# Round 2 v Wyoming/Indiana

## 1AC

Same as UTD 1AC

## 2AC

**States 2AC**

**States don’t have legal authority over military bases - they are enclaves**

**Tymkovich 12**

(Seymour, Circuit Judge, “ALLISON v. BOEING LASER TECHNICAL SERVICES” <http://www.leagle.com/xmlResult.aspx?xmldoc=In%20FCO%2020120810042.xml&docbase=CSLWAR3-2007-CURR>, SEH)

**Under a body of constitutional law applicable to federal enclaves**, U.S. Const. art. I, § 8, cl. 17, **state law that is adopted after the creation of the enclave** generally **does not apply on the enclave**. **A federal enclave is created when a state cedes jurisdiction over land within its borders to the federal government** and Congress accepts that cession**. These enclaves include** numerous **military bases**, federal facilities, and even some national forests and parks. Federal enclave doctrine operates as a choice of law doctrine that dictates which law applies to causes of action arising on these lands**.**¶ **It is well-established that after a state has transferred authority over a tract of land creating a federal enclave, the state may no longer impose new state laws on these lands.** But state laws enacted before the cession continue to apply unless Congress specifically overrides them. The question here is whether state common law causes of action recognized after the state ceded the enclave to the federal government are available on federal enclaves. This question is governed by **a long string of Supreme Court precedent that makes it clear that the law on a federal enclave is the state law that governed the land at the time the federal government established the enclave, not state law enacted thereafter**—unless that law was expressly adopted by the enclave's new sovereign, the federal government.

**Current acquisitions favor old tech – the plan’s signal is key**

**CNA 10**

CNA 10, non-profit research organization that operates the Center for Naval Analyses and the Institute for Public Research, “Powering America’s Economy: Energy Innovation at the Crossroads of National Security Challenges”, July, <http://www.cna.org/sites/default/files/research/WEB%2007%2027%2010%20MAB%20Powering%20America%27s%20Economy.pdf>

In our final discussion, we consider the end of the innovation pipeline—deployment—and we look at how fine-tuning the incentives might help pull more innovative, new energy technologies through the pipeline. Energy use at installations is governed under a stricter rubric than operational energy: a variety of regulatory and legislative mandates have steered DOD toward lowering energy consumption, increasing use of renewables, and promoting conservation and energy efficiency. However, **the adoption of new clean energy technologies is still hampered in key installation acquisition programs**. To help achieve its energy goals, DOD often employs two mechanisms: the Energy Conservation Investment Program (ECIP) and Energy Savings Performance Contracts (ESPCs). The ECIP program is backed by Congressional appropriations (through military construction funding), and it is designed to allow installations to purchase technologies that save money through conserving energy [55]. The program is viewed widely as being successful, cited as saving more than two dollars for each dollar invested. ESPCs are contracting vehicles that allow DOD to invest in energy-related improvements without expending funds appropriated by Congress. **Through ESPCs, DOD partners with private firms that make the energy improvements; in return, the firms’ investments are paid back through the energy savings**. **While these programs have improved installation energy use, as they are currently structured, they favor older technologies that are well-established on the commercial market**. **This is especially the case for ESPCs, which are inherently risk averse**. **The private sector firms that enter into these contracts only do so if they are guaranteed to make a profit; as such, the energy improvements are done so with tried-and-tested technologies** whose payback schedules and energy savings are well-defined. Many of these investments are also made with small profit margins. As such, **companies are not willing to take risks on these contracts by using new and perhaps unproven technologies**. **Altering these programs to reduce the advantages provided to already commercialized products will encourage the acquisition of more innovative technologies on installations**. One change could include a guaranteed return on investment (similar to that given on older technologies) for those developers proposing cutting-edge technologies. Another change could include giving first preference to innovations that come from public/private partnerships (incubators, energy hubs, etc.). **Given DOD’s size and the fact that installations mirror U.S. infrastructure, the use of innovative technologies on its installations provides a clear demand signal to the developer**.

