is laying here, also, Mr. Chairman, is an estimate of the undiscovered, technically recoverable oil and gas. Part one of that report covers five oil and gas basins. The second part of the report will be out later this year. Now this report, it is not—there are people who have different opinions of it. But the fact is we believe it will be a good guidance tool, as we look at where the oil and gas potential is and where we need to do land use planning. And as we update these land use plannings and do our EISs, that will help guide further the private sector, the public sector, and all stakeholders on how we can better do land use planning and develop oil and gas in a sound fashion. Also, I have laying here in front of me the two EISs that have been done on the two major coal methane basins in the United States, San Juan Basis and the Powder River Basin. Completing these reports, which are in draft, will increase and offer the opportunity for production of natural gas with coal bed methane. Now these reports are in draft and, once completed, will authorize and allow for additional exploration and development. It has taken 2 years to get these in place. It has taken 2 years to get some of these in place. This planning process that Congress has initiated under FLPMA and other statutes allows for a deliberative, conscious understanding of what the impacts are. We believe that when these are finalized, that is in fact what will occur. One of the areas which we believe that the Department of the Interior and the Bureau of Land Management is and is going to engage in is coordination with landowners. Mr. Chairman, the private sector in the oil and gas industry must be good neighbors with the ranchers in the West. The BLM is going to be addressing the issues of bonding requirements that will assure that landowners have their surface rights and their values protected. BLM is working to make the consultation process with the landowners, with the States and local governments and other Federal agencies more efficient and meaningful. But we must assure that the surface owners are protected and the values of their ranches are in fact assured. And by being good neighbors, we can do that. In the BLM land use planning process, we have priorities, ten current resource management planning areas that contain the major oil and gas reserves that are reported out in the EPCA study. Once this process is completed, then we can move forward with consideration of development of the natural gas. We are also working with the Western Governors’ Association and the Western Utilities Group. The purpose is to identify and designate right-of-way corridors on public lands. We would like to do it now as to where right-of-way corridors make sense and put those in our land use planning processes, so that when the need is truly identified, utilities, energy companies, and the public will know where they are Instead of taking two years to amend a land use plan, hopefully this will expedite and have future opportunity so that when the need is there, we can go ahead and make that investment through the private sector. It should speed up the process of right-of-way permits for both pipelines and electric transmission. Now let me switch to the offshore, the Outer Continental Shelf. It is a huge contributor to our Nation’s energy and economic security. The CHAIRMAN. Mr. Secretary, everything you have talked about so far is onshore. Mr. GRILES. That is correct. The CHAIRMAN. You now will speak to offshore. Mr. GRILES. Yes, sir, I will. Now we are keeping on schedule the holding lease sales in the areas that are available for leasing. In the past year, scheduled sales in several areas were either delayed, canceled, or put under moratoria, even though they were in the 5-year plan. **It** undermined certainty. It made investing, particularly in the Gulf, more risky. We have approved a 5-year oil and gas leasing program in July 2002 that calls for 20 new lease sales in the Gulf of Mexico and several other areas of the offshore, specifically in Alaska by 2007. Now our estimates indicate that these areas contain resources up to 22 billion barrels of oil and 61 trillion cubic feet of natural gas. We are also acting to raise energy production from these offshore areas by providing royalty relief on the OCS leases for new deep wells that are drilled in shallow water. These are at depths that heretofore were very and are very costly to produce from and costly to drill to. We need to encourage that exploration. These deep wells, which are greater than 15,000 feet in depth, are expected to access between 5 to 20 trillion cubic feet of natural gas and can be developed quickly due to existing infrastructure and the shallow water. We have also issued a final rule in July 2002 that allows companies to apply for a lease extension, giving them more time to analyze complex geological data that underlies salt domes. That is, where geologically salt overlays the geologically clay. And you try to do seismic, and the seismic just gets distorted. So we have extended the lease terms, so that hopefully those companies can figure out where and where to best drill. Vast resources of oil and natural gas lie, we hope, beneath these sheets of salt in the OCS in the Gulf of Mexico. But it is very difficult to get clear seismic images. We are also working to create a process of reviewing and permitting alternative energy sources on the OCS lands. We have sent legislation to Congress that would give the Minerals Management Service of the Department of the Interior clear authority to lease parts of the OCS for renewable energy. The renewables could be wind, wave, or solar energy, and related projects that are auxiliary to oil and gas development, such as offshore staging facilities and emergency medical facilities. We need this authority in order to be able to truly give the private sector what are the rules to play from and buy, so they can have certainty about where to go.

#### And, restrictions key – alters market dynamics

Medlock, 8 [Medlock is a fellow in Energy Studies at Rice University's James A Baker III Institute for Public Policy and an adjunct assistant professor in the [Economics Department](http://www.chron.com/?controllerName=search&action=search&channel=opinion%2Foutlook&search=1&inlineLink=1&query=%22Economics+Department%22) at Rice, “Open outer continental shelf”, http://www.chron.com/opinion/outlook/article/Open-outer-continental-shelf-1597898.php]

A confluence of factors is responsible for the recent price run-up at the pump. One important factor behind the strength of oil prices is the expectation of inadequate oil supply in the future. This has led to a debate regarding the removal of drilling access restrictions in the U.S. Outer Continental Shelf (OCS). According to the Department of Interior's Minerals Management Service (MMS), the OCS in the Lower 48 states currently under moratorium holds 19 billion barrels of technically recoverable oil. Some analysts claim that opening the OCS will not matter that much, as the quantity of oil is only about two years of U.S. consumption. But a more appropriate way to look at the issue is this: If the OCS could provide additional production of 1 million barrels per day of oil, our import dependence on Persian Gulf crude oil would be reduced by about 40 percent. Moreover, at 1 million barrels per day, the currently blocked OCS resource would last about 50 years. Of course, opening the OCS will not bring immediate supplies because it would take time to organize the lease sales and then develop the supply delivery infrastructure. However, as development progressed, the expected growth in supply would have an effect on market sentiment and eventually prices. Thus, opening the OCS should be viewed as a relevant part of a larger strategy to help ease prices over time because an increase in activity in the OCS would generally improve expectations about future oil supplies. Lifting the current moratorium in the OCS would also provide almost 80 trillion cubic feet of technically recoverable natural gas that is currently off-limits. A recent study by the Baker Institute indicates that removing current restrictions on resource development in the OCS would reduce future liquefied natural gas import dependence of the United States and lessen the influence of any future gas producers' cartel.

#### And, that sustains low prices and ensures adequate supply

Hastings, 12 [House Representative Doc, Republican Washington, President Obama's offshore drilling plan must be replaced, http://thehill.com/blogs/congress-blog/energy-a-environment/239529-president-obamas-offshore-drilling-plan-must-be-replaced]

Though President Obama uses lofty rhetoric to claim support for American oil and natural gas production, the administration chose to bury the announcement of this plan under mountains of news coverage. It’s no surprise that during an election year the president doesn’t want to hype a plan that represents a giant step backwards for American energy production and keeps 85 percent of our offshore areas off-limits. Fortunately, Congress now has the responsibility to act and make clear that the president’s plan is inadequate to meet the United States’ energy needs. Under current law, the president must submit the five-year plan to Congress for a mandatory 60-day review before it goes into effect. While in the past, this 60-day review has been treated as just a formality, it is an opportunity to reject the president’s plan and offer a better alternative for job creation and energy production. H.R. 6082, the Congressional Replacement of President Obama’s Energy-Restricting and Job-Limiting Offshore Drilling Plan, would replace President Obama’s plan with an environmentally responsible, robust plan that supports new offshore drilling. This plan passed out of the House Natural Resources Committee with bipartisan support and will be considered by the full House this week. It sets up a clear choice between the president’s drill-nowhere-new plan and the Congressional replacement plan to responsibly expand offshore American energy production. President Obama’s plan **doesn’t open one new area for** leasing and energy production. The Atlantic Coast, the Pacific Coast and most of the water off Alaska are all placed off-limits. This is especially frustrating for Virginians who had a lease sale scheduled for 2011, only to have it canceled by President Obama. The president added further insult to injury by not including the Virginia lease sale in his final plan, meaning the earliest it could happen is late 2017. The president’s plan only offers 15 lease sales limited to the Gulf of Mexico and, very late in the plan, small parts of Alaska. It doesn’t open one new area for leasing and energy production. According to the non-partisan Congressional Research Service, President Obama’s 15 lease sales represent the lowest number ever included in an offshore leasing plan. President Obama rates worse than even Jimmy Carter. Thanks to President Obama, it’s as if the bipartisan steps to lift the drilling moratoria in 2008 never happened. Crippling $4 gasoline prices sparked Americans’ outrage and pressured the Democrat-controlled Congress to allow legislation to pass opening up new offshore areas to drilling. Unfortunately, four years later, American families and small businesses are experiencing the pain of higher gasoline prices and yet no progress has been made to expand production of our offshore resources. The Congressional moratorium on drilling has simply been replaced by the “Obama moratorium” on drilling. Gasoline prices were $1.89 when President Obama took office, and prices today are nearly double. Americans will continue to face volatile price spikes as long as we continue to keep the United States’ energy resources under lock-and-key. In stark contrast to the president, the Congressional replacement plan includes 29 lease sales and opens new areas previously under moratoria. It’s a targeted effort towards those areas where we know we have the most oil and natural gas resources – like the mid-Atlantic, the Southern California Coast and Alaska. This is a drill smart plan that would create thousands of new American jobs, help lower prices at the pump and strengthen our national and economic security. Congress has a choice – to either support the president’s plan that re-imposes the drilling moratorium and places the vast majority of offshore areas off-limits, or support using American energy to create American jobs and strengthen America’s economy.

#### Only offshore development can keep domestic prices down

Pirog, 12 [Robert Pirog Specialist in Energy Economics CRS, http://assets.opencrs.com/rpts/R40645\_20120210.pdf]

Natural gas markets differ from the oil market in that they are not global, but regional. As shown¶ in Table 6, above, virtually all U.S. natural gas consumption comes from U.S. or Canadian¶ sources. The only link between regional natural gas markets is through LNG, but the rapidly¶ growing market for LNG predicted earlier in this decade has failed to materialize. LNG is still¶ largely characterized by long-term, two-party supply and purchase agreements. In the North¶ American market, LNG plays the role of making up marginal short-falls in the demand and¶ supply balance. As production from domestic onshore shale gas deposits increases, the role of¶ LNG in the U.S. market will likely be small.¶ In this regional market structure, the development of new, offshore U.S. supplies could have a¶ significant impact on the domestic price of natural gas, as well as contributing to U.S. energy¶ independence of this fuel. Although the price of natural gas has not shown the same degree of¶ volatility as oil, the United States has been **among the highest-priced regions in the world**. High¶ prices have caused residential consumers to allocate a greater portion of their budgets to home¶ heating expenses. Industrial users either lose sales to overseas competitors, or cease U.S.¶ production when domestic natural gas prices rise too much beyond those observed in other¶ regions of the world.¶ The development of offshore natural gas resources is likely to further retard the development of a¶ growing LNG system in the United States. Terminals for the re-gasification of LNG have proven¶ to be difficult to site and permit, and expensive to build. If domestic natural gas resources, close¶ to existing collection and distribution systems, at least in the Gulf of Mexico, could be developed,¶ the LNG terminals might prove to be redundant, depending on the volumes of natural gas that¶ ultimately might be recovered. Offshore natural gas development, though commonly associated with offshore oil production, will likely be less competitive in a market environment dominated¶ by onshore shale gas development.

#### Nearly 100 new projects are capable of development

Paul Hillegeist et al (President and COO at Quest Offshore Resources, Inc, Sean Shafer, Project Director, Andrew Jackson, Project Manager, Leslie Cook , Senior Research Consultant) December 2011 “The State of the Offshore U.S. Oil and Gas Industry” http://energytomorrow.org/images/uploads/Quest\_2011\_December\_29\_Final.pdf

If drilling permits going forward were to be issued at pre‐moratorium rates, the number of shallow water projects delayed could be significantly reduced from 85 under the current path to 37 over the 2012 to 2015 period, and from 48 to 9 for the deepwater. The increased number of projects would increase investment in the Gulf of Mexico offshore oil and gas industry by over $15.6 billion dollars from 2012‐2015. This additional investment would increase average annual U.S. employment between 17,000 and 49,000 thousand jobs per year over that time period. Offshore oil production would be higher over the next decade, for example, by 2017 offshore oil production would rise by approximately 13 percent relative to its current projected path. A regulatory environment that eliminates unnecessary permitting delays and maintains competitiveness with development opportunities in other regions of the world would provide a first step to revitalizing the offshore oil and gas industry. Additional access to offshore areas currently off‐limits remains a key missing component of U.S. energy policy, and would provide substantial additional gains to the nation in terms of energy security, employment and government revenue.

#### OCS doubles our capacity

Baker Institute, ‘8 (Baker Institute for Public Policy, Rice University, Baker Institute Policy Report, January 2008, “Natural Gas in North America: Markets and Security,” http://connection.ebscohost.com/c/articles/30064519/study-lift-u-s-drilling-restrictions-avoid-international-lng-cartel)//CC

As might be expected, the lower requirements for LNG under this scenario stem from larger, lowcost U.S. Lower 48 natural gas production. Modeling predicts that lifting access restrictions would lead to an increase overall in Lower 48 production of about 1.5 tcf in 2015 (or a 7.5 percent increase), increasing to 3.1 tcf greater production (or a 10.1 percent increase) in every year from 2015 through 2030. More specifically, OCS production would total 5.0 tcf in 2015 and 6.1 tcf in 2025 as compared to only 3.5 tcf in 2015 and 3.9 tcf in 2025 if the restrictions remain in place. Lifting restrictions in the Rocky Mountains adds another 0.10 tcf by 2015 and 0.93 tcf by 2025.

#### Otherwise, restrictions crush predictability and timing of projects

Curry L. Hagerty (Specialist in Energy and Natural Resources Policy at the Congressional Research Service) June 15, 2010 “Outer Continental Shelf Moratoria on Oil and Gas Development” http://crs.ncseonline.org/nle/crsreports/10Jul/R41132.pdf

One legacy of congressional moratoria is their impact on the timing of possible OCS development. From a developer’s point of view, predictability in the pace, timing, and sequence of OCS development projects is key to strategic business decisions. From a regulator’s standpoint, agency discretion for OCS development is tied to program planning horizons set by statutory or regulatory timetables. Features of the annual congressional moratoria varied from year to year, and from region to region, as reflected in Table 1, and the resultant uncertainty had a disruptive effect on the pace of OCS activity, which was viewed negatively by those in favor of OCS drilling. Among those opposed to OCS drilling, the disruptive effect was considered a positive outcome.23 Changes to the specific provisions of annual moratoria measures created tensions due to the unpredictability of the bans on leasing activities, timeframes, and locations.24 It was not uncommon for developers to engage in litigation against the federal government and to claim damages related to reliance on leases and federal OCS policies that were disrupted by the annual congressional moratoria.25 Although observers agreed that appropriations measures were out of sync with the timetable used to coordinate federal OCS planning functions, proponents of annual congressional moratoria provisions countered that restrictions were defensible in the absence of more permanent alternatives for similar leasing prohibitions

### neocleous

#### Neocleous’ claim that Western economic models leads to fascism and perpetual war is devoid of any academic merit – there is not one scholar in the last quarter century that agrees with him

James **Gregor 2000**(Professor of Political Science at the University of California, Berkeley) October 2000 “The Search for Fascism” EBSCO

Mark Neocleous' Fascism, as a case in point, is a little book almost entirely devoid of merit. It is an interpretation of fascism predicated on the conviction that "Fascism is first and foremost an ideology generated by modern industrial capitalism" (p. xi). Generated by modern industrial capitalism, Fascism produced an ideology and created a regime that was "full of emotion and empty of real meaning.…" (p. x). Fascists, somehow the products of technologically proficient and pragmatically motivated "modern industrial capitalism," abandoned "any rational argument" in their support of dysfunctional and counterproductive "violence and war" as "absolutes" (p. 17). Given that characterization, Neocleous goes on to argue that such a belief and political system was the very opposite of an intelligent, rational, humane and peace-loving Marxism--which embraced the "Enlightenment's core political projects" of truth, humanity, peace, "collective emancipation" and a "truly rational society" (p. 2). One can only be puzzled that someone could write something like that about Marxists and their revolutionary behaviors at the end of the twentieth century. It has been at least a quarter-century since any serious academic argued that fascism was, in any significant sense, the product of "modern industrial capitalism." It has been almost as long since any serious academic argued that Fascism was "empty of real meaning" or that fascists were the irrational advocates of "perpetual war." Whatever all that can be taken to mean, it is more important to try to understand what it might mean to say that "Marxism" is part of the "liberal" tradition that is committed to fulsome rationality and universal peace. It is hard to believe that Neocleous imagines that either Josef Stalin or Mao Zedong might be representatives of any such "humane and peaceful" tradition. Mao, for example, was an unregenerate anti-intellectual who held that too much reading might "petrify" one's brain--and that, throughout history, the less-learned always triumphed over those more-learned. Mao believed in action rather than thought--and was convinced that there were too many schools in China. Learning, apparently, was very bad.

#### Growth is on balance positive—trade relations cause interdep

**Hillebrand 10** - Professor of Diplomacy @ University of Kentucky and a Senior Economist for the Central Intelligence Agency. [Evan E. Hillebrand, ?Deglobalization Scenarios: Who Wins? Who Loses?,? Global Economy Journal, Volume 10, Issue 2 2010, <http://www.bepress.com/cgi/viewcontent.cgi?article=1611&context=gej>)

A long line of writers from Cruce (1623) to Kant (1797) to Angell (1907) to Gartzke (2003) have theorized that economic interdependence can lower the likelihood of war. Cruce thought that free trade enriched a society in general and so made people more peaceable; Kant thought that trade shifted political power away from the more warlike aristocracy, and Angell thought that economic interdependence shifted cost/benefit calculations in a peace-promoting direction. Gartzke contends that trade relations enhance transparency among nations and thus help avoid bargaining miscalculations.

There has also been a tremendous amount of empirical research that mostly supports the idea of an inverse relationship between trade and war. Jack Levy said that, “While there are extensive debates over the proper research designs for investigating this question, and while some empirical studies find that trade is associated with international conflict, most studies conclude that trade is associated with peace, both at the dyadic and systemic levels” (Levy, 2003, p. 127).

There is another important line of theoretical and empirical work called Power Transition Theory that focuses on the relative power of states and warns that when rising powers approach the power level of their regional or global leader the chances of war increase (Tammen, Lemke, et al, 2000). Jacek Kugler (2006) warns that the rising power of China relative to the United States greatly increases the chances of great power war some time in the next few decades. The IFs model combines the theoretical and empirical work of the peacethroughtrade tradition with the work of the power transition scholars in an attempt to forecast the probability of interstate war. Hughes (2004) explains how he, after consulting with scholars in both camps, particularly Edward Mansfield and Douglas Lemke, estimated the starting probabilities for each dyad based on the historical record, and then forecast future probabilities for dyadic militarized interstate disputes (MIDs) and wars based on the calibrated relationships he derived from the empirical literature.

The probability of a MID, much less a war, between any random dyad in any given year is very low, if not zero. Paraguay and Tanzania, for example, have never fought and are very unlikely to do so. But there have been thousands of MIDs in the past and hundreds of wars and many of the 16,653 dyads have nonzero probabilities. In 2005 the mean probability of a country being involved in at least one war was estimated to be 0.8%, with 104 countries having a probability of at least 1 war approaching zero. A dozen countries12, however, have initial probabilities over 3%.

The globalization scenario projects that the probability for war will gradually decrease through 2035 for every country—but not every dyad--that had a significant (greater than 0.5% chance of war) in 2005 (Table 6). The decline in prospects for war stems from the scenario’s projections of rising levels of democracy, rising incomes, and rising trade interdependence—all of these factors figure in the algorithm that calculates the probabilities. Not all dyadic war probabilities decrease, however, because of the power transition mechanism that is also included in the IFs model. The probability for war between China and the US, for example rises as China’s power13 rises gradually toward the US level but in these calculations the probability of a China/US war never gets very high.14

Deglobalization raises the risks of war substantially. In a world with much lower average incomes, less democracy, and less trade interdependence, the average probability of a country having at least one war in 2035 rises from 0.6% in the globalization scenario to 3.7% in the deglobalization scenario. Among the top-20 war-prone countries, the average probability rises from 3.9% in the globalization scenario to 7.1% in the deglobalization scenario. The model estimates that in the deglobalization scenario there will be about 10 wars in 2035, vs. only 2 in the globalization scenario15. Over the whole period, 2005-2035, the model predicts four great power wars in the deglobalization scenario vs. 2 in the globalization scenario.16

IV. Winners and Losers

Deglobalization in the form of reduced trade interdependence, reduced capital flows, and reduced migration has few positive effects, based on this analysis with the International Futures Model. Economic growth is cut in all but a handful of countries, and is cut more in the non-OECD countries than in the OECD countries. Deglobalization has a mixed impact on equality. In many non-OECD countries, the cut in imports from the rest of the world increases the share of manufacturing and in 61 countries raises the share of income going to the poor. But since average productivity goes down in almost all countries, this gain in equality comes at the expense of reduced incomes and increased poverty in almost all countries. The only winners are a small number of countries that were small and poor and not well integrated in the global economy to begin with—and the gains from deglobalization even for them are very small.

Politically, deglobalization makes for less stable domestic politics and a greater likelihood of war. The likelihood of state failure through internal war, projected to diminish through 2035 with increasing globalization, rises in the deglobalization scenario particularly among the non-OECD democracies. Similarly, deglobalization makes for more fractious relations among states and the probability for interstate war rises.

### deloria

#### Here are a bunch of things that Deloria is straight up wrong about

Brumble 1998 ( “Vine Deloria Jr, Creationism, and Ethnic Pseudoscience” <http://ncse.com/rncse/18/6/vine-deloria-jr-creationism-ethnic-pseudoscience>)

Vine Deloria, a Standing Rock Sioux, has been an important advocate for American Indians for more than 25 years. He has defended Indian claims in the courts; he has acted as an Indian spokesman in Washington. Deloria is also a professor of history, law, and religious studies at the University of Colorado. His books have brought Indian concerns to a broad audience. He burst upon the scene in 1969 with Custer Died for Your Sins, and he has continued to write about injustices done the Indians by the government, the schools, the church, anthropologists, and the courts. Most recently he has taken on the scientists inRed Earth, White Lies: Native Americans and the Myth of Scientific Fact. Imagine how Deloria's own people must have felt when this distinguished man returned to the Standing Rock Reservation to talk — no, to consult — with them about science. Deloria describes just such a scene in this book. He returns to the reservation and delivers a speech. In this speech he discusses a problem in paleontology that he is currently working on. Deloria believes that a certain sawtooth-backed "monster" in one of the Sioux tales is really a stegosaurus:¶ After my speech a couple of the traditional people approached me and said that the next time I came, if I had time, they would take me to see the spot where the people last saw this creature, implying that it was still possible to see the animal during the last century before the reservations were established. I gave their knowledge credence (p 243).¶ Deloria is telling us that he believes that these "traditional people" have helped him to prove that the scientists are wrong — that dinosaurs did not go extinct millions of years ago; a hundred years ago the Sioux saw the stegosaurus walking in the Badlands. He "gave their knowledge credence." Imagine how these "traditional people," these Standing Rock Sioux, must have felt to have Vine Deloria, a university professor and one of their own, talking with them seriously about paleontology — and giving credence to what they were able to tell him about the stegosaurus, what they were able to tell him out of the storehouse of their traditional knowledge. Anyone who knows anything at all about American Indian history must understand what a moment this must have been. Red Earth, White Lies was written in the spirit of that evening — the book promotes not just the value of American Indian oral traditions, but the scientificvalue of American Indian oral traditions. And the book is also a heady indictment of the white man's science. The only problem, of course, is that Deloria is wrong. He was wrong on that memorable evening — whatever the beast in the tale might be, the Sioux could not have seen a stegosaurus a hundred years ago. And he is just as obviously wrong on almost every page of Red Earth, White Lies. Some examples follow.¶ On the Earth as a Youthful Planet¶ Deloria doubts that the earth is billions of years old; indeed, he writes, "Most American Indians, I believe, were here 'at the beginning' and have preserved the memory of traumatic continental and planetary catastrophes" (p 251). The geologists are simply wrong in their reading of the geological record. For example, "vulcanism was a onetime event" (p 235).¶ Dinosaurs and Human Beings¶ Indians tell stories about a time when there were monsters on the earth. Some of these monsters Deloria recognizes as dinosaurs: "That is to say, humans and some creatures we have classified as dinosaurs were contemporaries" (p 241). Deloria is inclined to credit one western tribe's belief that they have in their possession "an unfossilized dinosaur bone" (p 241). And as we have seen, he believes that the Sioux saw the stegosaurus walking in the Badlands a hundred years ago.¶ On Noah's Flood¶ Deloria believes in the historical reality of the biblical flood, because "Indian traditions also spoke of a great flood... and they had their own culture heroes who followed the same procedure as Noah" (p 61-2). In fact, the Old Testament account of Noah's flood "may very well provide evidence of the basic accuracy of the Indian story" (p 207). Just as his forefathers built their encampments in a circle, so Deloria builds his arguments.¶ On Pilgrims and Mammoths¶ Deloria argues that "there were mammoths or mastodons still living in the eastern United States at the time the Pilgrims landed" (p 143).¶ On the Mormon View of the Origin of the American Indians¶ Deloria gives credence to the Mormon contention that the American Indians came from the Middle East (p 62).¶ On the Effects of Increased Levels of Carbon Dioxide¶ Deloria is convinced that increased levels of carbon dioxide lead to gigantism; this explains the size of the mammoths and the giant sloths — just as it explains the increasing size of human beings since the beginnings of the industrial revolution. Indeed, Deloria sees the increase of carbon dioxide (which most of us worry about in connection with global warming) as one reason for the increased size of football and basketball players since he was in high school (p 172-7).¶ On the Change in the Coefficient of Gravity¶ Deloria is inclined to think that the coefficient of gravity has fluctuated so widely as to account (with the increased levels of carbon dioxide) for the gigantism we find in the age of the dinosaurs and again in the age of the mammoths and giant sloths (p 174).¶ On Ecology¶ By way of dismissing the idea that such animals as the mammoth might have gone extinct because of climate change, Deloria writes that "It hardly seems possible that any animal, living in a more benign region for a change, would promptly expire" (p 164) — as though penguins, for example, would really be better off in San Diego.¶ On Evolution¶ Evolution is a failed theory: "[E]ven the most sophisticated of modern scientists, in explaining the fossil remains, finds that species in the rocks are distant relatives to each other, not direct lineages" (p 40). At one point Deloria refers dismissively to "the outmoded sequence of alleged human evolution" (p 217). Once Deloria has considered the evidence he asks, "Where is evolution?" (p 238).¶ On the Character of Science¶ Scientists are virtually incapable of independent thinking; they are hobbled by their reverence for orthodoxy (p 42-4, 50-1, 154-5, 180, 202, 231-2). Scientists characteristically persecute those who dare to advance unorthodox views. Science is thus essentially a religion (p 17-8, 41, 87, 178, 251) — and scientists are in the thrall of their scientific myths. In many areas science is nothing more than "a hilarious farce" (p 202). Most readers will recognize in much of this the lineaments of "creation science". But for those who have (quite reasonably) paid little attention to "creation science", here is a good, brief characterization of the movement:¶ The creationists have learned a lot in their long struggle to unseat evolution. Trial and error has shown them what doesn't work: Anti-science doesn't, efforts to ban [the teaching of] evolution don't, and purely religious invective is also a losing proposition. The idea of being open-minded, religiously neutral, and scientific has gained such wide credence (or at least lip service) that creationists can't successfully oppose it, no matter how much they might like to. So, their new tactic is to declare creationism scientific, then join in with the majority and espouse the virtues of the times in their own name. In this way they can pose as latter-day Galileos being persecuted by "orthodox" science (Edwords 1980: 4-5).¶ Add to this a large measure of standard-issue American Ethnic Invective, and you have Deloria's method exactly.¶ Ethnic Pseudoscience¶ Of course Deloria is not the first American ethnic to question mainstream science and scholarship. Deloria's closest pseudoscientific cousins may be in the Afrocentric movement. African-American "melanin scholars", for example Martin Bernal, have as their basic tenet that melanin (the pigment found in all humans) has remarkable properties (Ortiz de Montellano 1991, 1991/1992; Griffin 1996; Lefkowitz and Rogers 1996). So those who have lots of melanin have large powers. Thus it is melanin that is responsible for the athletic prowess of African-Americans and for the superior intelligence and extra-sensory potential of blacks in general. Melanin also accounts for the achievements of the ancient Egyptians, who were black, according to the melanin scholars. This allows the melanin scholars to provide pseudoscientific underpinnings for an Afrocentric creation myth. According to the melanin scholars, then, it was melanin that allowed Africans to "invent" fire, language, and time. None of this would matter much if scholars who know better would respond to such arguments on their merits. But educated people of good will recognize in such scholarship the aspirations of disadvantaged peoples for a place at the table of learning. Sympathizing as they do with the yearnings of the dispossessed, educated people of good will often pretend to see real contributions to learning in ethnic pseudoscience and pseudoscholarship. I was struck, for example, by the dust jacket blurbs for Red Earth, White Lies. Leslie Marmon Silko writes that the book "shoots down a whole herd of sacred cows — from Charles Darwin's cow to Samuel Eliot Morison's bull." Goodness; does Silko — who is a university professor, after all — really believe that Deloria has disposed of the theory of evolution? In genuine puzzlement, I wrote to ask her this question, but I received no response. (I am not certain that she received the letter.) Dee Brown, author of Bury My Heart at Wounded Knee, one of the best known books on American Indian history, wrote that Deloria is "lambasting scholars and scientists for filling our heads with nonsense while they ignore the traditional knowledge of native tribes." I wrote Brown, again in genuine puzzlement, to ask him if he really meant this: "Deloria even argues," I wrote, "that human beings and dinosaurs were on the earth at the same time." Brown reminded me that "some of the creation myths tell of green scum heated by the sun being washed ashore to begin terrestrial life." Yes, one might respond, and a Navajo myth tells of four consecutive worlds with the creatures passing from one to the next by ladders. Probably paleontologists and geologists would be as little aided by the one myth as by the other. And of course it is only the work of the scientists which makes the "green scum" myth seem more like science than the "ladders" myth. Surely Brown cannot really think that geologists and paleontologists would be further along if they spent less time looking at rocks and more time interpreting Kwakiutl myths. But Brown makes another suggestion:¶ Deloria has a Siouan sense of black humor, and likes to tease his readers. Unless he has changed in the last few years, he would laugh at the idea of men and dinosaurs living together. But then he might tell you that.¶ So, Brown is not convinced, really, that dinosaurs and human beings were on the earth at the same time. No, Brown thinks it likely that ol' trickster Deloria is just counting coup in his on-going culture war with the Anglo establishment, just having fun with me — and all the others who might be willing to fork over $23 for a book advertised to dispel "the myth of scientific fact". But if Deloria's book is just a politico-ethnic practical joke, it seems to have taken in another of the blurb writers. Father Peter J Powell wrote that this book "is the most important scholarly work" Deloria has written. Powell expresses the hope that the book will "persuade Anglo scholars to accord American Indian elders that respect owed them as repositories of the greatest wisdom concerning the nature of this continent that exists." Powell has written widely on American Indian history, and he has worked for many years among Indians of several tribes. He is a learned man — and so I wrote to him in puzzlement. He wrote back to assure me that, yes, he really does believe that "geologists should take American Indian traditions seriously." He really is "convinced that ultimately geologists will discover the succession of geological events recalled in the tribal traditions to be empirically sound" — but then Father Powell reminds me that he is a priest, that he writes as one for whom "theology is the queen of the sciences." And so we return to creationism.¶ Political and Legal Consequences¶ All of this is diverting, but we should remember that when theology or affirmative action drives science, there can be real-world consequences. Most immediately, we should worry that Deloria's affirmative-action science might work its way into public school science curricula. Deloria puts it this way: "All we ask is respect for the other traditions and some of their versions of origins" (p 187). This is, of course, exactly the disingenuous argument of the creationists, as they strive to get "creation science" into the schools and textbooks: "We are only asking that both theories be taught." But well-meaning academics who scorn this argument when it comes from Christian creationists, often encourage ethnic pseudoscience curricula out of a sense of cultural noblesse oblige. And so we end up with real science for the nice, white suburbs, and self-affirming pseudoscience for the reservations and inner cities. Deloria has another motive of ethnic self-interest as well. Deloria must be hoping that Red Earth, White Lies will have real legal consequences. For Deloria the lawyer, "proof" of the veracity of Indian oral traditions can be crucial in treaty claims — where Indian tribal memory is sometimes importantly in conflict with written treaties (p 230). Numerous court cases pit Indian understanding of a treaty against the literal wording of the treaty. In many of these cases, this means that Indian tribal memory — oral tradition — is being pitted against what is written. The Idaho Court of Appeals (Swim v Bergland 1983), for example, ruled that agreements between the United States and Indian tribes are to be construed according to the probable understanding of original tribal signatories. The Washington Court of Appeals (Fry v US 1981) decided that evidence of tribal custom is a proper basis for judicial conclusions about the present effect of Indian treaty provisions. Such arguments will be easier for Deloria the lawyer to make if he can point to Red Earth, White Lies as "proving" that Indian oral traditions have real scientific standing. If academics agree that his book "proves" that oral traditions can help the paleontologists, then oral traditions obviously ought to be accepted as proof in questions of legal ownership dating back a mere century, say. I would not be misunderstood: I do not mean to deny that oral traditions might be important evidence in a court of law; I certainly do not mean to deny the worth of oral traditions. Indeed, I have devoted a good deal of attention to certain aspects of American Indian oral traditions (see Brumble 1988). And of course a good deal of scientific attention is being paid to oral traditions having to do with plants, to ethnobotany. But Deloria devotes only two pages of Red Earth, White Lies to ethnobotany (p 58-59). The book has mainly to do with "geomythology" (60).¶ Foundations of Competent Scholarship¶ I do want to point out that Deloria, the creationists, and the melanin scholars differ importantly from scientists. Deloria and company are fundamentally anti-rational — even as they try to wrap the mantle of science about their beliefs. Thus they are content with seeming scientific arguments to buttress beliefs which they hold independent of evidence. Deloria, for example, takes up a familiar creationist strain in mocking the evolutionists for lacking any "transitional forms" in the fossil record:¶ [E]ven the most sophisticated of modern scientists, in explaining the fossil remains, finds that species in the rocks are distant relatives to each other, not direct lineages.... Apparently somewhere, and at a time unknown, when species were ready to evolve they went offstage, made their changes, and then rushed back into the geologic strata to leave evidence of their existence (p 40).¶ In fact, by the time Deloria was penning these lines, the paleontological world was already abuzz with the news that transitional forms had been found. In the January 14, 1994 issue of Science Thewissen and Aria described the fossil skeleton of a whale with large, complete, and functional hind legs — legs which would have allowed this early whale to get about on the land! Gould calls this a "bag packer for creationists", the paleontological "smoking gun" (1995: 366-7). This was big news, and Science is not exactly an obscure journal. The publication of the article was early enough for Deloria to have read the piece (or even Gould's April, 1994, account of the discovery in Natural History reprinted in Gould 1995: 359-76), had he been doing the kind of reading one would have to do in order to write a book responsibly attacking the basic tenets of geology and paleontology.