#### States links to politics

Kiely ‘12 [[EUGENE KIELY](http://www.factcheck.org/author/eugene-kiely/), Washington assignment editor USA today, February 17, 2012 Factcheck.org “Did Obama ‘Approve’ Bridge Work for Chinese Firms?” http://www.factcheck.org/2012/02/did-obama-approve-bridge-work-for-chinese-firms/]

Who’s to blame, if that’s the right word, if the project ends up using manufactured steel from China? The National Steel Bridge Alliance blames the state railroad agency. The Alliance for American Manufacturing says the federal Buy American laws have been “weakened with loopholes and various exemptions that make it easier for bureaucrats to purchase foreign-made goods instead of those made in American factories with American workers.” So, how did **Obama get blamed** for the decisions by state agencies and for state projects that, in at least one case**, didn’t even use federal funds?** The answer is a textbook lesson in how **information gets distorted** when emails go viral. We looked at the nearly 100 emails we received on this subject and found that Obama wasn’t mentioned at all in the first few emails. Typical of the emails we received shortly after the ABC News report aired was this one from Oct. 11, 2011: “I just got an email regarding Diane Sawyer on ABC TV stating that U. S. Bridges and roads are being built by Chinese firms when the jobs should have gone to Americans. Could this possible be true?” The answer: Yes, it’s true. End of story, right? Wrong. Days later, emails started to appear in our inbox that claimed ABC News reported that Chinese firm were receiving stimulus funds to build U.S. bridges — even though the broadcast news story didn’t mention stimulus funds at all. (The report did include a clip of Obama delivering a speech on the need to rebuild America’s bridges and put Americans to work, but said nothing about the president’s $830 billion stimulus bill.) Still, we received emails such as this one on Nov. 4, 2011, that included this erroneous claim language: “Stimulus money meant to create U.S. jobs went to Chinese firms. Unbelievable….” **It didn’t take long for Obama to be blamed**. That same day — Nov. 4, 2011 — we received an email that made this leap to Obama: “SOME CHINESE COMPANIES WHO ARE BUILDING ‘OUR’ BRIDGES. (3000 JOBS LOST TO THE CHINESE FIRM)…..AND NOW OBAMA WANTS ‘MORE STIMULUS MONEY’…..THIS IS NUTS ! ! ! If this doesn’t make you furious nothing will….” This year, Obama’s name started to surface in the subject line of such critical emails — raising the attack on the president to yet another level and perhaps ensuring the email will be even more widely circulated. Since Jan. 17, we have gotten more than a dozen emails with the subject line, “ABC News on Obama/USA Infrastructure,” often preceded with the word “SHOCKING” in all caps. The emails increasingly contain harsh language about the president. Since Jan. 11, 23 emails carried this added bit of Obama-bashing: “I pray all the unemployed see this and cast their votes accordingly in 2012!” One of those emails — a more recent one from Feb. 8 — contained this additional line: “Tell me again how Obama’s looking out for blue collar guys**. He** cancels pipelines, and **lets Chinese contractors build our bridges…” And so it goes, on and on. All from a news report that blamed state officials — not Obama — for spending taxpayer money** on Chinese firms to build U.S. bridges.

**Politics**

#### Push now-

#### Hagel nomination fight means capital expenditure inevitable

Gopal **Ratnam**, Bloomberg News, **12/30**/12, Obama’s political, policy and Pentagon dilemma, www.bendbulletin.com/article/20121230/NEWS0107/212300381/

President Barack **Obama faces a growing dilemma in** his choice of **a new defense secretary** to succeed Leon Panetta. **Having dropped** U.N. Ambassador Susan **Rice** and named Massachusetts Democratic Sen. John Kerry to replace Hillary Clinton as secretary of state, **Obama runs the risk of appearing weak if he bows to political opposition again** and chooses someone other than former Nebraska Republican senator Chuck Hagel to lead the Pentagon. **Picking another candidate would show** for a second time “that **the president’s important choices** for personnel **can be vetoed by two or three senators**," said Sean Kay, a professor of politics and government at Ohio Wesleyan University in Delaware, Ohio, who specializes in U.S. foreign and defense policy. “**The White House will come out of this significantly weakened**." **If Obama sticks with Hagel in the face of opposition from** an ad hoc coalition of **Republican advocates** of muscular defense policies, **Democratic supporters of Israel and gay rights activists**, though, **Obama might be forced to spend political capital** **he needs for the bigger battle** over the federal budget and deficit reduction.