### 1ar at: neolib

#### And, Neolib’s inevitable and movements—no alternative economic system

Jones 11—Owen, Masters at Oxford, named one of the Daily Telegraph's 'Top 100 Most Influential People on the Left' for 2011, author of "Chavs: The Demonization of the Working Class", The Independent, UK, "Owen Jones: Protest without politics will change nothing", 2011, [www.independent.co.uk/opinion/commentators/owen-jones-protest-without-politics-will-change-nothing-2373612.html](http://www.independent.co.uk/opinion/commentators/owen-jones-protest-without-politics-will-change-nothing-2373612.html)

My first experience of police kettling was aged 16. It was May Day 2001, and the anti-globalisation movement was at its peak. The turn-of-the-century anti-capitalist movement feels largely forgotten today, but it was a big deal at the time. To a left-wing teenager growing up in an age of unchallenged neo-liberal triumphalism, just to have "anti-capitalism" flash up in the headlines was thrilling. Thousands of apparently unstoppable protesters chased the world's rulers from IMF to World Bank summits – from Seattle to Prague to Genoa – and the authorities were rattled.¶ Today, as protesters in nearly a thousand cities across the world follow the example set by the Occupy Wall Street protests, it's worth pondering what happened to the anti-globalisation movement. Its activists did not lack passion or determination. But they did lack a coherent alternative to the neo-liberal project. With no clear political direction, the movement was easily swept away by the jingoism and turmoil that followed 9/11, just two months after Genoa.¶ Don't get me wrong: the Occupy movement is a glimmer of sanity amid today's economic madness. By descending on the West's financial epicentres, it reminds us of how a crisis caused by the banks (a sentence that needs to be repeated until it becomes a cliché) has been cynically transformed into a crisis of public spending. The founding statement of Occupy London puts it succinctly: "We refuse to pay for the banks' crisis." The Occupiers direct their fire at the top 1 per cent, and rightly so – as US billionaire Warren Buffett confessed: "There's class warfare, all right, but it's my class, the rich class, that's making war, and we're winning."¶ The Occupy movement has provoked fury from senior US Republicans such as Presidential contender Herman Cain who – predictably – labelled it "anti-American". They're right to be worried: those camping outside banks threaten to refocus attention on the real villains, and to act as a catalyst for wider dissent. But a coherent alternative to the tottering global economic order remains, it seems, as distant as ever. **¶** Neo-liberalism crashes around, half-dead, with no-one to administer the killer blow.**¶** There's always a presumption that a crisis of capitalism is good news for the left. Yet in the Great Depression, fascism consumed much of Europe. The economic crisis of the 1970s did lead to a resurgence of radicalism on both left and right. But, spearheaded by Thatcherism and Reaganism, the New Right definitively crushed its opposition in the 1980s.This time round, there doesn't even seem to be an alternative for the right to defeat. That's not the fault of the protesters. In truth, the left has never recovered from being virtually smothered out of existence. It was the victim of a perfect storm: the rise of the New Right; neo-liberal globalisation; and the repeated defeats suffered by the trade union movement.¶ But, above all, it was the aftermath of the collapse of Communism that did for the left. As US neo-conservative Midge Decter triumphantly put it: "It's time to say: We've won. Goodbye." From the British Labour Party to the African National Congress, left-wing movements across the world hurtled to the right in an almost synchronised fashion. It was as though the left wing of the global political spectrum had been sliced off. That's why, although we live in an age of revolt, there remains no left to give it direction and purpose.

#### No political crises

Stelzer 9 Irwin Stelzer is a business adviser and director of economic policy studies at the Hudson Institute, “Death of capitalism exaggerated,” [http://www.theaustralian.news.com.au/story/0,25197,26174260-5013479,00.html](http://www.theaustralian.news.com.au/story/0%2C25197%2C26174260-5013479%2C00.html)

A FUNNY thing happened on the way to the collapse of market capitalism in the face of the worst economic crisis since the Great Depression. It didn't. Indeed, in Germany voters relieved Chancellor Angela Merkel of the necessity of cohabiting with a left-wing party, allowing her to form a coalition with a party favouring lower taxes and free markets. And in Pittsburgh leaders representing more than 90 per cent of the world's GDP convened to figure out how to make markets work better, rather than to hoist the red flag. The workers are to be relieved, not of their chains but of credit-card terms that are excessively onerous, and helped to retain their private property - their homes. All of this is contrary to expectations. The communist spectre that Karl Marx confidently predicted would be haunting Europe is instead haunting Europe's left-wing parties, with even Vladimir Putin seeking to attract investment by re-privatising the firms he snatched. Which raises an interesting question: why haven't the economic turmoil and rising unemployment led workers to the barricades, instead of to their bankers to renegotiate their mortgages? It might be because Spain's leftish government has proved less able to cope with economic collapse than countries with more centrist governments. Or because Britain, with a leftish government, is now the sick man of Europe, its financial sector in intensive care, its recovery likely to be the slowest in Europe, its prime credit rating threatened. Or it might be because left-wing trade unions, greedily demanding their public-sector members be exempted from the pain they want others to share, have lost their credibility and ability to lead a leftward lurch. All of those factors contribute to the unexpected strength of the Right in a world in which a record number of families are being tossed out of their homes, and jobs have been disappearing by the million. But even more important in promoting reform over revolution are three factors: the existence of democratic institutions; the condition of the unemployed; and the set of policies developed to cope with the recession. Democratic institutions give the aggrieved an outlet for their discontent, and hope they can change conditions they deem unsatisfactory. Don't like the way George W. Bush has skewed income distribution? Toss the Republicans out and elect a man who promises to tax the rich more heavily. Don't like Gordon Brown's tax increases? Toss him out and hope the Tories mean it when they promise at least to try to lower taxes. Result: angry voters but no rioters, unless one counts the nutters who break windows at McDonald's or storm banks in the City. Contrast that with China, where the disaffected have no choice but to take to the streets. Result: an estimated 10,000 riots this year protesting against job losses, arbitrary taxes and corruption. A second factor explaining the Left's inability to profit from economic suffering is capitalism's ability to adapt, demonstrated in the Great Depression of the 1930s. While a gaggle of bankers and fiscal conservatives held out for the status quo, Franklin D. Roosevelt and his experimenters began to weave a social safety net. In Britain, William Beveridge produced a report setting the stage for a similar, indeed stronger, net. Continental countries recovering from World War II did the same. So unemployment no longer dooms a worker to close-to-starvation. Yes, civic institutions were able to soften the blow for the unemployed before the safety net was put in place, but they could not cope with pervasive protracted lay-offs. Also, during this and other recessions, when prices for many items are coming down, the real living standard of those in work actually improves. In the US, somewhere between 85 per cent and 90 per cent of workers have kept their jobs, and now see their living costs declining as rents and other prices come down. So the impetus to take to the streets is limited. Then there are the steps taken by capitalist governments to limit the depth and duration of the downturn. As the economies of most of the big industrial countries imploded, policy went through two phases. The first was triage - do what is necessary to prevent the financial system from collapse. Spend. Guarantee deposits to prevent runs on banks and money funds, bail out big banks, force relatively healthier institutions to take over sicker ones, mix all of this with rhetorical attacks on greedy bankers - the populist spoonful of sugar that made the bailouts go down with the voters - and stop the rot. Meanwhile, have the central banks dust off their dog-eared copies of Bagehot and inject lots of liquidity by whatever means comes to mind. John Maynard Keynes, meet Milton Friedman for a cordial handshake. Then came more permanent reform, another round of adapting capitalism to new realities, in this case the malfunctioning of the financial markets. Even Barack Obama's left-wing administration decided not to scupper the markets but instead to develop rules to relate bankers' pay more closely to long-term performance; to reduce the chance of implosions by increasing the capital banks must hold, cutting their profits and dividends, but leaving them in private hands; and to channel most stimulus spending through private-sector companies. This leaves the anti-market crowd little room for manoeuvre as voters seem satisfied with the changes to make capitalism and markets work better and more equitably. At least so far. There are exceptions. Australia moved a bit to the left in the last election, but more out of unhappiness with a tired incumbent's environmental and foreign policy. Americans chose Obama, but he had promised to govern from the centre before swinging left. And for all his rhetorical attacks on greedy bankers and other malefactors of great wealth, he sticks to reform of markets rather than their replacement, with healthcare a possible exception. Even in these countries, so far, so good for reformed capitalism. No substitutes accepted.

### 1ar: at nukes

#### New sources and models all forecast extinction—none of their indicts apply

**Mosher 2011** (2/25, Dave, Wired Science, “How one nuclear skirmish could wreck the planet”, <http://www.wired.com/wiredscience/2011/02/nuclear-war-climate-change/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+wiredscience+(Blog+-+Wired+Science)>, WEA)

WASHINGTON — Even a small nuclear exchange could ignite mega-firestorms and wreck the planet’s atmosphere.

New climatological simulations show 100 Hiroshima-sized nuclear bombs — relatively small warheads, compared to the arsenals military superpowers stow today — detonated by neighboring countries would destroy more than a quarter of the Earth’s ozone layer in about two years.

Regions closer to the poles would see even more precipitous drops in the protective gas, which absorbs harmful ultraviolet radiation from the sun. New York and Sydney, for example, would see declines rivaling the perpetual hole in the ozone layer above Antarctica. And it may take more than six years for the ozone layer to reach half of its former levels.

Researchers described the results during a panel Feb. 18 at the [annual meeting of the American Association for the Advancement of Science](http://www.aaas.org/meetings/2011/), calling it “a real bummer” that such a localized nuclear war could bring the modern world to its knees.

“This is tremendously dangerous,” said environmental scientist [Alan Robock of Rutgers University](http://envsci.rutgers.edu/~robock/), one of the climate scientists presenting at the meeting. “The climate change would be unprecedented in human history, and you can imagine the world … would just shut down.”

To defuse the complexity involved in a nuclear climate catastrophe, Wired.com sat down with [Michael Mills](http://acd.ucar.edu/~mmills/), an atmospheric chemist at the National Center for Atmospheric Research, who led some of the latest simulation efforts.

‘It’s pretty clear this would lead to a global nuclear famine.’

Wired.com: In your simulation, a war between India and Pakistan breaks out. Each country launches 50 nukes at their opponent’s cities. What happens after the first bomb goes off?

Michael Mills: The initial explosions ignite fires in the cities, and those fires would build up for hours. What you eventually get is a firestorm, something on the level we saw in World War II in cities like Dresden, in Tokyo, Hiroshima and so on.

Today we have larger cities than we did then — mega cities. And using 100 weapons on these different mega cities, like those in India and Pakistan, would cause these firestorms to build on themselves. They would create their own weather and start sucking air through bottom. People and objects would be sucked into buildings from the winds, basically burning everything in the city. It’ll burn concrete, the temperatures get so hot. It converts mega cities into black carbon smoke.

Wired.com: I see — the firestorms push up the air, and ash, into the atmosphere?

Mills: Yeah. You sometimes see these firestorms in large forest fires in Canada, in Siberia. In those cases, you see a lot of this black carbon getting into the stratosphere, but not on the level we’re talking about in a nuclear exchange.

The primary cause of ozone loss is the heating of the stratosphere by that smoke. Temperatures initially increase by more than 100 degrees Celsius, and remain more than 30 degrees higher than normal for more than 3 years. The higher temperatures increase the rates of two reaction cycles that deplete ozone.

Wired.com: And the ozone layer is in the stratosphere, correct?

Mills: OK, so we live in the troposphere, which is about 8 kilometers [5 miles] thick at the poles, and 16 km [10 miles] at the equator.

At the top of the troposphere, you start to encounter the stratosphere. It’s defined by the presence of the ozone layer, with the densest ozone at the lowest part, then it tails off at the stratopause, where the stratosphere ends about 50 km [30 miles] up.

We have a lot of weather in the troposphere. That’s because energy is being absorbed at the Earth’s surface, so it’s warmest at the surface. As you go up in the atmosphere it gets colder. Well, that all turns around as you get to the ozone layer. It starts getting hotter because ozone is absorbing ultraviolet radiation, until you run out of ozone and it starts getting colder again. Then you’re at the mesosphere.

How Nukes Gobble Up Ozone

When we talk about ozone, we’re talking about the odd oxygen family, which includes both ozone (O3) and atomic oxygen (O). Those two gases can interchange rapidly within hours.

Ozone is produced naturally by the breakdown of molecules of oxygen, O2, which makes up 20 percent of the atmosphere. O2 breaks down from ultraviolet solar radiation and splits it into two molecules of O. Then the O, very quickly, runs into another O2 and forms O3. And the way O3 forms O again is by absorbing more UV light, so it’s actually more protective than O2.

Ozone is always being created and destroyed by many reactions. Some of those are catalytic cycles that destroy ozone, and in those you have something like NO2 plus O to produce NO plus O2. In that case, you’ve gotten rid of a member of the odd oxygen family and converted it to O2. Well, then you’ve got an NO which can react with ozone and produce the NO2 back again and another O2. So the NO and NO2 can go back and forth and in the process one molecule can deplete thousands of molecules of ozone.

It’s a similar process to chlorofluorocarbons, Those are the larger molecules that we’ve manufactured that don’t exist naturally. They break down into chlorine in the stratosphere, which has a powerful ozone-depleting ability. —Michael Mills

Wired.com: Where do the nukes come in? I mean, in eroding the ozone layer?

Mills: It’s not the explosions that do it, but the firestorms. Those push up gases that lead to oxides of nitrogen, which act like[chlorofluorocarbons](http://www.wired.com/wiredscience/2010/12/siberian-traps/). But let’s back up a little.

There are two important elements that destroy ozone, or O3, which is made of three atoms of oxygen. One element involves oxides of nitrogen, including nitrogen dioxide, or NO2, which can be made from nitrous oxide, or N2O — laughing gas.

The other element is a self-destructive process that happens when ozone reacts with atomic oxygen, called O. When they react together, they form O2, which is the most common form of oxygen on the planet. This self-reaction is natural, but takes off the fastest in the first year after the nuclear war.

In years two, three and four, the NO2 builds up. It peaks in year two because the N2O, the stuff that’s abundant in the troposphere, rose so rapidly with the smoke that it’s pushed up into the stratosphere. There, it breaks down into the oxides like NO2, which deplete ozone.

Wired.com: So firestorms suck up the N2O, push it up into the stratosphere, and degrade the ozone layer. But where does this stuff come from?

Mills: N2O is among a wide class of what we call tracers that are emitted at the ground. It’s produced by bacterias in soil, and it’s been increasing due to human activities like nitrogen fertilizers used in farming. N2O is actually now the most significant human [impact on the ozone](http://www.wired.com/wiredscience/2008/05/reactive-nitrog/), now that we’ve mostly taken care of CFCs.

Wired.com: You did [similar computer simulations](http://www.wired.com/wiredscience/2008/04/regional-nuclea/) in the past few years and saw this [ozone-depleting effect](http://www.pnas.org/content/105/14/5307.abstract). What do the new simulations tell us?

Mills: Before, we couldn’t look at the ozone depletion’s effects on surface temperatures; we lacked a full ocean model that would respond realistically. The latest runs are ones I’ve done in the Community Earth System Model. It has an atmospheric model, a full-ocean model, full-land and sea-ice models, and even a glacier model.

We see significantly greater cooling than other studies, perhaps because of ozone loss . Instead of a globally averaged 1.3-degree–Celsius drop, which [Robock’s atmospheric mode](http://onlinelibrary.wiley.com/doi/10.1002/wcc.45/abstract)l produced, it’s more like 2 degrees. But we both see a 7 percent decrease in global average precipitation in both models. And in our model we see a much greater global average loss of ozone for many years, with even larger losses everywhere outside of the tropics.

I also gave this to my colleague [Julia Lee-Taylor](http://acd.ucar.edu/~julial/) at NCAR. She calculated the UV indexes across the planet, and a lot of major cities and farming areas would be exposed to a UV index similar to the Himalayas, or the hole over the Antarctic. We’re starting to look at the response of sea ice and land ice in the model, and it seems to be heavily increasing in just a few years after the hypothetical war.

Wired.com: What would all of this do to the planet, to civilization?

Mills: UV has big impacts on whole ecosystems. Plant height reduction, decreased shoot mass, reduction in foliage area. It can affect genetic stability of plants, increase susceptibility to attacks by insects and pathogens, and so on. It changes the whole competitive balance of plants and nutrients, and it can affect processes from which plants get their nitrogen.

Then there’s marine life, which depends heavily on [phytoplankton](http://www.wired.com/wiredscience/2010/08/phytoplankton-blooms-gallery/). Phytoplankton are essential; they live in top layer of the ocean and they’re the plants of the ocean. They can go a little lower in the ocean if there’s UV, but then they can’t get as much sunlight and produce as much energy. As soon as you cut off plants in the ocean, the animals would die pretty quickly. You also get damage to larval development and reproduction in fish, shrimp, crabs and other animals. Amphibians are also very susceptible to UV.

#### Nuke war outweighs structural violence – prioritizing structural violence makes preventing war impossible

Boulding 78 [Ken, is professor of economics and director, Center for Research on Conflict Resolution, University of Michigan, “Future Directions in Conflict and Peace Studies,” The Journal of Conflict Resolution, Vol. 22, No. 2 (Jun., 1978), pp. 342-354]

Galtung is very legitimately interested in problems of world poverty and the failure of development of the really poor. He tried to amalga- mate this interest with the peace research interest in the more narrow sense. Unfortunately, he did this by downgrading the study of inter- national peace, labeling it "negative peace" (it should really have been labeled "negative war") and then developing the concept of "structural violence," which initially meant all those social structures and histories which produced an expectation of life less than that of the richest and longest-lived societies. He argued by analogy that if people died before the age, say, of 70 from avoidable causes, that this was a death in "war"' which could only be remedied by something called "positive peace." Unfortunately, the concept of structural violence was broadened, in the word of one slightly unfriendly critic, to include anything that Galtung did not like. Another factor in this situation was the feeling, certainly in the 1960s and early 1970s, that nuclear deterrence was actually succeeding as deterrence and that the problem of nuclear war had receded into the background. This it seems to me is a most dangerous illusion and diverted conflict and peace research for ten years or more away from problems of disarmament and stable peace toward a grand, vague study of world developments, for which most of the peace researchers are not particularly well qualified. To my mind, at least, the quality of the research has suffered severely as a result.' The complex nature of the split within the peace research community is reflected in two international peace research organizations. The official one, the International Peace Research Association (IPRA), tends to be dominated by Europeans somewhat to the political left, is rather, hostile to the United States and to the multinational cor- porations, sympathetic to the New International Economic Order and thinks of itself as being interested in justice rather than in peace. The Peace Science Society (International), which used to be called the Peace Research Society (International), is mainly the creation of Walter Isard of the University of Pennsylvania. It conducts meetings all around the world and represents a more peace-oriented, quantitative, science- based enterprise, without much interest in ideology. COPRED, while officially the North American representative of IPRA, has very little active connection with it and contains within itself the same ideological split which, divides the peace research community in general. It has, however, been able to hold together and at least promote a certain amount of interaction between the two points of view. Again representing the "scientific" rather than the "ideological" point of view, we have SIPRI, the Stockholm International Peace Research Institute, very generously (by the usual peace research stand- ards) financed by the Swedish government, which has performed an enormously useful service in the collection and publishing of data on such things as the war industry, technological developments, arma- ments, and the arms trade. The Institute is very largely the creation of Alva Myrdal. In spite of the remarkable work which it has done, how- ever, her last book on disarmament (1976) is almost a cry of despair over the folly and hypocrisy of international policies, the overwhelming power of the military, and the inability of mere information, however good, go change the course of events as we head toward ultimate ca- tastrophe. I do not wholly share her pessimism, but it is hard not to be a little disappointed with the results of this first generation of the peace research movement. Myrdal called attention very dramatically to the appalling danger in which Europe stands, as the major battleground between Europe, the United States, and the Soviet Union if war ever should break out. It may perhaps be a subconscious recognition-and psychological denial-of the sword of Damocles hanging over Europe that has made the European peace research movement retreat from the realities of the international system into what I must unkindly describe as fantasies of justice. But the American peace research community, likewise, has retreated into a somewhat niggling scientism, with sophisticated meth- odologies and not very many new ideas. I must confess that when I first became involved with the peace research enterprise 25 years ago I had hopes that it might produce some- thing like the Keynesian revolution in economics, which was the result of some rather simple ideas that had never really been thought out clearly before (though they had been anticipated by Malthus and others), coupled with a substantial improvement in the information system with the development of national income statistics which rein- forced this new theoretical framework. As a result, we have had in a single generation a very massive change in what might be called the "conventional wisdom" of economic policy, and even though this conventional wisdom is not wholly wise, there is a world of difference between Herbert Hoover and his total failure to deal with the Great Depression, simply because of everybody's ignorance, and the moder- ately skillful handling of the depression which followed the change in oil prices in 1-974, which, compared with the period 1929 to 1932, was little more than a bad cold compared with a galloping pneumonia. In the international system, however, there has been only glacial change in the conventional wisdom. There has been some improvement. Kissinger was an improvement on John Foster Dulles. We have had the beginnings of detente, and at least the possibility on the horizon of stable peace between the United States and the Soviet Union, indeed in the whole temperate zone-even though the tropics still remain uneasy and beset with arms races, wars, and revolutions which we cannot really afford. Nor can we pretend that peace around the temper- ate zone is stable enough so that we do not have to worry about it. The qualitative arms race goes on and could easily take us over the cliff. The record of peace research in the last generation, therefore, is one of very partial success. It has created a discipline and that is something of long-run consequence, most certainly for the good. It has made very little dent on the conventional wisdom of the policy makers anywhere in the world. It has not been able to prevent an arms race, any more, I suppose we might say, than the Keynesian economics has been able to prevent inflation. But whereas inflation is an inconvenience, the arms race may well be another catastrophe. Where, then, do we go from here? Can we see new horizons for peace and conflict research to get it out of the doldrums in which it has been now for almost ten years? The challenge is surely great enough. It still remains true that war, the breakdown of Galtung's "negative peace," remains the greatest clear and present danger to the human race, a danger to human survival far greater than poverty, or injustice, or oppression, desirable and necessary as it is to eliminate these things. Up to the present generation, war has been a cost and an inconven- ience to the human race, but it has rarely been fatal to the process of evolutionary development as a whole. It has probably not absorbed more than 5% of human time, effort, and resources. Even in the twenti- eth century, with its two world wars and innumerable smaller ones, it has probably not acounted for more than 5% of deaths, though of course a larger proportion of premature deaths. Now, however, advancing technology is creating a situation where in the first place we are developing a single world system that does not have the redundancy of the many isolated systems of the past and in which therefore if any- thing goes wrong everything goes wrong. The Mayan civilization could collapse in 900 A.D., and collapse almost irretrievably without Europe or China even being aware of the fact. When we had a number of iso- lated systems, the catastrophe in one was ultimately recoverable by migration from the surviving systems. The one-world system, therefore, which science, transportation, and communication are rapidly giving us, is inherently more precarious than the many-world system of the past. It is all the more important, therefore, to make it internally robust and capable only of recoverable catastrophes. The necessity for stable peace, therefore, increases with every improvement in technology, either of war or of peacex

### AT: Canada Advantage

#### Threat real – outweighs their DA’s

Bremmer, 1/25/13 [Javier Solana is president of the Centre for Global Economy and Geopolitics of ESADE Ian Bremmer is president of Eurasia Group © Project Syndicate, 2013, A new year of global conflict, http://www.europeanvoice.com/article/2013/january/a-new-year-of-global-conflict/76260.aspx]

Perhaps the lowest-cost way to undermine rivals and attack enemies is to launch attacks in cyberspace. That is why so many deep-pocketed governments – and some that are not so rich – are investing heavily in the technology and skills needed to enhance this capability.¶ This form of warfare is especially worrisome for two reasons. First, unlike the structure of Cold War-era ‘mutually assured destruction', cyber weapons offer those who use them an opportunity to strike anonymously. Second, constant changes in technology ensure that no government can know how much damage its cyber-weapons can do or how well its deterrence will work until they use them.¶ As a result, governments now probe one another's defences every day, increasing the risk of accidental hostilities. If John Kerry and Chuck Hagel are confirmed as US secretaries of state and defence, respectively, the Obama administration will feature two prominent sceptics of military intervention. But high levels of US investment in drones, cyber-tools, and other unconventional weaponry will most likely be maintained.¶ These technological advances create the backdrop for the competition and rivalries roiling the two most important geopolitical hotspots. In the Middle East, US and European officials will continue to resist deeper involvement in regional turmoil this year, leaving local powers – Turkey, Iran, and Saudi Arabia – to vie for influence. Confrontations between moderates and militants, and between Sunni and Shi'ite factions, are playing out in several North African and Middle Eastern countries.¶ US officials have reason to believe that, over time, they will be able to worry less about the region and its problems. According to current projections, technological innovations in unconventional energy will allow the US to meet more than 80% of its oil demand from sources in North and South America by 2020. China, on the other hand, is set to become more dependent on Middle Eastern output.¶ Meanwhile, East Asia will remain a potential trouble-spot in 2013. Many of China's neighbours fear that its ongoing economic and military expansion poses a growing threat to their interests and independence, and are reaching out to the US to diversify their security partnerships and hedge their bets on China's benign intentions. The US, eager to boost its economy's longer-term prospects by engaging new trade partners in the world's fastest-growing region, is shifting resources to Asia – though US (and European) policymakers would be wise to move forward with a transatlantic free-trade agreement as well.¶ There is a growing risk that the new Chinese leadership will interpret a heavier US presence in the region as an attempt to contain China's rise and stunt its growth. We have already seen a series of worrisome confrontations in the region, pitting China against Vietnam and the Philippines in the South China Sea, and against Japan in the East China Sea. While these disputes are unlikely to provoke military hostilities this year, the use of drones and cyber weapons remains a real threat.¶

#### Yes war—demographics force reliance on nukes

**Eberstadt, 11** - Henry Wendt Chair in Political Economy at the American Enterprise Institute and a Senior Adviser at the National Bureau of Asian Research  (Nicholas, “The Dying Bear: Russia's Demographic Disaster,” Nov/Dec, proquest)

Throughout the Putin and Medvedev eras, the potential security risks to Russia from the ongoing demographic crisis have weighed heavily on the minds of the country's leaders. In his first State of the Nation address, in July 2000, Putin declared that "year by year, we, the citizens of Russia, are getting fewer and fewer. . . . We face the threat of becoming a senile nation." In his 2006 address, he identified demographics as "the most acute problem facing our country today." In Medvedev's May 2009 National Security Strategy, the country's demographic situation was noted as one of the "new security challenges" that Russia must confront in the years ahead. In other words, the potential ramifications of Russia's population trends are not entirely lost on the Kremlin-and they are hardly just a domestic concern. But how will Russia's bunkered and undemocratic leaders cope with the demographic pressures and unfavorable human resource trends that are undermining their goals? For the international community, this may be the single most disturbing aspect of Russia's peacetime population crisis: it is possible that Russia's demographic decline could prompt Moscow to become a more unpredictable, even menacing, actor on the world stage. Most immediately and dramatically, the decline could lead Russia's military leaders, aware of their deficiencies in both manpower and advanced technology, to lower the threshold at which they might consider using nuclear weapons in moments of crisis. Indeed, such thinking was first outlined in Putin's 2000 National Security Concept and was reaffirmed in Medvedev's 2009 National Security Strategy. The official Russian thinking is that nuclear weapons are Russia's trump card: the more threatening the international environment, the more readily Moscow will resort to

#### Russia war now

Moscow Times 1/23/13 http://www.themoscowtimes.com/opinion/article/americas-new-cold-war-with-russia/474457.html

With the full support of a feckless policy elite and an uncritical media establishment, Washington is slipping, if not plunging, into a new cold war with Moscow. Relations, already deeply chilled by fundamental disputes over missile defense, the Middle East and Russia's internal politics, have now been further poisoned by two conflicts reminiscent of tit-for-tat policy-making during the previous Cold War.¶ In December, Congress, in a fit of sanctimonious lawmaking and indifference to larger consequences, passed the Magnitsky Act. In effect a blacklist without due process, it will punish Russian officials (and perhaps their family members) alleged to be guilty of "gross violations of human rights" in their own country. However odious such individuals may be, Russia's political class was bound to resent yet another haughty U.S. intrusion into its political and legal affairs. A no less capricious State Duma quickly responded by banning U.S. adoption of Russian orphans, long a highly sensitive issue, which will go into full effect in 2014. Little opposition was voiced in the U.S. and Russian legislatures to their respective bills.¶ There was, however, a significant difference. Under President [Vladimir Putin](http://www.themoscowtimes.com/mt_profile/vladimir_putin/432538.html)'s "authoritarian regime," the Russian media were filled with heated controversy over the adoption ban, including denunciations of Putin for signing it. But in the "democratic" U.S. mainstream media, there has been only applause for the Magnitsky Act and President Barack Obama's decision to sign it. Nor is this the first time leading U.S. newspapers and television and radio outlets have been cheerleaders for a new cold war.

#### Rejection of securitization causes the state to become more interventionist—turns the K

Tara **McCormack, ’10**, is Lecturer in International Politics at the University of Leicester and has a PhD in International Relations from the University of Westminster. 2010, (Critique, Security and Power: The political limits to emancipatory approaches, page 127-129)

The following section will briefly raise some questions about the rejection of the old security framework as it has been taken up by the most powerful institutions and states. Here we can begin to see the political limits to critical and emancipatory frameworks. In an international system which is marked by great power inequalities between states, the rejection of the old narrow national interest-based security framework by major international institutions, and the adoption of ostensibly emancipatory policies and policy rhetoric, has the consequence of **problematising weak or unstable states** and allowing international institutions or major states a more interventionary role, yet without establishing mechanisms by which the citizens of states being intervened in might have any control over the agents or agencies of their emancipation. Whatever the problems associated with the pluralist security framework **there were at least formal and clear demarcations**. This has the consequence of **entrenching international power inequalities** and allowing for a shift towards a hierarchical international order in which the citizens in weak or unstable states may arguably have even less freedom or power than before. Radical critics of contemporary security policies, such as human security and humanitarian intervention, argue that we see an assertion of Western power and the creation of liberal subjectivities in the developing world. For example, see Mark Duffield’s important and insightful contribution to the ongoing debates about contemporary international security and development. Duffield attempts to provide a coherent empirical engagement with, and theoretical explanation of, these shifts. Whilst these shifts, away from a focus on state security, and the so-called merging of security and development are often portrayed as positive and progressive shifts that have come about because of the end of the Cold War, Duffield argues convincingly that these shifts are highly problematic and unprogressive. For example, the rejection of sovereignty as formal international equality and a presumption of nonintervention has eroded the division between the international and domestic spheres and led to an international environment in which Western NGOs and powerful states have a major role in the governance of third world states. Whilst for supporters of humanitarian intervention this is a good development, Duffield points out the depoliticising implications, drawing on examples in Mozambique and Afghanistan. Duffield also draws out the problems of the retreat from modernisation that is represented by sustainable development. The Western world has moved away from the development policies of the Cold War, which aimed to develop third world states industrially. Duffield describes this in terms of a new division of human life into uninsured and insured life. Whilst we in the West are ‘insured’ – that is we no longer have to be entirely self-reliant, we have welfare systems, a modern division of labour and so on – sustainable development aims to teach populations in poor states how to survive in the absence of any of this. Third world populations must be taught to be self-reliant, they will remain uninsured. Self-reliance of course means **the condemnation of millions to** **a barbarous life of inhuman bare survival**. Ironically, although sustainable development is celebrated by many on the left today, by leaving people to fend for themselves rather than developing a society wide system which can support people, sustainable development actually leads to a less human and humane system than that developed in modern capitalist states. Duffield also describes how many of these problematic shifts are embodied in the contemporary concept of human security. For Duffield, we can understand these shifts in terms of Foucauldian biopolitical framework, which can be understood as a regulatory power that seeks to support life through intervening in the biological, social and economic processes that constitute a human population (2007: 16). Sustainable development and human security are for Duffield technologies of security which aim to *create* self-managing and self-reliant subjectivities in the third world, which can then survive in a situation of serious underdevelopment (or being uninsured as Duffield terms it) without causing security problems for the developed world. For Duffield this is all driven by a neoliberal project which seeks to control and manage uninsured populations globally. Radical critic Costas Douzinas (2007) also criticises new forms of cosmopolitanism such as human rights and interventions for human rights as a triumph of American hegemony. Whilst we are in agreement with critics such as Douzinas and Duffield that these new security frameworks cannot be empowering, and ultimately lead to more power for powerful sta**tes**, we need to understand why these frameworks have the effect that they do. We can understand that these frameworks have political limitations without having to look for a specific plan on the part of current powerful states. In new security frameworks such as human security we can see the political limits of the framework proposed by critical and emancipatory theoretical approaches

#### Speed makes us net resilient to accident

Thrift 4, HEAD OF THE DIVISION OF LIFE AND ENVIRONMENTAL SCIENCES AND A PROFESSOR OF GEOGRAPHY AT THE UNIVERSITY OF OXFORD, (Nigel, But Malice Aforethought: Cities and the Natural History of Hatred Centre of Contemporary Culture of Barcelona, <http://www.cccb.org/rcs_gene/malice_aforethought.pdf>)

Recently, this general hum of activity has been powered up by information technology. True, the speed and interconnectedness of information and communications technology may have produced new vulnerabilities but, generally speaking, information and communications technology has probably made cities more robust by adding more degrees of redundancy. Simple things like risk analysis and other institutionalised forms of diligence, booking systems, etc. have made the business of maintenance and repair easier to carry out and, indeed, is beginning to automate at least some of this activity (as in, for example, the instance of machines that send messages that they are breaking down). More to the point, in situations of breakdown, whether epic or mundane, the humble mobile phone has extended the city’s interactivity and adaptability in all kinds of ways and may well have been the most significant device to add to a city’s overall resilience by adding an extra thread to the urban knot. In addition, all kinds of knowledges of maintenance and repair which are heavily dependent upon information and communications technologies are coming to the fore, all the way from logistics to disaster planning itself (which, in certain senses, is a branch of logistics).

I want to argue that this activity constitutes an urban technological unconscious which helps to keep cities as predictable objects in which things turn up as they are meant to, regularly and predictably (THRIFT, 2004a). Modern Western cities are in many ways mass engineerings of time and space and this engineering increasingly involves working with very small spaces (of the order of millimetres) and times (of the order of milliseconds). At this scale, this means working on the structure of anticipation, producing a comforting sense of regularity and a corresponding (and probably amplified historically) sense of annoyance when things do not play out exactly as it is intended that they should. In a sense, speed has produced a new landscape of anticipation. Some commentators see this landscape as a threat, likely to institute a new «dromocracy». I am more ambivalent. It seems to me that it offers possibilities too, and not least in providing rapid reaction to problems large and small. Indeed, as information technology systems come in which are based on continuous updating of information, some degree of capacity to track and trace and the ability to forecast forward in a very limited way (for example, through profiling systems), so it seems to me that cities will add another landscape to their repertoire, one which works a few seconds or minutes or, in extreme cases, hours ahead of the present and which will add markedly to their resilience. Of course, there is a new repertoire of risk associated with this landscape of foresight but whether it is that much larger than many other developments remains to be seen. Computer systems are vulnerable to attack just like any other system but it is also important to remember the continuous amount of repair and maintenance which goes into these systems anyway and reactions to attacks by worms or viruses are rapidly being incorporated into this burgeoning structure.

#### Virilio’s theory is flawed – his analogies are flawed and he makes incoherent, baseless statements

Sokal and Bricmont 98 – \*Professor of Physics at NYU AND \*\*Belgian theoretical physicist, philosopher of science and a professor at the Université catholique de Louvain (December 1998, Alan and Jean, “Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science”, Library of Congress Cataloging-in-Publication Data, pg. 169-170) MGM

The writings of Paul Virilio revolve principally around the themes of technology, communication, and speed. They contain a plethora of references to physics, particularly the theory of relativity. Though Virilio's sentences are slightly more meaningful than those of Deleuze-Guattari, what is presented as "science" is a mixture of monumental confusions and wild fantasies. Furthermore, his analogies between physics and social questions are the most arbitrary imaginable, when he does not simply become intoxicated with his own words. We confess our sympathy with many of Virilio's political and social views; but the cause is not, alas, helped by his pseudo-physics.

Let us start with a minor example of the astonishing erudition vaunted by Le Monde:

Recent MEGALOPOLITAN hyperconcentration (Mexico City, Tokyo ... ) being itself the result of the increased speed of economic exchanges, it seems necessary to reconsider the importance of the notions of ACCELERATION and DECELERATION (what physicists call positive and negative velocities [vitesses positive et negative selon les physiciens]) ... (Virilio 1995, p. 24, capitals in the original 220)

Here Virilio mixes up velocity (vitesse) and acceleration, the two basic concepts of kinematics (the description of motion), which are introduced and carefully distinguished at the beginning of every introductory physics course. 221 Perhaps this confusion isn't worth stressing; but for a purported specialist in the philosophy of speed, it is nonetheless a bit surprising.

### AT: Manufacturing

#### Casting out elite economic jargon fails. We have an obligation to take large scale consequences seriously

**Barnhizer 2006** – law professor at Cleveland State University (David, Georgetown International Environmental Law Review, “Waking from Sustainability's "Impossible Dream": The Decisionmaking Realities of Business and Government”, http://www.allbusiness.com/human-resources/employee-development-leadership/4077913-1.html, WEA)

Grand utopian visions, and even smaller Utopias based on an ideal of pastoral communities harmoniously husbanding local resources, simply are not reflective of the reality faced by the vast majority of people. E.F. Schumacher's argument that "small is beautiful" may appear to be an elegant solution for how we can all live comfortable and rewarding lives within enriching community bonds, but it is not going to happen.56

"Small is beautiful" has become an impossible dream for all but a few communities. The process of impossibility is driven by population growth, the breakdown of local communities through migration, the infusion of multicultural diversity, and a materialistic ethos that has altered our sense of what constitutes quality of life. The most obvious driving forces include increasing urban densities and coastal development requiring massive infrastructures and supportive supply systems, overall population levels, and the distortions of population distribution and age demographics. To these can be added quality of life demands caused by people in economically impoverished countries who can see how material life is led in richer countries and the spread of interdependent economic systems that allow global production and distribution systems to penetrate what had been largely closed economic and cultural systems. These conditions are not reversible.