#### Won’t pass - GOP won’t back down

LA Times 12/31

Kathleen Hennessey and David Lauter, "Obama wins 'fiscal cliff' victory, but at high cost", 2012, [www.latimes.com/news/nationworld/nation/la-na-fiscal-cliff-analysis-20130101,0,6417926.story](http://www.latimes.com/news/nationworld/nation/la-na-fiscal-cliff-analysis-20130101%2C0%2C6417926.story)

Others, however, expressed doubt that Obama would be able to achieve his additional goals now that his trump card had been played. The president's leverage in the current negotiations had been the automatic tax increase set to take effect Tuesday. If Republicans did not vote for a deal, taxes would go up for everyone, and polls indicated voters were inclined to blame them, not Obama.¶ The challenge of squeezing tax increases out of a Republican-led House will get harder, not easier, in the new year. Without the threat of an automatic tax increase, Obama has much less leverage, said Jared Bernstein, the former chief economist and economic advisor to Vice President Joe Biden. And Republicans will gain leverage through their threats to refuse an increase in the debt ceiling, which would cause the government to default on its bonds.¶ "While the White House had the leverage, it would have been very good for them to deal with the debt ceiling," Bernstein said. "The Republicans are absolutely sharpening their knives for that next fight, which is horrific, by comparison — a much worse self-inflicted wound on the economy."

#### Plan’s popular- Bipart support

Pendidikan ‘11

Cinta writes for the Love and Like Education Blog, “Sanders is the Sole Vote Against Small Modular Reactor Research,” http://loveandlikeeducation.blogspot.com/2011/08/bernie-sanders-and-small-modular.html

Sanders is Sole Vote Against Small Modular Reactor Research¶ Bernie Sanders and Small Modular Reactors¶ Senator Bernie Sanders often speaks about his opposition to Vermont Yankee as having something to do with the age of the plant, the fact it is owned by Entergy, or his "state's rights" stance about regulating nuclear power plants.¶ Recently, however, Sanders made it clear that he is against nuclear power in any form and is proud of that opinion. On Senator Sanders website, he featured the fact that he was the only vote against "a pair of measures that would promote the development of small modular reactors."¶ One of these measures was the Nuclear Power Act S512. This act would authorize the Secretary of Energy to start a cost-shared program for development of small modular reactors (SMRs).¶ This act had strong bi-partisan support, being sponsored by 3 Republican and 4 Democratic Senators. The act requires research and development funds for SMRs. The Act is still in process, and does not have a firm dollar amount attached, but the dollar amount is likely to be small (in government terms, at least.). Current estimates are $100 million per fiscal year for four years, starting next year.¶ The act also requires that industry cost-share the expense. If industry doesn't think it is worth spending money on the research, the research will not receive government funding either.¶ As a background to the probable cost of this Act, we should note that President Obama requested $4.8 billion dollars for Department of Energy research, of which $3.2 billion is allocated for renewable energy and energy efficiency research. (This number has changed with the debt deal, but new numbers are not available at this time.)¶ Small Modular Reactors for The Future¶ Sander's opposition to this Nuclear Power Act will hurt America's chances to develop an important new exportable technology. Outside of Europe, the nuclear renaissance remains in full swing, with reactors being ordered and built in Arabia, China, India and Southeast Asia. Developing a strong set of SMR designs would be America's best chance to re-entering the world market for nuclear power.¶ SMRs are modular (assembled in a factory and delivered to the site), small (50 to 225 MW) and have many safety features, such as passive cooling. SMRs are expected to have a huge international market. They suitable for many places that do not have the population density or money for the current crop of huge reactors (1200 MW, built on site at great expense). SMRs would make nuclear power affordable and salable many places.¶ Westinghouse and Babcock & Wilcox have invested significant amounts of their own money in developing these products. The NRC is also active in assessing preliminary designs. At another Senate committee meeting on SMRs, Commissioner Magwood of the NRC said that he does not expect decisions made by the NRC to be the critical factor in the success or failure of SMRs. Magwood noted that SMRs have passive safety features and large water inventories; these would be considered during license review.¶ America Fallen Behind¶ America has fallen far behind the rest of the world in most nuclear technologies. Pressurized Water Reactors (PWRs) and Boiling Water Reactors (BWRs) were developed in this country. They are being sold all over the world, but not by United States companies. We're out of the running. Other countries licensed and improved our original technologies. Companies from France, Korea, Russia and China compete to build large reactors in China, Arabia, and Southeast Asia.¶ Three American companies have put millions of dollars into the development of SMRs: Westinghouse, Babcock & Wilcox, and NuScale (a small start-up). Many people in the nuclear industry feel that the race to develop the first successful SMR is a truly high-stakes race, being fought at the level of nationwide efforts. Luckily, SMR development has bi-partisan support, and Mr. Sanders was alone in his opposition to supporting American industry efforts to develop these plants.¶ Should Government Be Involved?¶ Of course, one can make a case that the government should get out of the energy research business altogether. If Senator Sanders wished to save tax dollars by cutting all energy-research programs, he might have a valid case. However, if the government does plan to spend money on energy research, cost-sharing with industry on a new nuclear technology is certainly a far better use of funds than many of the projects in the swollen DOE renewable budget.

#### DoD doesn’t link

**Appelbaum 12**

Binyamin, Defense cuts would hurt scientific R&D, experts say, The New York Times, 1-8, <http://hamptonroads.com/2012/01/defense-cuts-would-hurt-scientific-rd-experts-say>

Sarewitz, who studies the government's role in promoting innovation, said **the Defense Department had been** more successful **than other federal agencies because it is the** main user of the innovations that it finances**.** **The Pentagon, which spends billions** each year on weapons, equipment and technology, **has an** unusually direct stake in the outcome **of its** research and development **projects.**¶ "The central thing that distinguishes them from other agencies is that they are the customer," Sarewitz said. "You can't pull the wool over their eyes."¶ **Another factor is the Pentagon's relative insulation from politics, which has allowed it to sustain a long-term research agenda** in controversial areas**. No matter which party is in power,** **the Pentagon has continued to invest in clean-energy tech**nology, **for example,** in an effort to find ways to reduce one of its largest budget items, energy costs.

**Nuke lobby supports- guarantees bipart support**

**Samuelsohn ‘11** (Darren Samuelsohn, March 16, 2011, “Nuclear industry lobbyists' clout felt on Hill,” Politico, <http://www.politico.com/news/stories/0311/51367.html>)

Facing its biggest crisis in 25 years, the U.S. nuclear power industry can count on plenty of Democratic and Republican friends in both high and low places.¶ During the past election cycle alone, the Nuclear Energy Institute and more than a dozen companies with big nuclear portfolios have spent tens of millions of dollars on lobbying and campaign contributions to lawmakers in key leadership slots and across influential state delegations.¶ The donations and lobbying funds came at a critical moment for the nuclear industry as its largest trade group and major companies pushed for passage of a cap-and-trade bill.¶ While that effort failed, the money is sure to **keep doors open** on Capitol Hill as lawmakers consider any response to the safety issues highlighted by multiple nuclear reactor meltdowns in Japan in the aftermath of last week’s monster earthquake and tsunami.¶ “The bottom line is you’ve got a variety of industrial interests that care about nuclear power and have a heck of a lot of money to spend if their business and their bottom line is put in political jeopardy,” said Dave Levinthal, communications director at the Center for Responsive Politics. “As Congress is talking about potentially diving deeper, these companies bring a lot of resources and a heck of a lot of cash to bear if tDhis fight goes forward.”¶ NEI, the industry’s biggest voice in Washington, for example, spent $3.76 million to lobby the federal government and an additional $323,000 through its political action committee on a bipartisan congressional slate, including 134 House and 30 Senate candidates, according to data compiled by the CRP.¶ Alex Flint, NEI’s senior vice president for government affairs, said the spending is a byproduct of record high demand for his industry.¶ “The fact that the day after the election, both the president and [House Speaker John Boehner] said nuclear was an area where it’s something they can agree, it’s made us that much more in demand,” Flint said. “Our lobbying expenses have gone up more in large part because we have more people talking to more members of Congress.”

#### Winners win

Marshall and Prins ‘11

Bryan W. MARSHALL AND PRINS 11, Miami University, Department of Political Science AND Brandon C. PRINS, University of Tennessee & Howard H. Baker, Jr. Center for Public Policy, September 2011 “Power or Posturing? Policy Availability and Congressional Inﬂuence on U.S. Presidential Decisions to Use Force”, Presidential Studies Quarterly, http://onlinelibrary.wiley.com/doi/10.1111/j.1741-5705.2011.03885.x/pdf, [Stolarski]

Presidents rely heavily on Congress in converting their political capital into real policy success. Policy success not only shapes the reelection prospects of presidents, but it also builds the president’s reputation for political effectiveness and fuels the prospect for subsequent gains in political capital (Light 1982). Moreover, the president’s legislative success in foreign policy is correlated with success on the domestic front. On this point, some have largely disavowed the two-presidencies distinction while others have even argued that foreign policy has become a mere extension of domestic policy (Fleisher et al. 2000; Oldﬁeld and Wildavsky 1989) Presidents implicitly understand that there exists a linkage between their actions in one policy area and their ability to affect another. The use of force is no exception; in promoting and protecting U.S. interests abroad, presidential decisions are made with an eye toward managing political capital at home (Fordham 2002).