My concern here is related to the speed at which societies are approaching various kinds of large-scale dislocations, injustices, strife, and even disaster. I do not want to resort to doomsday prophecies or set a clear date on which critical resources will be irreversibly depleted, such as was done in the Club of Rome's Limits to Growth report in 1972.57 In addition to being destructive and careless, humans are also adaptive and resilient. Placing hard and fast deadlines on when chaos occurs and the worst effects are generated is unwise and chancy at best.58 But if it is unwise or at least extremely difficult to make accurate and detailed predictions involving "doom and gloom" scenarios, it is equally unwise and foolhardy to ignore that the equivalent of ecological and social tectonic plates with massive disruptive potential are shifting underneath the surface of our national and global systems. Failing to prepare for the most likely consequences reaches the level of gross irresponsibility.

We face a combination of ecological, social, and economic crises. These crises involve the ability to fund potentially conflicting obligations for the provision of social benefits, health care, education, pensions, and poverty alleviation. They also include the need for massive expenditures to "fix" what we have already broken.59 Part of the challenge is that in the United States and Europe we have made fiscal promises that we cannot keep. We also have vast economic needs for continuing wealth generation as a precondition for achieving social equity on national and global levels. Figuring out how to reduce some of those obligations, eliminate others, and rebuild the core and vitality of our system must become a part of any honest social discourse. Even Pollyanna would be overwhelmed by the choices we face. There will be significant pain and sacrifice in any action we take. But failing to take prompt and effective action will produce even more catastrophic consequences.

#### And, external factors prove the status quo is structurally improving

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The world is getting better, faster, than we could ever have imagined. For those of us who are fortunate enough to live in wealthy communities or countries, we have a common set of reference points we use to describe the world's most intractable, upsetting, unimaginable injustices. Often, we only mention these horrible realities in minimizing our own woes: "Well, that's annoying, but it's hardly as bad as children starving in Africa." Or "Yeah, this is important, but it's not like it's the cure for AIDS." Or the omnipresent description of any issue as a "First World Problem". But let's, for once, look at the actual data around developing world problems. Not our condescending, world-away displays of emotion, or our slacktivist tendencies to see a retweet as meaningful action, but the actual numbers and metrics about how progress is happening for the world's poorest people. Though metrics and measurements are always fraught and flawed, Gates' single biggest emphasis was the idea that measurable progress and metrics are necessary for any meaningful improvements to happen in the lives of the world's poor. So how are we doing? THE WORLD HAS CHANGED The results are astounding. Even if we caveat that every measurement is imprecise, that billionaire philanthropists are going to favor data that strengthens their points, and that some of the most significant problems are difficult to attach metrics to, it's inarguable that the past two decades have seen the greatest leap forward in the lives of the global poor in the history of humanity. Some highlights: Children are 1/3 less likely to die before age five than they were in 1990. The global childhood mortality rate for kids under 5 has dropped from 88 in 1000 in 1990 to 57 in 1000 in 2010. The global infant mortality rate for kids dying before age one has plunged from 61 in 1000 to 40 in 1000. Now, any child dying is of course one child too many, but this is astounding progress to have made in just twenty years. In the past 30 years, the percentage of children who receive key immunizations such as the DTP vaccine has quadrupled. The percentage of people in the world living on less than $1.25 per day has been cut in half since 1990, ahead of the schedule of the Millennium Development Goals which hoped to reach this target by 2015. The number of deaths to tuberculosis has been cut 40% in the past twenty years. The consumption of ozone-depleting substances has been cut 85% globally in the last thirty years. The percentage of urban dwellers living in slums globally has been cut from 46.2% to 32.7% in the last twenty years. And there's more progress in hunger and contraception, in sustainability and education, against AIDS and illiteracy. After reading the Gates annual letter and following up by reviewing the UN's ugly-but-data-rich Millennium Development Goals statistics site, I was surprised by how much progress has been made in the years since I've been an adult, and just how little I've heard about the big picture despite the fact that I'd like to keep informed about such things. I'm not a pollyanna — there's a lot of work to be done. But I can personally attest to the profound effect that basic improvements like clean drinking water can have in people's lives. Today, we often use the world's biggest problems as metaphors for impossibility. But the evidence shows that, actually, we're really good at solving even the most intimidating challenges in the world. What we're lacking is the ability to communicate effectively about how we make progress, so that we can galvanize even more investment of resources, time and effort to tackling the problems we have left.

#### Neocleous’ view of security is strikingly ahistorical that bundles complex systems into a generic straitjacket AND his attacks on social services are misplaced given the current, actual conditions of global economic security and the gains made by progressive social movements via securitizing discourse

**Dayan 09** (Hilla, Phd Candidate @ New School for Social Research, "Critique of Security (review)," Canadian Journal of Law and Society, http://muse.jhu.edu.proxy2.library.uiuc.edu/journals/canadian\_journal\_of\_law\_and\_society/v024/24.2.dayan.html)

The book's main grievance is that the fetish of security—very broadly defined to include security both in the economic and in the political sense—is the root of anti-democratic measures, massive repression, and socio-economic injustice. In chapter 3, which deals with the relationship between social and national security, the overriding argument is that liberal democracies are, almost by definition, security states in the worst possible sense. The United States in particular is held responsible, given examples such as the New Deal and the Marshall Plan, for enforcing economic security intertwined with political and military interests on "the whole world, [which] was to be inclded in this new, 'secure' global liberal order" (p. 103). In this account, the desire to sustain a capitalist socio-economic order is portrayed as not much different from either the security obsessions of, for example, Israel and the apartheid regime of South Africa (p. 63) or the policies of any European welfare state. **This is a strikingly ahistorical approach that bundles up highly complex social, economic, and political systems into a generic straitjacket**. **Because of this overly generalizing line of argument, Critique of Security does not add much to the insights of critical theory** dating back to the 1970s, which has already dealt extensively with authoritarian practices and tendencies of liberal-capitalist orders.2 Moreover, **it curiously ignores the fact** that earlier post- or neo-Marxist critiques of the liberal-capitalist order have been **formulated primarily in the name of security—the demand to secure and protect the status of workers, women, minorities, and the environment**, for example.3 **Especially under the current conditions of insecurity generated by a global financial crisis, Neocleous' attack on welfare security seems misplaced or incomplete**. The interesting tension between popular and progressive demands for security from the ravages of capitalism, on the one hand, and security as a project of protecting the capitalist order, on the other hand, is not dealt with at all. Instead, the author pleads with us to simply eliminate the desire for security from our lives, or, in other words, to [End Page 291] **throw the baby out with the bathwater.** Still, Critique of Security serves as a useful reminder that demands for collective protection from the conditions generated by the systemic failures of the capitalist system must be accompanied by a sober re-evaluation of the limits and responsibilities of the state and its capacity to abuse power, especially in times of economic and political crisis and insecurity. It is a timely contribution that raises questions about the current responses by states to the global economic crisis. Now that all state resources are pulled and stretched to put capitalism back on track, whose security is really protected?

### K

#### Framework – the k needs to prove the whole plan is bad – any other interpretation moots aff offense, kills decision making skills – debate is a game which requires refuting specific 1ac claims – the 1ac’s simulation is productive

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Joas’ re-interpretation of Dewey’s pragmatism as a “theory of situated creativity” raises a critique of humans as purely rational agents that navigate instrumentally through meansends- schemes (Joas, 1996: 133f). This critique is particularly important when trying to understand how games are enacted and validated within the realm of educational institutions that by definition are inscribed in the great modernistic narrative of “progress” where nation states, teachers and parents expect students to acquire specific skills and competencies (Popkewitz, 1998; cf. chapter 3). However, as Dewey argues, the actual doings of educational gaming cannot be reduced to rational means-ends schemes. Instead, the situated interaction between teachers, students, and learning resources are played out as contingent re-distributions of means, ends and ends in view, which often make classroom contexts seem “messy” from an outsider’s perspective (Barab & Squire, 2004). 4.2.3. Dramatic rehearsal The two preceding sections discussed how Dewey views play as an imaginative activity of educational value, and how his assumptions on creativity and playful actions represent a critique of rational means-end schemes. For now, I will turn to Dewey’s concept of dramatic rehearsal, which assumes that social actors deliberate by projecting and choosing between various scenarios for future action. Dewey uses the concept dramatic rehearsal several times in his work but presents the most extensive elaboration in Human Nature and Conduct: Deliberation is a dramatic rehearsal (in imagination) of various competing possible lines of action… [It] is an experiment in finding out what the various lines of possible action are really like (...) Thought runs ahead and foresees outcomes, and thereby avoids having to await the instruction of actual failure and disaster. An act overtly tried out is irrevocable, its consequences cannot be blotted out. An act tried out in imagination is not final or fatal. It is retrievable (Dewey, 1922: 132-3). This excerpt illustrates how Dewey views the process of decision making (deliberation) through the lens of an imaginative drama metaphor. Thus, decisions are made through the imaginative projection of outcomes, where the “possible competing lines of action” are resolved through a thought experiment. Moreover, Dewey’s compelling use of the drama metaphor also implies that decisions cannot be reduced to utilitarian, rational or mechanical exercises, but that they have emotional, creative and personal qualities as well. Interestingly, there are relatively few discussions within the vast research literature on Dewey of his concept of dramatic rehearsal. A notable exception is the phenomenologist Alfred Schütz, who praises Dewey’s concept as a “fortunate image” for understanding everyday rationality (Schütz, 1943: 140). Other attempts are primarily related to overall discussions on moral or ethical deliberation (Caspary, 1991, 2000, 2006; Fesmire, 1995, 2003; Rönssön, 2003; McVea, 2006). As Fesmire points out, dramatic rehearsal is intended to describe an important phase of deliberation that does not characterise the whole process of making moral decisions, which includes “duties and contractual obligations, short and long-term consequences, traits of character to be affected, and rights” (Fesmire, 2003: 70). Instead, dramatic rehearsal should be seen as the process of “crystallizing possibilities and transforming them into directive hypotheses” (Fesmire, 2003: 70). Thus, deliberation can in no way guarantee that the response of a “thought experiment” will be successful. But what it can do is make the process of choosing more intelligent than would be the case with “blind” trial-and-error (Biesta, 2006: 8). The notion of dramatic rehearsal provides a valuable perspective for understanding educational gaming as a simultaneously real and imagined inquiry into domain-specific scenarios. Dewey defines dramatic rehearsal as the capacity to stage and evaluate “acts”, which implies an “irrevocable” difference between acts that are “tried out in imagination” and acts that are “overtly tried out” with real-life consequences (Dewey, 1922: 132-3). This description shares obvious similarities with games as they require participants to inquire into and resolve scenario-specific problems (cf. chapter 2). On the other hand, there is also a striking difference between moral deliberation and educational game activities in terms of the actual consequences that follow particular actions. Thus, when it comes to educational games, acts are both imagined and tried out, but without all the real-life consequences of the practices, knowledge forms and outcomes that are being simulated in the game world. Simply put, there is a difference in realism between the dramatic rehearsals of everyday life and in games, which only “play at” or simulate the stakes and risks that characterise the “serious” nature of moral deliberation, i.e. a real-life politician trying to win a parliamentary election experiences more personal and emotional risk than students trying to win the election scenario of The Power Game. At the same time, the lack of real-life consequences in educational games makes it possible to design a relatively safe learning environment, where teachers can stage particular game scenarios to be enacted and validated for educational purposes. In this sense, educational games are able to provide a safe but meaningful way of letting teachers and students make mistakes (e.g. by giving a poor political presentation) and dramatically rehearse particular “competing possible lines of action” that are relevant to particular educational goals (Dewey, 1922: 132). Seen from this pragmatist perspective, the educational value of games is not so much a question of learning facts or giving the “right” answers, but more a question of exploring the contingent outcomes and domain-specific processes of problem-based scenarios.

#### And, our framework is vital to prevent environmental destruction and produce good knowledge

**Crist 4** (Eileen, Professor at Virginia Tech in the Department of Science and Technology, “Against the social construction of nature and wilderness”, Environmental Ethics 26;1, p 13-6, http://www.sts.vt.edu/faculty/crist/againstsocialconstruction.pdf)

Yet, constructivist analyses of "nature" favor remaining in the comfort zone of zestless agnosticism and noncommittal meta-discourse. As David Kidner suggests, this intellectual stance may function as a mechanism against facing the devastation of the biosphere—an undertaking long underway but gathering momentum with the imminent bottlenecking of a triumphant global consumerism and unprecedented population levels. Human-driven extinction—in the ballpark of Wilson's estimated 27,000 species per year—is so unthinkable a fact that choosing to ignore it may well be the psychologically risk-free option. Nevertheless, this is the **opportune** historical **moment** for **intellectuals** in the humanities and social sciences to join forces with conservation scientists in order to help create the consciousness shift and **policy changes** to stop this irreversible destruction. Given this outlook, how **students** in the human sciences are **trained** to regard scientific knowledge, and what kind of **messages percolate to the public from the academy** about the nature of scientific findings, **matter** immensely. The "agnostic stance" of constructivism toward "scientific claims" about the environment—a stance supposedly mandatory for discerning how scientific knowledge is "socially assembled"[32]—is, to borrow a legendary one-liner, striving to interpret the world at an hour that is pressingly calling us to change it.

#### Floating Piks are a voting issue – they don’t have literature to support them, the pedagogical benefits are solved without “doing the aff” – shifting is unpredictable and destroys the depth of education

#### Epistemological debate is irrelevant - concrete action is inevitable - they fail to create useful knowledge

**Friedrichs, 09** [Jorg, University Lecturer in Politics at the Oxford Department of International Development, “From Positivist Pretense to Pragmatic Practice Varieties of Pragmatic Methodology in IR Scholarship” Pragmatism and International Relations]

As Friedrich Nietzsche ([1887] 1994:1; cf. Wilson 2002) knew, the knower isstrangely unknown to himself. In fact, it is much morehazardous to contemplate theway how we gain knowledge than to gain such knowledge in the ﬁrst place. This is not to deny that intellectuals are a narcissistic Kratochwil lot, with a penchant for omphaloskepsis. The typical result of their navel-gazing, however, is not increased self-awareness. Scholars are more likely to come up with ex-post-facto rationalizations of how they would like to see their activity than with accurate descriptions of how they go about business. As a result, in science there is a paradoxical divide between positivist pretenseand pragmatic practice. Many prominent scholars proceed pragmatically in gen-erating their knowledge, only to vest it all in a positivist cloak when it comes topresenting results. In the wake of Karl Popper (1963), fantasies about ingeniousconjectures and inexorable refutations continue to hold sway despite the muchmore prosaic way most scholars grope around in the formulation of their theo-ries, and the much less rigorous way they assess the value of their hypotheses. In proposing pragmatism as a more realistic alternative to positivist idealiza-tions, I am not concerned with the original intentions of Charles Peirce. Theseare discussed and enhanced by Ryto¨ vuori-Apunen (this forum). Instead, Ipresent various attempts to make pragmatism work as a methodology for IR scholarship. This includes my own preferred methodology, the pragmaticresearch strategy of abduction. As Fritz Kratochwil and I argue elsewhere, abduction should be at the center of our efforts, while deduction and induction areimportant but auxiliary tools (Friedrichs and 2009).Of course, one does not need to be a pragmatist to proceed in a pragmatic way. Precisely because it is derived from practice, pragmatic commonsense is a sold as the hills. For example, James Rosenau (1988:164) declared many yearsago that he coveted ‘‘a long-held conviction that one advances knowledge most effectively by continuously moving back and forth between very abstract and very empirical levels of inquiry, allowing the insights of the former to exert pressurefor the latter even as the ﬁndings of the latter, in turn, exert pressure for the for-mer, thus sustaining an endless cycle in which theory and research feed on eachother.’’ This was shortly before Rosenau’s turn to postmodernism, while he wasstill touting the virtues of behaviorism and standard scientiﬁc requisites, such asindependent and dependent variables and theory testing. But if we take his state-ment at face value, it appears that Rosenau-the-positivist was guided by a sort of pragmatism for all but the name. While such practical commonsense is certainly valuable, in and by itself, it does not qualify as scientiﬁc methodology. Science requires a higher degree of methodological awareness. For this reason, I am not interested here in pragma-tism as unspoken commonsense, or as a pretext for doing empirical researchunencumbered by theoretical and methodological considerations. Nor am I con-cerned with pragmatism as an excuse for staging yet another epistemological debate. Instead, I am interested in pragmatism as an instrument to go about research with an appropriate degree of epistemological and methodologicalawareness. Taking this criterion as my yardstick, the following three varieties of pragmatist methodology in recent IR scholarship are worth mentioning: theory synthesis, analytic eclecticism (AE), and abduction.Theory synthesis is proposed by Andrew Moravcsik (2003), who claims that theories can be combined as long as they are compatible at some unspeciﬁedfundamental level, and that data will help to identify the right combination of theories. He does not explicitly invoke pragmatism but vests his pleading in apositivist cloak by using the language of theory testing. When looking closer,however, it becomes apparent that his theoretical and methodological noncha-lance is far more pragmatic than what his positivist rhetoric suggests. Moravcsiksees himself in good company, dropping the following names: Robert Keohane,Stephen Walt, Jack Snyder, Stephen Van Evera, Bary Buzan, Bruce Russett, John O’Neal, Martha Finnemore, and Kathryn Sikkink. With the partial excep-tion of Finnemore, however, none of these scholars explicitly links his or herscholarship to pragmatism. They employ pragmatic commonsense in theirresearch, but devoutly ignore pragmatism as a philosophical and methodologicalposition. As a result, it is fair to say that theory synthesis is only on a slightly higher level of intellectual awareness than Rosenau’s statement quoted above. Analytic eclecticism, as advertized by Peter Katzenstein and Rudra Sil, links acommonsensical approach to empirical research with a more explicit commit-ment to pragmatism (Sil and Katzenstein 2005; Katzenstein and Sil 2008).The 7 Even the dean of critical rationalism, Karl Popper, is ‘‘guilty’’ of lapses into pragmatism, for example when hestates that scientists, like hungry animals, classify objects according to needs and interests, although with the impor-tant difference that they are guided in their quest for ﬁnding regularities not so much by the stomach but ratherby empirical problems and epistemic interests (Popper 1963:61–62). 646 Pragmatism and International Relations idea is to combine existing research traditions in a pragmatic fashion and thusto enable the formulation and exploration of novel and more complex sets of problems. The constituent elements of different research traditions are trans-lated into mutually compatible vocabularies and then recombined in novel ways.This implies that most scholars must continue the laborious process of formulat-ing parochial research traditions so that a few cosmopolitan colleagues will beenabled to draw upon their work and construct syncretistic collages. 8 In additionto themselves, Katzenstein and Sil cite a number of like-minded scholars such asCharles Tilly, Sidney Tarrow, Paul Pierson, and Robert Jervis. 9 The ascription isprobably correct given the highly analytical and eclectic approach of these schol-ars. Nevertheless, apart from Katzenstein and Sil themselves none of these schol-ars has explicitly avowed himself to AE.My preferred research strategy is abduction, which is epistemologically asself-aware as AE but minimizes the dependence on existing research traditions.The typical situation for abduction is when we, both in everyday life and as socialscientists, become aware of a certain class of phenomena that interests us for somereason, but for which we lack applicable theories. We simply trust, although we donot know for certain, that the observed class of phenomena is not random. Wetherefore start collecting pertinent observations and, at the same time, applyingconcepts from existing ﬁelds of our knowledge. Instead of trying to impose anabstract theoretical template (deduction) or ‘‘simply’’ inferring propositions fromfacts (induction), we start reasoning at an intermediate level (abduction). Abduction follows the predicament that science is, or should be, above all amore conscious and systematic version of the way by which humans have learnedto solve problems and generate knowledge in their everyday lives. As it iscurrently practiced, science is often a poor emulator of what we are able toachieve in practice. This is unfortunate because human practice is the ultimatemiracle. In our own practice, most of us manage to deal with many challenging situations. The way we accomplish this is completely different from**,** and far moreefﬁcient than, the way knowledge is generated according to standard scientiﬁc methods. If it is true that in our own practice we proceed not so much by induction or deduction but rather by abduction, then science would do well tomimic this at least in some respects. 10 Abduction has been invoked by numerous scholars, including Alexander Wendt, John Ruggie, Jeffrey Checkel, Martin Shapiro, Alec Stone Sweet, andMartha Finnemore. While they all use the term abduction, none has ever thor-oughly speciﬁed its meaning. To make up for this omission, I have developedabduction into an explicit methodology and applied it in my own research oninternational police cooperation (Friedrichs 2008). Unfortunately, it is impossi-ble to go into further detail here. Readers interested in abduction as a way toadvance international research and methodology can also be referred to my recent article with Fritz Kratochwil (Friedrichs and Kratochwil 2009).On a ﬁnal note, we should be careful not to erect pragmatism as the ultimateepistemological fantasy to caress the vanity of Nietzschean knowers unknown tothemselves, namely that they are ingeniously ‘‘sorting out’’ problematic situa-tions. Scientiﬁc inquiry is not simply an intimate encounter between a researchproblem and a problem solver. It is a social activity taking place in communitiesof practice (Wenger 1998). Pragmatism must be neither reduced to the utility of results regardless of their social presuppositions and meaning, nor to the 8 Pace Rudra Sil (this forum), the whole point about eclecticism is that you rely on existing traditions to blendthem into something new. There is no eclecticism without something to be eclectic about. 9 One may further expand the list by including the international society approach of the English school (Ma-kinda 2000), as well as the early Kenneth Waltz (1959). 10 Precisely for this reason, abduction understood as ‘Inference to the Best Explanation’ plays a crucial role inthe ﬁeld of Artiﬁcial Intelligence. 647 The Forum fabrication of consensus among scientists. Pragmatism as the practice of dis-cursive communities and pragmatism as a device for the generation of useful knowledge are two sides of the same coin