#### Political capital isn’t key

Dickinson 9 professor of political science at Middlebury College (Matthew, “Sotomayor, Obama and Presidential Power,” May 26, 2009 Presidential Power http://blogs.middlebury.edu/presidentialpower/2009/05/26/sotamayor-obama-and-presidential-power/]

What is of more interest to me, however, is what her selection reveals about the basis of presidential power. Political scientists, like baseball writers evaluating hitters, have devised numerous means of measuring a president’s influence in Congress. I will devote a separate post to discussing these, but in brief, they often center on the creation of legislative “box scores” designed to measure how many times a president’s preferred piece of legislation, or nominee to the executive branch or the courts, is approved by Congress. That is, how many pieces of legislation that the president supports actually pass Congress? How often do members of Congress vote with the president’s preferences? How often is a president’s policy position supported by roll call outcomes? These measures, however, are a misleading gauge of presidential power – they are a better indicator of congressional power. This is because how members of Congress vote on a nominee or legislative item is rarely influenced by anything a president does. Although journalists (and political scientists) often focus on the legislative “endgame” to gauge presidential influence – will the President swing enough votes to get his preferred legislation enacted? – this mistakes an outcome with actual evidence of presidential influence. Once we control for other factors – a member of Congress’ ideological and partisan leanings, the political leanings of her constituency, whether she’s up for reelection or not – we can usually predict how she will vote without needing to know much of anything about what the president wants. (I am ignoring the importance of a president’s veto power for the moment.) Despite the much publicized and celebrated instances of presidential arm-twisting during the legislative endgame, then, most legislative outcomes don’t depend on presidential lobbying. But this is not to say that presidents lack influence. Instead, the primary means by which presidents influence what Congress does is through their ability to determine the alternatives from which Congress must choose. That is, presidential power is largely an exercise in agenda-setting – not arm-twisting. And we see this in the Sotomayer nomination. Barring a major scandal, she will almost certainly be confirmed to the Supreme Court whether Obama spends the confirmation hearings calling every Senator or instead spends the next few weeks ignoring the Senate debate in order to play Halo III on his Xbox. That is, how senators decide to vote on Sotomayor will have almost nothing to do with Obama’s lobbying from here on in (or lack thereof). His real influence has already occurred, in the decision to present Sotomayor as his nominee. If we want to measure Obama’s “power”, then, we need to know what his real preference was and why he chose Sotomayor. My guess – and it is only a guess – is that after conferring with leading Democrats and Republicans, he recognized the overriding practical political advantages accruing from choosing an Hispanic woman, with left-leaning credentials. We cannot know if this would have been his ideal choice based on judicial philosophy alone, but presidents are never free to act on their ideal preferences. Politics is the art of the possible. Whether Sotomayer is his first choice or not, however, her nomination is a reminder that the power of the presidency often resides in the president’s ability to dictate the alternatives from which Congress (or in this case the Senate) must choose. Although Republicans will undoubtedly attack Sotomayor for her judicial “activism” (citing in particular her decisions regarding promotion and affirmative action), her comments regarding the importance of gender and ethnicity in influencing her decisions, and her views regarding whether appellate courts “make” policy, they run the risk of alienating Hispanic voters – an increasingly influential voting bloc (to the extent that one can view Hispanics as a voting bloc!) I find it very hard to believe she will not be easily confirmed. In structuring the alternative before the Senate in this manner, then, Obama reveals an important aspect of presidential power that cannot be measured through legislative boxscores.

**Defense industry is chill w/ sequestration**

**Adams 10/17**—Professor of International Relations at the School of International Service, American University and a Distinguished Fellow at the Stimson Center. (Gordon, The Fiscal Slide, [www.foreignpolicy.com/articles/2012/10/17/the\_fiscal\_slide](http://www.foreignpolicy.com/articles/2012/10/17/the_fiscal_slide))

Then, there is the matter of procurement and what **some see** as **the** almost **cataclysmic** level of **devastation that** such harsh **cuts would impose on the defense industry.** **Except they won't.** It turns out **the industry is pretty healthy, it has been for a decade, and it is working on contracts that have been funded in prior budget years**, which are **exempt from sequestration**.¶ **As the director of defense procurement put it:** "**The vast majority of our contracts are fully funded**, **so there's no need to terminate existing contracts unless the product is no longer needed."** **Lockheed treasurer** Ken **Possenriede agreed** that **sequestration was not a** near-term **problem**: "If sequestration happens, just based on our normal business rhythm, we're comfortable from a cash-on-hand standpoint that we'll endure that."

#### No escalation

Fettweis 7

Asst Prof Poli Sci – Tulane, Asst Prof National Security Affairs – US Naval War College, 7

(Christopher, “On the Consequences of Failure in Iraq,” *Survival*, Vol. 49, Iss. 4, December, p. 83 – 98)

Without the US presence, a second argument goes, nothing would prevent Sunni-Shia violence from sweeping into every country where the religious divide exists. A Sunni bloc with centres in Riyadh and Cairo might face a Shia bloc headquartered in Tehran, both of which would face enormous pressure from their own people to fight proxy wars across the region. In addition to intra-Muslim civil war, cross-border warfare could not be ruled out. Jordan might be the first to send troops into Iraq to secure its own border; once the dam breaks, Iran, Turkey, Syria and Saudi Arabia might follow suit. The Middle East has no shortage of rivalries, any of which might descend into direct conflict after a destabilising US withdrawal. In the worst case, Iran might emerge as the regional hegemon, able to bully and blackmail its neighbours with its new nuclear arsenal. Saudi Arabia and Egypt would soon demand suitable deterrents of their own, and a nuclear arms race would envelop the region. Once again, however, none of these outcomes is particularly likely.Wider war No matter what the outcome in Iraq, the region is not likely to devolve into chaos. Although it might seem counter-intuitive, by most traditional measures the Middle East is very stable. Continuous, uninterrupted governance is the norm, not the exception; most Middle East regimes have been in power for decades. Its monarchies, from Morocco to Jordan to every Gulf state, have generally been in power since these countries gained independence. In Egypt Hosni Mubarak has ruled for almost three decades, and Muammar Gadhafi in Libya for almost four. The region's autocrats have been more likely to die quiet, natural deaths than meet the hangman or post-coup firing squads. Saddam's rather unpredictable regime, which attacked its neighbours twice, was one of the few exceptions to this pattern of stability, and he met an end unusual for the modern Middle East. Its regimes have survived potentially destabilising shocks before, and they would be likely to do so again. The region actually experiences very little cross-border warfare, and even less since the end of the Cold War. Saddam again provided an exception, as did the Israelis, with their adventures in Lebanon. Israel fought four wars with neighbouring states in the first 25 years of its existence, but none in the 34 years since. Vicious civil wars that once engulfed Lebanon and Algeria have gone quiet, and its ethnic conflicts do not make the region particularly unique. The biggest risk of an American withdrawal is intensified civil war in Iraq rather than regional conflagration. Iraq's neighbours will likely not prove eager to fight each other to determine who gets to be the next country to spend itself into penury propping up an unpopular puppet regime next door. As much as the Saudis and Iranians may threaten to intervene on behalf of their co-religionists, they have shown no eagerness to replace the counter-insurgency role that American troops play today. If the United States, with its remarkable military and unlimited resources, could not bring about its desired solutions in Iraq, why would any other country think it could do so?17 Common interest, not the presence of the US military, provides the ultimate foundation for stability. All ruling regimes in the Middle East share a common (and understandable) fear of instability. It is the interest of every actor - the Iraqis, their neighbours and the rest of the world - to see a stable, functioning government emerge in Iraq. If the United States were to withdraw, increased regional cooperation to address that common interest is far more likely than outright warfare.

**2AC Water DA**

#### Nuclear power is inevitable -

**Only SMR’s solve**

**IAEA 7**

“Economics of Nuclear Desalination: New Developments and Site Specific Studies”, July, http://www-pub.iaea.org/MTCD/publications/PDF/te\_1561\_web.pdf