#### Permutation do the plan and engage in Epistemic Disobedience to modernity – solves the links – perm double bind

#### Action is key when survival is at stake---epistemology is irrelevant

Norton 5 (Bryan G, professor of philosophy at the Georgia Institute of Technology, “Sustainability: A Philosophy of Adaptive Ecosystem Management”, University of Chicago Press, November 1, 2005, pp. 151-154)

Pragmatists pay attention to the particularities of unique situations. In action-forcing situations, it is often possible to provide helpful, if context- sensitive, guidance to decide what to accept as certain enough to guide action and what is not so certain and therefore requires further study. These decisions, which occur within a value-laden context, allow us to use agreements about values—however limited and situation-specific—to accept certain goals as consensus goals. Then we can pursue observations and management experiments to reduce debilitating uncertainty regarding techniques to achieve those goals. Shared values and goals can, in this way, sometimes serve as the solid ground on which to stand to undertake experimentation with means to achieve the goals, thereby reducing uncertainty about system functioning. At other times, of course, beliefs about the system and its behavior seem undeniable, and we can stand on these planks to deliberate about realistic and wise goals. The epistemology of adaptive management thus provides for gradual progress and improvement of both our belief system and our preferences and values, by using experience to triangulate between temporarily accepted beliefs and values. The most controversial aspect of this knowledge- seeking strategy, perhaps, is the idea that in concrete situations shared values can sometimes serve as a solid basis upon which to pursue mission-oriented science to reduce uncertainty about outcomes of our choices. To explore this idea, it is essential that we understand environmental values in such a way that through successive applications of our method, values can be improved over time. In this and the remaining chapters in part 2,1 provide such a context-sensitive approach that can serve to bootstrap both our values and our factual understanding of management situations simultaneously.¶ Likening our epistemological problem to a ride on Neuraths boat, which is required to stay afloat indefinitely while repairs are made, we can understand our problem as one of deciding which of our beliefs to accept as strong enough and which should be submitted to immediate and critical review and testing. Sailors on the boat are motivated by their desire to survive, and so they undertake the repairs on the boat with great deliberation and care. They must not only make important technical judgments regarding which planks are becoming weak with age and rot, but they must also make judicious choices regarding which planks must, given the importance of their function, be given priority. Analogously, as adaptive managers, we are driven by the desire to stay afloat and to prosper as a community, and we must similarly decide carefully what beliefs to accept as given, which should be doubted, and which points of uncertainty are of highest priority, given the shared goals of the community. Like Neuraths sailors, we must make such epistemological judgments under pressure; if we guess wrong and stand on a weak board to fix a stronger one, we face danger, if we stand on a strong board and fix a weak one, we could still face danger if, for example, we choose to fix weak boards of no direct importance to the seaworthiness of the vessel and ignore others that might fail catastrophically. We must, like Justice Holmes's judge, act in a way that fulfills several social demands, including the demand that the present decision be both consistent with precedent and legal tradition and also responsive to the new demands of a new situation.¶ The particular context of a real management dilemma—a context always suffused with value—can be very important for pragmatists in determining which beliefs should be accepted, however provisionally, and which should be submitted to more intense scrutiny by observation and experiment. The necessity of acting—and refraining from action is itself an action—enforces a kind of discipline, a discipline felt in a particular situation with real values at stake. In some situations, for example when the very existence of the community is threatened, decisions can be seen against a backdrop of unquestioned values (community survival); in these situations consensus on values may be far stronger than consensus on science. Epistemological decisions, in situations where decisions are forced and important values are at stake, thus involve judgments of importance as well as truth. We can only examine our whole belief system and try to find some beliefs we can temporarily place beyond doubt. Given the goal of management, we first concentrate on beliefs that are most important to the ongoing voyage, postponing examination of others until later: we keep our ship afloat, gradually transforming it plank by plank. Similarly, adaptive managers sometimes, by hypothesis, help themselves to a platform of beliefs in order to question the goals that should be pursued; and at other times we assume our goals are worthy ones and proceed to test appropriate scientific hypotheses related to the attainment of those goals. Optimistically, the adaptive manager believes that this platform, which shifts over time and in the process of many trials, yields improved understanding and improved goals through an alternation between action and reflection. This may be the only effective way to respond to wicked problems as they arise in a community with diverse and sometimes competing values.¶ Of course one might object that this whole process is circular and that no "true" justification of goals or actions takes place. We assume facts to support values, and we then stand on the values to support the importance of scientific research to reduce uncertainty and to allow actions to support those values. Now we play our epistemological trump card—the ability of diverse communities, if they operate in an open, democratic mode—to focus attention on weak assumptions and unjustifiable principles. In open public debate and open public processes, when well-informed stakeholders have free access to information and to political institutions, diverse members of a community will have an incentive to identify weaknesses—scientific, economic, and moral—in policies proposed by competing groups. If a process can be created that mimics the process the repairmen on Neuraths boat must develop if they are to survive, then we can give up the dry dock of a priori, self-evident truths and trust science and the observational method, especially if empowered by a strong sense of shared community values, to identify weak planks and keep the boat afloat. So a reasonable way to proceed, in an adaptive management framework, is to inspire stakeholders and participants to challenge and question both the beliefs of science and the proposed goals and values. Democracy, in this sense, can be a powerful engine of truth-seeking. A diverse population, in adaptive management as well as in Darwinian evolution, increases adaptability, by exploring a variety of available options, winnowing out the weak assumptions, and pursuing the most justifiable goals within a particular situation.¶ Provided Neuraths analogy is apt, we can proceed with our analysis, having established a crucial role for values in our epistemological choices; now we turn our attention to improving our understanding of, and language for describing, environmental values. We want to understand environmental values theoretically. As adaptive managers, however, we are also interested in the way they function in a process of local, community-based experimental management. So far I have emphasized the practical costs of not having at our disposal a coherent and intelligible language, and an associated explanatory theory, for discussing environmental values and policy. These practical difficulties were symbolized by the crooked corridors at EPA; and none of EPA's corridors of communication are more crooked and blocked than those through which information about environmental values and goals should flow.¶ One important requirement of straightened corridors of communication is the creation of an integrative language that allows cross-disciplinary and cross-interest-group communication. So one task is to develop some clearer ways of talking about environmental values, relating them to the statements of disciplinary and integrative sciences, and—most importantly and most practically—creating an enlightening, integrative discourse about environmental science, values, and policy goals. If we are to go beyond simply improving communication, however, and move toward substantive agreements about what to do to protect resources and live sustainably, we must also provide a theoretical structure that connects the ideal of sustainability to justifiable environmental policy goals that can be operationalized, goals that can be stated and pursued in real-life communities with real-life problems. The purpose of this part of the book is two-fold: to improve our linguistic tools for communication about environmental values and to offer the broad outlines of a positive theory of environmental values.¶ Pragmatists, from Peirce to Leopold, and adaptive managers are not anti-theory; they are; however, very wary of theory cut loose from possible observation. No beliefs are ultimately immune from revision in the face of experience; all theory must sooner or later stand the test of experience, which helps us to separate truth from falsehood and nonsense. This generalization applies to theories of environmental value no less than to empirical hypotheses about causal factors. The goal of such a process is to create theory as a general reflection of experience and to avoid a priori theory invoked to dictate the general shape of any environmental values. By testing proposed theories against their performance in articulating, clarifying, and justifying real environmental goals of real communities, we gradually hone a language that will help communities in the future to ask the right questions and to improve their chances of achieving meaningful improvements in their policies.

#### Juxtaposing “western thinking” or “domination” with indigenous metaphysics romanticizes Native connection to the environment

**Bosworth 10** (Kai A Bosworth - B.A.: Environmental Studies, Macalester College, Saint Paul, MN, 1/1/2010. “Straws in the Wind: Race, Nature and Technoscience in Postcolonial South Dakotan Wind Power Development,” http://digitalcommons.macalester.edu/cgi/viewcontent.cgi?article=1007&context=envi\_honors)

Some contemporary environmentalist discourses have built images of “authentic” ¶ indigenous experience, people, or knowledge to legitimate and authorize exclusionary ¶ and privileging practices (Braun 2002, Moore et. al. 2003). Romanticized images of ¶ Native American spiritual, physical, beneficial, and/or harmonious relationships to nature ¶ have become centralized around a discourse that anthropologist Shepard Krech has called ¶ the “Ecological Indian” (1999).¶ 5¶ These discourses are complex, and are articulated in ¶ different ways through social movements (Nadasdy 2005, Li 2000), popular television ¶ shows and movies (Sturgeon 2009), discourses of science and social science (Agrawal ¶ 1995, Latour 1993), and through economic development, tourism, and environmental ¶ politics (Braun 2002). For Braun, many contemporary conservation discourses have ¶ assumed, ¶ that safeguarding indigenous cultures would help protect nature, because ¶ indigenous peoples are thought to have an interest and/or expertise in sustaining ¶ existing ecological relations; or, alternately, that the preservation of nature is ¶ necessary to preserve indigenous cultures, because they are seen to have a ¶ necessary relation to nature…Indigenous identities are defined and contained ¶ within the environmental imaginaries of European environmentalists and the ¶ postcolonial nation-state” (2002, 81).

#### That internal link turns their colonialism impacts

**Bosworth 10** (Kai A Bosworth - B.A.: Environmental Studies, Macalester College, Saint Paul, MN, 1/1/2010. “Straws in the Wind: Race, Nature and Technoscience in Postcolonial South Dakotan Wind Power Development,” http://digitalcommons.macalester.edu/cgi/viewcontent.cgi?article=1007&context=envi\_honors)

This shift has also changed the ways in which institutions relate to Native ¶ American people and knowledge practices. Just as some past mainstream environmental ¶ movements lauded and romanticized Native American values and lifestyles (even as they ¶ made these lifestyles impossible to maintain), current environmental politics has ¶ produced a vision of clean energy that has often assumed consistency with a supposed Native American vision of life in harmony with nature, often without involving Native ¶ American people in the development of this vision or in major decision making. It ¶ becomes natural that all Native American people would desire wind power, and any sort ¶ of heterogeneity in what methods and knowledges wind power produces, or what ¶ meanings indigenous people bring to this technology, are rendered less important. An ¶ articulation of nature out of balance – global warming – cannot be the fault of Native ¶ Americans, but it seems natural that indigenous people or knowledge can repair the ¶ damage.¶ In many ways, the romanticization of indigeneity in contemporary environmental ¶ discourses ignores the operations of contemporary colonialism and environmental racism in North America. In the last hundred years, rural Native American land assumed to be ¶ worthless has at various times been reconfigured as useful land for the public interest. ¶ The history of the dispossession of Native land has been well documented, especially by ¶ Laduke (1999, 2005) and Churchill (2002). At various times, indigenous land has been ¶ used as bombing ranges; nuclear test and storage sites; uranium, coal, and gold mines; ¶ methane and petroleum drilling and refineries; national parks; hunting grounds; major ¶ dam projects; and a whole host of other colonial purposes (Honor the Earth forthcoming, ¶ Jacoby 2001, Kuletz 1998, Laduke and Churchill 1992, Laduke 1999, 2005, Lawson ¶ 1994, Solnit 1994). For all intents and purposes, the Southwest and the area around the ¶ western half of the Dakotas, Montana, and Wyoming have been treated as “national ¶ sacrifice areas” (Laduke and Churchill 1992, 253). The uneven application of these ¶ environmental harms has been the ongoing result of a history of dispossession and ¶ structural violence that has left many Native American communities devastated.

**Perm do the plan and all non-mutually parts of the alternative**

#### Turn—rejecting reform of institutions of domination makes the entire postcolonial project self-defeating

Dirlik 98 – Prof Social Science, History and Anthropology, U Oregon (Arif, The Postcolonial Aura, p ix, AG)

Postcolonial criticism has quickly spent its critical power, however, as its questioning of totalizing solutions has turned into exclusion from criticism of the historical and the structural contexts for the local, without reference to which criticism itself is deprived of critical self-consciousness and, as it celebrates itself, knowingly or unknowingly also **celebrates the conditions that produced it**. Whether postcolonial criticism has been appropriated by those who did not share its initial critical intentions is a moot question, as its methodological denial of structures and its methodological individualism has facilitated such appropriation. Rather than a critique of earlier radicalisms from the inside as initially intended, postcolonialism in its unfolding has turned into a repudiation of the possibility of radical challenges to the existing system of social and political relations. Its preoccupation with local encounters and the politics of identity rules out a thoroughgoing critique of the structures of capitalism, or of other structurally shaped modes of exploitation and oppression, while also legitimizing arguments against collective identities that are necessary to struggles against domination and hegemony.

#### Postcolonialism falls into the same trap of representing others

Majid 1(Anouar, Provincial Acts, ttp://65.107.211.206/post/poldiscourse/casablanca/majid1.html)

As established and practised in the Anglo-American academy, postcolonial theory has been largely oblivious to non-western articulations of self and identity, and has thus tended to interpellate the non-western cultures it seeks to foreground and defend into a solidly Eurocentric frame of consciousness. Postcolonial theory thus operates with the paradoxical tension of relying on the secular, European vocabulary of its academic origins to translate non-secular, non-European experiences. Despite brilliant attempts to elucidate (or perhaps theorize away) this dilemma, the question of the non-western Other's agency remains suspended and unresolved, while the material conditions that generate a culture of dubious virtues (such as "hybridity" and "identity politics") acquire more theoretical legitimacy.

#### They replicate the error of representing others

Thomas 94 – senior research fellow, Australian National University (Nicholas, Colonialism’s Culture, p 158-9)

Critics of colonial discourse often write, unavoidably, from within the terrain that they wish to interrogate: as critics of and in the Western literary and theoretical canon, or as historians trained in one Western historiographic tradition or another. The claim and aspiration to speak in some sense from a native or colonized perspective has been intensively debated. If one speaks on behalf of ‘others’, there is a risk of creating false identifications and assimilating ‘their’ perspectives to one’s own; if one makes one’s own interest explicit, and is content only to speak about ‘them’ and ‘their’ self-representations, one may be accused of recapitu­lating what is seen as the paradigmatic exclusion of Orientalist discourse, namely constituting the presence of an author and an authority on the basis of the other’s absence. I do not wish to pursue these questions here, because their politics cannot be adequately registered through global terms such as ‘others’ and ‘authors’. It makes a difference whether an author is a historian, a cultural theorist, a film critic or an ethnog­rapher. It makes a great deal of difference, in particular, whether this author has produced his or her representations on the basis of sustained involvement with the people involved, and whether they therefore have particular expectations arising from that encounter. It also makes a difference who ‘they’ are; Tolai, Inuit, Chicanos and Tamils are not discursively interchangeable ‘others’ but peoples with very different locations, different access to state resources and education and different concerns. In one case they may regard it as highly inappropriate for anyone other than a member of the immediate community to narrate or represent their histories and identities; in other cases they may welcome the assistance of someone who is an outsider or partial outsider such as a diaspora-trained scholar. In these debates it sometimes seems to be assumed that colonial studies is primarily about ‘others’ — about representing ‘them’ in some way that is more acceptable politically, epistemologically and ethically. A number of writers have now pointed out that this fetishization of alterity easily recapitulates an us/them disjunction which has in fact long been fissured and cut across by migration and transactions in both directions. There is also a risk that it neglects the extent to which colonial studies cannot take the identities of colonists as an unproblematic reference point.

#### There are no starting points

Corbin and Klinger 2k3 (Carol, prof comm @ U College of Cape Breton Geoffrey, prof comm @ Depauw “"Service Guarantees Citizenship": The Generation of Criticism in a Postmodern Public Sphere” “<http://ac-journal.org/journal/vol6/iss4/iss4/articles/mck.htm>)

We share with Nietzsche a skeptical approach to the historical method and advance a genealogical alternative.5 To elucidate our position, we first need to better understand the meaning and interplay among our primary network of terms—past, history, present, and genealogy. Importantly, we distinguish "the past" from "history." The former is more the sum total of that which has happened—the wars, the famines, the depressions, the babies, the praxis of the everyday. In contrast, we use the word "history" to refer to the narrativization of "the past" which means selecting those bits and pieces from the past that the historian finds significant. History is always a story of what happened from a particular perspective written in such a way as to accomplish some purpose. As Nietzsche recognizes, we are intentionally and consciously reproducing the past for the purpose of either simply entertaining ourselves, or guiding our actions.¶ The pejorative understanding of terms like past, present, or future, usually involves the assumption of temporality. We maintain, however, that terms like "the present" are not merely temporal, but material states. The present of an 80-year old man is different than the present of a teenager. Different experiences and memories create two remarkably different "presents." So what makes "a present" is not the same for all of us, it is not fixed, and it is not certain. Generations are bound through their shared presents, which involve the recollection of shared experiences through collective memory.6 To facilitate communication between generations, and we do believe that communication is the key to draw generations together, each group must come to contextualize problems in the same structurational set, or what Lyotard called the "collective imaginary." We focus on the place where imagination becomes "real," where it achieves the ontological state of being that marks it as something material.¶ Genealogy is a unique way of approaching the past, one that differs significantly from the historical approach. One key difference between the two approaches is the starting point of the procedure in each. With history, critics always jump back to some imaginary point of origin, and from that point of origin they trace causes and effects back toward the present position. With genealogy, on the other hand, critics start with themselves, and trace their genealogical roots backwards. Genealogy starts in the present and organizes materials of the past in a more disciplined way than history. The starting point of history is always variable. It depends on the interests and the inclinations of the particular historian who writes the narrative, and it tends to reinforce the claim that the historian advances.7 Instead of starting in the past and working to the point of present action, the genealogist begins with the present and works back. The genealogical approach changes the approach to the past. The past no longer becomes constraining, but a trope—and nothing more—that can be used in approaching present day problems.¶ We believe that the genealogical approach helps us understand the living matter, the living memory, the living person and that within the living there is a need for cross-generational communication, and persuasion, and identification. As we note above, genealogy cannot be understood as a temporal phenomenon. Living in "a present" involves not merely growing older, but freezing your psychological mindset, freezing your take on the ideology, freezing your take on society and culture in a particular portion or fragment of your life.8 For us, the ballyhoo surrounding the "generation gap" is a very real problem--and possibility—rooted in a radical reinterpretation of traditional approaches to ontological inquiry.9¶ The boundaries of a generation are created not from shared time, but shared experience. As Ortega notes, "Age, then, is not a date, but a 'zone of dates'" (470. Now assuredly there are significant differences between individuals within generations, but insofar as individual identity is the product of social construction, individuals within generations share experience within similar structural and symbolic systems. Thus, even seeing a generation as a biological entity misses the point. As Ortega notes, "A generation is an integrated manner of existence, or, if you prefer, a fashion in living" (45). Thus, "at any given moment a generation is one and the same thing as human life" (67). Moreover, the "'spirit of the times' has a peculiar character not possessed by the world of individual beliefs" (39).10As such, a generation is not a collective of individuals, but a marker for human experience. The "greatest influence which the spirit of the times . . . exerts on each individual life is exercised not by the simple fact of being there . . . but because the greater portion of my world, of my beliefs, arises out of that collective repertory, and coincides with its contents" (39-40).¶

#### Focusing on the state is key—the alternative is insufficient unless tied to a focus on macro-political action

#### Cuomo ’11

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Due to the scale of change that is needed, individual and household reductions in greenhouse-gas pollution will be effective only if they are deep and widespread, and only if they are accompanied by meta-level efforts, but meta-level policies and corporate practices seem unlikely to emerge without significant support from “below.” Addressing climate change through mitigation and transnational funding for adaptation requires administrative action in the form of binding treaties, laws and regulations, taxes, incentives for technological development, and increased international aid, but such policies and practices require mass popular support. An unfair and possibly unmanageable degree of practical responsibility therefore falls on citizens and consumers, who may turn out to be ineffective as political actors because of the problems of insufficiency and disempowerment, among other things. Nonetheless, if national and corporate policies will not go in a more sustainable direction without a great swell of public support in places like the United States, then it is ethically and practically necessary that the significant minority who hopes to effectively address the problem of climate change find ways to build that support. It would be tragic if increasing disempowerment fueled by well-intentioned green messaging were to magnify political ineffectiveness among environmentalists and global human rights advocates by making it more attractive to focus on personal or private-sphere changes, rather than investing time or energy in work for change at higher levels. Perhaps money and energy otherwise spent on highpriced home retrofitting or demanding lifestyle changes should be aimed directly toward growing movements that increase “green” consciousness and political influence and that effectively demand full corporate responsibility for pollution. If such efforts were to result in a few very significant policy changes, such as a global moratorium on gas flaring or a greening of the military, the payoff in terms of long-term mitigation could be great. Such successes could in turn energize cultural shifts toward more effective alternative technologies. What can a well-organized collection of people who care accomplish through democratic politics and cultural transformation? Can advocates for environmental integrity and human rights better help us all to effectively reduce greenhouse gas emissions in due time? The problem of climate change provides opportunities to foster regenerating movements toward more sustainable and humane futures, and so inevitably some will step up and take responsibility for addressing the problem. Could they possibly succeed? Given the urgency created by the industrial greenhouse effect, an ethically motivated minority must effectively act on their caring while also making it contagious through the creation of a more effective political will. The insufficiency problem might be reduced if those who care about climate change and climate justice channel their mitigation efforts more effectively to influence decision-makers and policies at higher levels, where actions can be carried out with significant and immediate effects on emission levels and matters of social justice. If more corporate and governmental actors are pressured (or inspired) to take responsibility for the causes of climate change, their decisions and innovations can in turn create more options for carbon-free lifestyles, which will also help reduce the insufficiency and disempowerment problems for average consumers. The knowledge we need to avert a more extreme climate disaster already exists, in many places and in multiple forms. Those who care about humanity and Earth’s green growing mantle of life need the power to turn dominant practices and policies toward better futures. Grand successes along those lines are needed very soon.

#### Economic thought good and predictions accurate

**Hands, 84** [Douglas, W. department of economics at Puget sound, “What Economics Is Not: An Economist's Response to Rosenberg Source: Philosophy of Science”, Vol. 51, No. 3 (Sep., 1984), pp. 495-503, p. jstor]

1. Economic Predictions. Much of Rosenberg's discussion is directed toward explaining the "predictive weakness" (p. 297) of modem economics and the discipline's inability (or lack of desire) to "improve its predictive content" (p. 301). This failure to generate successful predictions and to improve the few predictions which are made is taken as an empiricafl act about even the most applied economic theories. No evidence is provided, or even suggested, to support this empirical claim. Rosenberg certainly needs to provide evidence for the ubiquitous predictive failure of applied economic theory. Such criticism is by no means "well known" or "standard" in the literature on economic methodology. It is "standard” to argue that economic theories are insulated from direct falsification, that they are built on inadequate behavioral foundation s, and that in their most abstract form they fail to yield predictions or even to systematically connect up with applied theories which might yield predictions. But systematic predictive failure is not a standard methodological criticism of applied economic theory. The reason why such predictive failure i snot a standard criticism i squite simple: Rosenberg has exaggerated the extent of this failure. Predictive failure is simply not the ubiquitous fact of modem economic theory which Rosenberg assumes. While nowhere n ear the standards ofthe best natura ls cience, applied economic theories (both micro and macro) do generate an ocean of successful predictions, on everything from the impact of trucking deregulation to the demand for consumer credit. Rosenberg's claim that economic predictions have not "improved"(p . 301) with time is also exaggerated. W hile there is always room for more improvement, modern macroeconometric models provide extraordinary accuracy relative to pre-World W ar I1b usiness cycle models. Where substantiael errros ooccur, such as the inability to predict the inflationary im pacto fthe OPEC i nduceds upply-sides hock, the models are improved so that failures of the same type are less likely to reoccur.3 Rosenberg even goes so far as to argue that more predictively successful alternatives currently exist (at least in the micro domain) and are neglected, ostensibly because of an irrational professional attraction to intentional and extreme views of human behavior. He tells us that even if a more predictive theory were available: "it is not likely to actually deflect practicing economists from their intentional extreme research program . . . the reason is that they are not really much interested in questions of empirical applicability at all. Otherwise some of the attractive nonintentional and/or nonextremal approaches to economic behavior that are available would long ago have elicited more interest from economists than they have" (p. 308). An adequate defense of this position would of course require a demonstration of both the predictive failure of traditional microeconomics and the predictive success of the proposed alternatives. We have already questioned the validity of the former; Rosenberg merely asserts the latter. Contrary to Rosenberg's claim, predictive success is an important criterion of theory choice in economics. One of the reasons for this is that economic predictions are consumed by the business community. These business interests do not care whether the underlying economic theory is intentional or nonintentional. In fact, they do not even care whether the predictions are from scientific theories or not. They are only concerned with (and pay for) predictive accuracy. In addition to these business interests, labor unions, governments, and other organizations are also consumers of economic predictions. These groups approach economic theory with the same nomological nonchalance as the corporate consumers. Of course, the fact that organizational consumers of economic predictions often purchase information based on traditional economic models does not imply that these models constitute "science" or that there is no room for nontraditional models. The argument is only that the survivability of the traditional approach in such applications indicates that (relative to the available alternatives), its predictive failings are not as great as Rosenberg would have us believe.

#### Rational economic methodology is awesome – avoids falling into relativism and key to some semblance of pragmatic action

**Rowland 1995** – professor of communication at the University of Kansas (10/1, Robert, Philosophy & Rhetoric, 28.4, “In defense of rational argument: A pragmatic justification of argumentation theory and response to the postmodern critique”, BESCO, credit to LDK)

¶ The first step in developing a justifiable theory of rational argument that can account for the epistemological and axiological attacks is to recognize the performative contradiction at the heart of the postmodern critique. Postmodernists rely on rational argument in order to attack rational argument and they consistently claim that their positions are in some way superior to those of their modernist opponents. Writing of post-structuralism, Amanda Anderson notes "the incommensurability between its epistemological stance and its political aims, between its descriptions and its prescriptions, between the pessimism of its intellect and, if not the optimism, at least the intrusiveness of its moral and political will" (1992, 64).¶ The performative contradiction at the heart of postmodernism is nowhere more evident than in the epistemological critique of modernism. The two most important points made by postmodernists in relation to epistemology are that humans can understand the world only through their symbols and that there is no means of using "reality" to test a symbolic description. Advocates of traditional approaches to rationality have not been able to satisfactorily answer these positions, precisely because they seem to be "true" in some sense. This "truth," however, suggests that a theory of rational argument may be salvageable. If postmodernists can defend their views as in some sense "truer" than those of their modernist opponents, then there must be some standard for judging "truth" that can withstand the postmodern indictment. That standard is pragmatic efficacy in fulfilling a purpose in relation to a given problem.¶ Both modernists and postmodernists generally assume that truth and fact are equivalent terms. Thus, a "true" statement is one that is factually correct in all circumstances. By this standard, of course, there are no totally "true" statements. However, if no statement can be proved factually true, then a focus on facts is an inappropriate standard for judging truth.¶ I suggest that knowledge and **truth should be understood** not as factual statements that are certain, but as symbolic statements that function as useful problem-solving tools. When we say that a view is true, we really mean that a given symbolic description consistently solves a particular problem. Thus, the statement "the sun will come up tomorrow" can be considered "true," despite ambiguities that a postmodernist might point to in regard to the meaning of sun or tomorrow, because it usefully and consistently solves a particular epistemic problem.¶ The standard for "truth" is pragmatic utility in fulfilling a purpose in relation to a particular problem. A true statement is one that "works" to solve the problem. Both the nature of the problem and the arguer's purpose in relation to that problem infiuence whether a given statement is viewed as true knowledge. This explains why biological researchers and physicians often seem to have different definitions of truth in regard to medical practice. The researcher is concerned with fully understanding the way that the body works. His or her purpose dictates application of rigorous standards for evaluating evidence and causation. By contrast, the physician is concerned with treating patients and therefore may apply a much lower standard for evaluating new treatments. The pragmatic theory of argument I am defending draws heavily on the work of William James, who believed that "the only test of probable truth is what works" (1982, 225). Alan Brinton explains that for jEunes "the ultimate question of truth is a question about the concepts and their fruitfulness in serving the purposes for which they were created and imposed. Ideas are true insofar as they serve these purposes, and false insofar as they fail to do so" (1982, 163). Some contemporary pragmatists take a similar view. For example, Nicholas Rescher writes in relation to methodology that "the proper test for the correctness or appropriateness of anything methodological in nature is plainly and obviously posed by the paradigmatically pragmatic questions: Does it work? Does it attain its intended purposes?" (1977, 3). Similarly, Celeste Condit Railsback argues that "truth is . . . relative to the language and purposes of the persons who are using it" (1983, 358-59). At this point, someone like Derrida might argue that while the pragmatic approach accounts for the symbolic nature of truth, it does not deal with the inability of humans to get at reality directly. Although the postmodern critique denies that humans can directly experience "the facts," it does not deny that a real-world exists.¶ Thus, a pragmatist endorses a given scientific theory because the symbolic description present in that theory does a better job than its competitors of fulfilling a set of purposes in a given context. Because it fulfills those purposes, we call the theory "true." We cannot attain knowledge about "the facts," but we can test the relative adequacy of competing problem-solving statements against those facts. Michael Redhead, a professor of history and philosophy of science at Cambridge University, notes that "we can always conjecture, but there is some control. The world kicks back" (in Peterson 1992,175; emphasis added). Knowledge is not about "facts." It is about finding symbolic descriptions of the world that work, that is, avoiding nature's kicks in fulfilling a given purpose.¶ The foregoing suggests that a principled pragmatic theory of argument sidesteps the postmodern critique. Argumentation theory ¶ should be understood as a set of pragmatic rules of thumb about the kinds of symbolic statements that effectively solve ¶ problems. These statements exist at varying levels of generality. A consistency principle , for example, is really a rule of thumb stating something like "All other things being equal, consistent symbolic descriptions are more likely to prove useful for solving a particular problem in relation to a given purpose than are inconsistent descriptions." Other principles are linked to narrower purposes in more specific contexts. Thus, the standards for evaluating arguments in a subfield of physics will be tied to the particular purposes and problems found in that subfield. The key point is that all aspects of a theory of argument can be justified pragmatically, based on their value for producing useful solutions to problems.¶ A pragmatic theory of argument can be understood as operating at three levels, all of which are tied to functionality. At the first or definitional level, argument is best understood as a kind of discourse or interaction in which reasons and evidence are presented in support of a claim. Argument as a symbolic form is valued based on its ability to deal with problems; the business of argument is problem solving. At a second or theoretical level, what Toulmin would call fieldinvariant, general principles of rational argument are justified pragmatically based on their capacity to solve problems. Thus, tests of evidence, general rules for describing argument, standards relating to burden of proof or presumption, and fallacies, all can be justified pragmatically based on the general problem-solving purpose served by all argument. For example, the requirement that claims must be supported with evidence can be justified as a general rule of thumb for distinguishing between strong and weak (that is, useful and useless) arguments. Certainly, there are cases in which unsupported assertions are "true" in some sense. However, the principle that any claim on belief should be supported with evidence of some type is a functional one for distinguishing between claims that are likely to be useful and those that are less likely to be useful.¶ At a third level, that of specific fields or subfields, principles of argumentation are linked to pragmatic success in solving problems in the particular area (see Rowland 1982). Thus, for instance, the rules of evidence found in the law are linked directly to the purposes served by legal argument. This explains why the burden of proof in a criminal trial is very different from that found in the civil law. The purpose of protecting the innocent from potential conviction requires that a higher standard of proof be applied in this area than elsewhere.¶ The pragmatic perspective I have described is quite different from that of interpretive pragmatists such as Richard Rorty (1979, 1982, 1985, 1987) and Stanley Fish (1980, 1989a, 1989b). Rorty, while denying the existence of legitimate formal or content-based standards for "proof" (1982,277), endorses a processual epistemology based on "the idea of [substituting] 'unforced agreement' for that of 'objectivity' " (41-42). Janet Home summarizes Rorty's views, noting that "the difference between 'certified knowledge' and 'mere belief is based upon intersubjective agreement rather than correspondence" (1989, 249). By contrast. Fish grounds reason in the practices of particular "interpretive communities" (1989b, 98). In this view, "Particular facts are firm or in question insofar as the perspective . . . within which they emerge is firmly in place, settled" (Fish 1989a, 308).¶ Unfortunately, a theory of argumentation cannot be salvaged merely by grounding reason in conversational practice or community assent. If there are no agreed upon standards, then how does one "rationally" test a claim intersubjectively or in process? Fish and Rorty beg the question when they ground reason in community and conversational process. Unlike Rorty and Fish, who reject the ideas of "truth" and "knowledge," I argue that those concepts must be redefined in relation to problem solving.¶ The pragmatic theory of argument that I have advanced provides a principled means of choosing among competing alternatives, regardless of the context. One always should ask whether or not a particular symbolic description of the world fulfills its purposes. In so doing, methodological principles for testing knowledge claims, such as tests of evidence, fallacies, and more precise field standards, can be justified, and then they can be applied within the conversation or by the community. The approach, therefore, provides standards to be applied in Rorty's process or by Fish's community and avoids the tautology that otherwise confronts those approaches. The perspective neatly avoids the problems associated with modernism, but also provides a principled approach to argument that does not lead to relativism.¶ In defense of rational argument¶ When argument is viewed as a pragmatic problem-solving tool, the power of the postmodern critique largely dissipates. At the most basic level, a pragmatic theory of argument is based on premises such as the following:¶ 'Statements supported by evidence and reasoning are more likely to be useful for satisfactorily solving a problem than ones that lack that support.¶ 'Consistent arguments are more likely to be generalizable than inconsistent ones.¶ 'Experts are more likely to have useful viewpoints about technical questions tied to a particular field than nonexperts. These statements are not "true" in the factual sense, but they are universally recognized as useful, a point that is emphasized in the work of even the most committed postmodernist. Even someone like Derrida demands that his opponents support their claims with evidence and consistent reasoning. In so doing, Derrida clearly recognizes the functional utility of general standards for testing argument form and process.¶ Arguing should be understood as a pragmatic process for locating solutions to problems. The ultimate justification of argument as a discipline is that it produces useful solutions. Of course, not all arguments lead to successful solutions because the world is a complex place and the people who utilize the form/process are flawed. However, the general functional utility of argument as a method of ¶ invention or discovery and the method of justification is undisputed. The pragmatic approach to argument also provides a means of answering the axiological objections to traditional reason. Initially, the view that argument is often a means of enslaving or disempowering people is based on a misunderstanding of how argument as a form of discourse functions. In fact, the danger of symbolic oppression is less applicable to argument as a type of symbol use than to other forms. Argument tells us how to solve problems. It can be a force for enslavement only to the degree that a successful problem-solution is enslaving. This is a rare event in any society grounded in democratic ethics.¶ Additionally, argument as a form and process is inherently person-respecting because in argument it is not status or force that matters, but only the reasoning (see Brockriede 1972). In a pure argumentative encounter, it does not matter whether you are President of the United States or a college junior; all that is relevant is what you have to say. Of course, this ideal is rarely realized, but the principle that humans should test their claims against standards of argumentation theory that are tied to pragmatic problem solving (and not base conclusions on power) is one that recognizes the fundamental humanity in all people.¶ Furthermore, argument is one of the most important means of protecting society from symbolic oppression. Argument as an internal process within an individual and external process within society provides a method of testing the claims of potential oppressors. Therefore, training in argument should be understood as a means of providing pragmatic tools for breaking out of terministic or disciplinary prisons.¶ Against this view, it could be argued that pragmatism, because of its "practical" bent, inevitably degenerates into "hegemonic instrumental reason" in which technocratic experts control society. In Eclipse of Reason, Max Horkheimer takes the position that "in its instrumental aspect, stressed by pragmatism," reason "has become completely harnessed to the social process. Its operational value, its role in the domination of men and nations has been made the sole criterion" (1947, 21). Later, he notes that "pragmatism is the counterpart of modern industrialism for which the factory is the prototype of human existence" (50).¶ The claims that pragmatism reduces reason to a mere instrument of production or leads to undemocratic technocratic control of society are, however, misguided. Initially, it is worth noting that Horkeimer's aim is not to indict rationality per se, but to focus on the inadequacy of a purely instrumental form of rationality, which he labels "subjective reason." Near the conclusion of Eclipse of Reason, Horkheimer defends "objective reason": "This concept of truth—the adequation of name and thing—inherent in every genuine philosophy, enables thought to withstand if not to overcome the demoralizing and mutilating effects of formalized reason" (1947, 180). The goal of this essay, to develop a theory of rational argument that can withstand the postmodern indictment, is quite consistent with Horkheimer's view that humans need "objective reason" in order to "unshackle . . . independent thought" and oppose "cynical nihilism" (127, 174). While there can be no purely "objective reason," field-invariant and field-dependent principles of argumentation can be justified pragmatically to serve the aims that Horkheimer assigns to that form.¶ Moreover, a pragmatic theory of argument should not be confused with a decision-making approach based on mere practicality or self-interest. Principles of argument are justified pragmatically, that is, because they work consistently to solve problems. But after justification, the invariant and relevant field-dependent principles may be used to test the worth of any argument and are not tied to a simple utilitarian benefit/loss calculus. The misconception that a pragmatic theory of truth is tied to a simplistic instrumentalism is a common one. John Dewey notes, for instance, that William James's reference to the "cash value" of reasoning was misinterpreted by some "to mean that the consequences themselves of our rational conceptions must be narrowly limited by their pecuniary value" (1982, 33). In fact, pragmatism "concerns not the nature of consequences but the nature of knowing" (Dewey 1960,331). Or as James himself put it, "The possession of true thoughts means everywhere the possession of invaluable instruments of action" (1948, 161). Pragmatism "is a method only," which "does not stand for any special result" (James 1982, 213), but that method can be used to justify principles of argument that in turn can be used to check the excesses of instrumental reason. Moreover, a pragmatic approach to argument is self-correcting. According to James, pragmatism "means the open air and possibilities of nature, as against dogma, artificiality and the pretense of finality in truth" (213). Dewey makes the same point when he claims that pragmatic theory involves "the use of intelligence to liberate and liberalize action" (1917,63). Nor does pragmatism necessarily lead to expert domination. A pragmatic argumentation theory endorses deference to the opinion of experts only on questions for which the expert possesses special knowledge relevant to a particular problem. And even on such issues, the views of the expert would be subject to rigorous testing. It would be quite unpragmatic to defer to expert opinion, absent good reasons and strong evidence.¶ The previous analysis in no way denies the risks associated with technical reason. It is, however precisely because of such risks that a principled pragmatic theory of argument is needed. Given that we live in an advanced technological society, it is inevitable that technical reason will play a role. Postmodernism points to the dangers of technical reason, but provides no means of avoiding those risks. A pragmatic theory of argument, by contrast, justifies principles of rationality that can be used to protect society from the nihilistic excesses of a purely instrumental reason.¶