Seventy percent of the planet is covered with water, but only 2.5% of that is fresh water. Nearly 70% of this fresh water is frozen in the icecaps of Antarctica and Greenland. Most of the rest is in the form of soil moisture or in deep inaccessible aquifers or comes in the form of heavy rains and floods that are difficult to contain and exploit. Consequently, **only less than 0.008%** (about 70 000 km3) **of the world’s water is readily accessible for direct human use, and even that is very unevenly distributed**. Recent statistics show that currently **2.3 billion people live in water-stressed areas and among them 1.7 billion live in water-scarce areas, where the water availability per person is less than 1000 m3/year**. In fact, **the situation is expected to worsen further since, by 2025, the number of people suffering from water stress or scarcity could swell to 3.5 billion, out of which 2.4 billion would live in water-scarce regions. Water scarcity is a global issue**. Every year new countries are affected by growing water problems.¶ It is for this reason that the Millennium Declaration by UN General Assembly in 2000 set up a target¶ to halve, by the year 2015, the world population, which is unable to reach, or to afford, safe drinking¶ water. Vision 21: shared vision for Hygiene, Water Supply and Sanitation, has a target to provide¶ water, sanitation and hygiene for all by 2025.¶ Better water conservation, water management, pollution control and water reclamation are all part of the integrated solution to projected water stresses. So too are new sources of fresh water, including the desalination of seawater.¶ **Desalination technologies have been well established since the mid-20th century and widely deployed in the Middle East and North Africa. The contracted capacity of desalination plants has increased steadily since 1965** and is now about 36 million m3/day worldwide, as shown in Figure 1. **This capacity could cater to world’s population roughly 6 litres a day per capita of fresh potable water. If this capacity were available to 1.5 billion in the world without direct access to drinking water, it would provide approximately 20 litres/day/capita**.¶ Large scale commercially available desalination processes can generally be classified into two categories: (a) distillation processes that require mainly heat plus some electricity for ancillary equipment, and (b) membrane processes that require only electricity. In the first category (distillation) there are two major processes: multi-stage flash (MSF) and multi-effect distillation (MED). In both processes, seawater is heated; the steam that evaporates is condensed and collected as freshwater; and the residual brine is discharged.¶ In the second category (membranes) is the reverse osmosis process (RO), in which pure water passes from the high-pressure seawater side of a semi-permeable membrane to the low-pressure freshwater side. The pressure differential must be high enough to overcome the natural tendency for water to move from the low concentration freshwater side of a membrane to the high concentration seawater side in order to balance osmotic pressures.¶ The energy for the desalination plants is generally supplied in the form of either steam or electricity. Conventional fossil fuel-powered plants have normally been utilized as the primary sources but their intensive use raises increasing environmental concerns, specifically in relation to greenhouse gas emissions (Section 1.3.3). The depleting sources and the future price uncertainty of the fossil fuels and their better use for other vital industrial applications are also the factors to be considered.¶ 1.3. THE ROLE OF NUCLEAR POWER IN DESALINATION¶ The world energy requirements are presently met from oil, coal, gas, hydro, nuclear and renewable energies in that order as shown in Table 1.¶ **It is now universally recognized that there will be an increase in the world’s requirement for electricity over the next few decades. The present trend towards meeting this demand includes the building of fossil fuel plants**, particularly combined cycle gas fired plants.¶ However, **the spiralling increase in** greenhouse gas (**GHG**) **emissions has resulted in** setting the **emission targets** in international meetings held at Toronto, Rio de Janeiro and Kyoto. The IAEA predicts that the GHG emissions would be 36-50% higher by 2010 compared to 1990 levels. Many analysts, therefore, feel that **the only viable alternative to fossil fuels is nuclear energy to reduce the rate of increase of GHG**, particularly, carbon dioxide.¶ Yet **another incentive for nuclear power is to maintain diversity of supply**. **A national strategy limited to one particular form of energy (fossil fuels) will be vulnerable to increased fuel costs and pressures from exporting countries**.¶ **Nuclear power is a proven technology, which has provided more than 16% of world electricity supply in over 30 countries. More than ten thousand reactor-years of operating experience have been accumulated over the past 5 decades**.¶ There are many reasons which favour a possible revival of the nuclear power production in the years to come. It is thus expected that this revival would also lead to an increased role of nuclear energy in non-electrical energy services, which, at the moment, are almost entirely dominated by fossil energy sources. Among various utilization of nuclear energy for non-electrical products, using it for the production of freshwater from seawater (nuclear desalination) has been drawing broad interest in the IAEA Member States as a result of acute water shortage issues in many arid and semi-arid zones worldwide. With technical co-ordination or support of the IAEA, several **demonstration programs of nuclear desalination are** also **in progress** in several Member States to confirm its technical and economical viability under country-specific conditions¶ **The desalination of seawater using nuclear energy is a feasible option to meet the growing demand for potable water. Over 175 reactor-years of operating experience on nuclear desalination have already been accumulated worldwide**.