#### Casting out elite economic jargon fails. We have an obligation to take large scale consequences seriously

**Barnhizer 2006** – law professor at Cleveland State University (David, Georgetown International Environmental Law Review, “Waking from Sustainability's "Impossible Dream": The Decisionmaking Realities of Business and Government”, http://www.allbusiness.com/human-resources/employee-development-leadership/4077913-1.html, WEA)

Grand utopian visions, and even smaller Utopias based on an ideal of pastoral communities harmoniously husbanding local resources, simply are not reflective of the reality faced by the vast majority of people. E.F. Schumacher's argument that "small is beautiful" may appear to be an elegant solution for how we can all live comfortable and rewarding lives within enriching community bonds, but it is not going to happen.56

"Small is beautiful" has become an impossible dream for all but a few communities. The process of impossibility is driven by population growth, the breakdown of local communities through migration, the infusion of multicultural diversity, and a materialistic ethos that has altered our sense of what constitutes quality of life. The most obvious driving forces include increasing urban densities and coastal development requiring massive infrastructures and supportive supply systems, overall population levels, and the distortions of population distribution and age demographics. To these can be added quality of life demands caused by people in economically impoverished countries who can see how material life is led in richer countries and the spread of interdependent economic systems that allow global production and distribution systems to penetrate what had been largely closed economic and cultural systems. These conditions are not reversible.

My concern here is related to the speed at which societies are approaching various kinds of large-scale dislocations, injustices, strife, and even disaster. I do not want to resort to doomsday prophecies or set a clear date on which critical resources will be irreversibly depleted, such as was done in the Club of Rome's Limits to Growth report in 1972.57 In addition to being destructive and careless, humans are also adaptive and resilient. Placing hard and fast deadlines on when chaos occurs and the worst effects are generated is unwise and chancy at best.58 But if it is unwise or at least extremely difficult to make accurate and detailed predictions involving "doom and gloom" scenarios, it is equally unwise and foolhardy to ignore that the equivalent of ecological and social tectonic plates with massive disruptive potential are shifting underneath the surface of our national and global systems. Failing to prepare for the most likely consequences reaches the level of gross irresponsibility.

We face a combination of ecological, social, and economic crises. These crises involve the ability to fund potentially conflicting obligations for the provision of social benefits, health care, education, pensions, and poverty alleviation. They also include the need for massive expenditures to "fix" what we have already broken.59 Part of the challenge is that in the United States and Europe we have made fiscal promises that we cannot keep. We also have vast economic needs for continuing wealth generation as a precondition for achieving social equity on national and global levels. Figuring out how to reduce some of those obligations, eliminate others, and rebuild the core and vitality of our system must become a part of any honest social discourse. Even Pollyanna would be overwhelmed by the choices we face. There will be significant pain and sacrifice in any action we take. But failing to take prompt and effective action will produce even more catastrophic consequences.

#### Double bind—playing up the violence of colonialism discursively replicates this violence

Goss 96 – Aboriginal Resource and Research Centre, New South Wales (Jasper, Postcolonialism, Third World Quarterly 17:2)

Gates argues that postcolonial theory has created its own double bind whereby one can choose to: empower the native discursively... downplaying the epistemic (and literal) violence of colonialism; or play up the absolute nature of colonial domination, [by] negating the subjectivity and agency of the colonised, thus textually replicating the repressive operations of colonialism. 29 The theoretical implications are that one is left in a constantly ambiguous position as to the impact of colonialism. Even Young, an admirer of postcolonial projects, must still raise the question, `of what, if anything, is specific to the colonial situation if colonial texts only demonstrate the same properties that can be found in any deconstructive reading of European texts’ .30 If the subaltern cannot speak (according to Spivak) and never will, then the situation we are left with is one that half-heartedly acknowledges the social ramifications of colonialism but has no way (or seeks none) of locating them within an historical project outside of `local’ discourses. Ahmad notes the impact of this theoretical turn by arguing that, `[colonialism ] thus becomes a transhistorical thing, always present and always in the process of dissolution in one part of the world or another, so that everyone gets the privilege, sooner or later, at one time or another, of being coloniser, colonised and postcolonial’.31 We have arrived at a situation where the difference between the coloniser and colonised is not only the result of colonial discourses but in fact can be turned around so that the coloniser is in fact colonised as well. There is no dispute that it is certainly desirable to make a critique of static and universalist categories (black, white, Third World, etc), but by seeking an eternal regress postcolonial theory problematises every category to the point at which it has no usefulness whatsoever. As Dirlik states: postcolonialism’ s repudiation of structure and totality in the name of history ironically ends up not in an affirmation of historicity but in a self-referential, universalising historicism that reintroduces through the back door an unexamined totality; it projects globally what are but local experiences.

#### Postcolonialism is inevitably co-opted to legitimize colonialism

Dirlik 99 – Prof Social Science, History and Anthropology, U Oregon (Arif, How the grinch hijacked radicalism, Postcolonial Studies 2:2)

In the light of what I have observed above with reference to the re-evaluation of class formations in earlier national liberation movements, it may be understandable why postcolonial critics from formerly colonial societies should be reluctant to speak to issues of class, as they hail for the most part from classes that were(and are) suspect in the eyes of nativists. This makes it all the more imperative to speak to issues of class, however, as postcolonial elites are increasingly entangled in the transnational class formations produced by global reconfigurations. In the process, the postcolonial argument is mobilised to serve as an alibi for a cultural colonialism that is so thorough that it is nearly impossible to speak about it, as colonialism itself loses its meaning where it proceeds by consent of the colonised. However diluted in its dissolution of social differences into generalities about marginality or subalternity, the postcolonial argument even in its later phase initially retained concern for the underdog; as witness the affinity postcolonial critics have expressed with the Subaltern historians. By now, however, postcolonial criticism has become absorbed into institutions of power, its arguments appropriated by those who may feel marginal in certain ways, but represent new forms of power in others.

#### They legitimize atrocity

Williams 97 – visiting fellow, Afrika-Studiecentrum (Adebayo, The postcolonial flaneur and other fellow-travellers, Third World Quarterly 18:5, AG)

Postcolonialism, as it is marked by the concept of hybridity, is a symptom pretending to be a diagnosis. The intellectual charms of contingency and the renunciation of agency have not stopped the agents of history. Hybridity did not stop three wars between India and Pakistan, despite the fact that the latter was hacked out of the former on the eve of independence. Indeed, neither has hybridity prevented the homogenous clans of Somalia from permanently waging war among themselves nor did it prevent the grotesque barbarity visited uponUS soldiers in that unhappy land. Hybridity or even assimilation did not confuse a superpower like France as to the real object and objective of its forty three documented interventions in `postcolonial’ Africa, and neither did it dissuade the Nigerian military authorities from executing Kenule Saro-Wiwa, who was making legitimate demands for his distinct nationality within the realities of a multinational Nigeria.

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#### Methane release inevitable – only extraction solves extinction

**Light 12** (Malcolm P.R. Light, Center for Polar Observation and Modeling, University of London, polar climate modeling and methane hydrates in the permafrost and submarine Arctic, “Charting Mankind’s Arctic Methane Emission Exponential Expressway to Total Extinction in the Next 50 Years,” Arctic News, August 10, 2012, http://arctic-news.blogspot.com/2012/08/charting-mankinds-expressway-to-extinction.html)

**If left alone** the subsea Arctic **methane hydrates will explosively destabilize on their own due to global warming and produce a massive** Arctic wide **methane “blowout” that will lead to** humanity’s **total extinction,** probably before the middle of this century (Light 2012 a, b and c). AIRS atmospheric methane concentration data between 2008 and 2012 (Yurganov 2012) show that the Arctic has already entered the early stages of a subsea methane “blowout” so we need to step in as soon as we can (e.g. 2015) to prevent it escalating any further (Light 2012c). The Arctic Natural Gas Extraction, Liquefaction & Sales (ANGELS) Proposal aims to reduce the threat of large, abrupt releases of methane in the Arctic, by extracting methane from Arctic methane hydrates prone to destabilization (Light, 2012c). After the Arctic sea ice has gone (probably around 2015) we propose that a large consortium of oil and gas companies/governments set up drilling platforms near the regions of maximum subsea methane emissions and drill a whole series of shallow directional production drill holes into the subsea subpermafrost “free methane” reservoir in order to depressurize it in a controlled manner (Light 2012c). This methane will be produced to the surface, liquefied, stored and transported on LNG tankers as a “green energy” source to all nations, totally replacing oil and coal as the major energy source (Light 2012c). The subsea methane reserves are so large that they can supply the entire earth’s energy needs for several hundreds of years (Light 2012c). By sufficiently depressurizing the Arctic subsea subpermafrost methane it will be possible to draw down Arctic ocean water through the old eruption sites and fracture systems and destabilize the methane hydrates in a controlled way thus shutting down the entire Arctic subsea methane blowout (Light 2012c).

#### Condo bad

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#### Prompts a broad switch back to coal plants

Reuters 9/12 (9/12/12, “Coal power to drive U.S. emissions higher next year: report,” <http://www.reuters.com/article/2012/09/12/us-usa-coal-emissions-idUSBRE88B1IM20120912>, RBatra)

U.S. fossil fuel emissions will rise 2.8 percent next year as higher costs for natural gas prompt power plant operators to switch to coal, according to a government energy report released on Wednesday. Coal-fired power generation will increase by 9.3 percent next year, the report said, in part because utilities are expected to pay almost 20 percent more for natural gas. Burning coal releases more carbon dioxide gas into the atmosphere than natural gas. Power plants have in recent years been using more natural gas to keep turbines churning, chiefly because an abundance of the fuel has made it more economical than coal. But a spike in the cost of natural gas in recent months will next year prompt more generators to burn coal, which has had more stable prices, said a report from the Energy Information Agency which supplies nonpartisan research. "The recent trend of substituting coal‐fired generation with natural‐gas ... may be slowing and will likely reverse," according to the report. "This is a function of price" said Carol Raulston of the National Mining Association. "Plants that have the capability to switch fuels are doing so." While emissions from petroleum and natural gas should be nearly flat next year, coal emissions will increase by 8.5 percent, the report said.

#### The alternative is coal—kills thousands every year

Zelman 11 Joanna, The Huffington Post, "Power Plant Air Pollution Kills 13,000 People Per Year, Coal-Fired Are Most Hazardous: ALA Report", 3/15, www.huffingtonpost.com/2011/03/14/power-plant-air-pollution-coal-kills\_n\_833385.html

The American Lung Association (ALA) recently released a new report on the dramatic health hazards surrounding coal-fired power plants.¶ The report, “Toxic Air: The Case For Cleaning Up Coal-Fired Power Plants,” reveals the dangers of air pollution emitted by coal plants.¶ One of the starkest findings in the report claims, “Particle pollution from power plants is estimated to kill approximately 13,000 people a year.”¶ So what's the biggest culprit?¶ “Coal-fired power plants that sell electricity to the grid produce more hazardous air pollution in the U.S. than any other industrial pollution sources.” According to the report details, over 386,000 tons of air pollutants are emitted from over 400 plants in the U.S. per year. Interestingly, while most of the power plants are located in the Midwest and Southeast, the entire nation is threatened by their toxic emissions.¶ An ALA graph shows that while pollutants such as acid gases stay in the local area, metals such as lead and arsenic travel beyond state lines, and fine particulate matter has a global impact. In other words, while for some workers the pollution may be a tradeoff for employment at a plant, other regions don’t reap the same benefits, but still pay for the costs to their health.¶ The report connected specific pollutants with their health effects. According to the ALA, 76% of U.S. acid gas emissions, which are known to irritate breathing passages, come from coal-fired power plants. Out of all industrial sources, these plants are also the biggest emitter of airborne mercury, which can become part of the human food chain through fish and wildlife -- high mercury levels are linked to brain damage, birth defects, and damage to the nervous system. Overall, air pollutants from coal plants can cause heart attacks, strokes, lung cancer, birth defects, and premature death.¶ The American Lung Association isn’t the only group to connect coal plants with death and illness. A recent study released in the Annals of the New York Academy of Sciences found that, due in large part to health problems, coal costs the U.S. $500 billion per year. Specifically, the study found that the health costs of cancer, lung disease, and respiratory illnesses connected to pollutant emissions totaled over $185 billion per year.