¶ 1.3.1. Nuclear desalination¶ In the IAEA terminology, nuclear desalination is defined to be the production of potable water from seawater in a facility in which a nuclear reactor is used as the source of energy for the desalination process. Electrical and/or thermal energy may be used in the desalination process on the same site. The facility may be dedicated solely to the production of potable water, or may be used for the generation of electricity and production of potable water, in which case only a portion of the total energy output of the reactor is used for water production.¶ The design approaches for a nuclear desalination plant are essentially derived from those of the nuclear reactor alone, with some additional aspects to be considered in the design of a desalination plant and its integration with the nuclear system.¶ **All nuclear reactor types can provide the energy required by the various desalination processes**. In this regard, it has been shown that Small and Medium Reactors (**SMRs**) **offer the largest potential as coupling options to nuclear desalination systems in developing countries**. The development of innovative reactor concepts and fuel cycles with **enhanced safety features as well as their attractive economics are expected to improve the public acceptance and further the prospects of nuclear desalination**.¶ The coupling with nuclear system is not difficult technically but needs some consideration in (a)¶ avoiding cross-contamination by radioactivity, (b) providing backup heat or power sources in case the¶ nuclear system is not in operation (e.g. for refuelling and maintenance), (c) incorporation of certain¶ design features, minimising the impact of the thermal desalination systems’ coupling to the nuclear¶ reactors (Section 1.6).¶ 1.3.2. Why nuclear desalination?¶ The International Atomic Energy Agency is a specialized organization of the UN system that seeks to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world. The institutional basis for the IAEA’s involvement in nuclear desalination is in its Statute and Medium Term Strategy.¶ Article II of the IAEA Statute provides that:¶ “ The Agency shall seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world”.¶ This refers implicitly to nuclear desalination as an option for the use of nuclear technologies.¶ The same applies to the Article III of the Statute, which authorizes the IAEA:¶ “ To encourage and assist research on, and development and practical application of, atomic energy for peaceful uses throughout the world….”; (Article III, A.1); and¶ “To foster the exchange of scientific and technical information on peaceful uses of atomic energy.” (Article III, A.3).¶ In addition, Objective A.3 of the Agency’s Medium Term Strategy requires the Agency:¶ “ To support and facilitate the development of new and emerging applications of nuclear technologies by co-generation and heat applications, including seawater desalination”.¶ Request of assessing feasibility of using nuclear energy for seawater desalination was first made by the five North African countries to the IAEA in 1989 and the General Conference adopted its resolution to resume the study. These countries are located in semi-arid zones and already suffer from water shortages.¶ In recent years, **interests have been** also been **indicated by** Member States in **South and South East Asia for the feasibility, as well as the demonstration, of nuclear desalination projects**. The issue has since then been repeatedly stressed at the General Conference (Committee on the Whole) and supported by many Member States including most members of Group-77. **The support stems not only from their expectation of its possible contribution to the freshwater issue but** has **also** been motivated by a variety of reasons that include: **the economic competitiveness of nuclear desalination in areas lacking cheap hydropower or fossil fuel resources, energy supply diversification, conservation of fossil fuel resources and spin-off effects of nuclear technology for industrial development**.¶ Looking to the future, there are several reasons for focusing now on expanding nuclear power’s contribution to desalination. Apart from the expanding demand for freshwater and the increasing concern about GHG emissions and pollution from fossil fuels, **there is a renewed and growing emphasis on small** and medium sized nuclear **reactors**, **and this is particularly important for desalination because the countries most in need of new sources of freshwater often have limited industrial infrastructures and relatively weaker electricity grids**. **The size of the grid limits the possibilities for integrating a co-generating nuclear power plant into the grid to supply the electricity market, in addition to meeting the energy requirements of a desalination plant**. **The largest power unit that can be integrated into an electricity grid must not exceed about 10-20 % of the total grid capacity**. Of course, **smaller nuclear reactors would be more appropriate for remote areas that are not suitable for connections to the grid**.¶ For nuclear desalination to be attractive in any given country, two conditions have to be satisfied simultaneously: **a lack of water and the ability to use nuclear energy for desalination**. In most regions, only one of the two is present. Both **are present** for example **in China**, the Republic of **Korea, India and Pakistan**. **These regions already account for almost half the world’s population, and thus represent a potential long term market for nuclear desalination**. The market will expand further to the extent that regions with high projected water needs, such as the Middle East and North Africa, increase their nuclear expertise and capabilities.¶ 1.3.3. Environmental impact of desalination by fossil fuelled energy sources¶ Desalination is an energy intensive process. **A future desalination strategy based only on the use of fossil fuelled systems is not sustainable: Fossil fuel reserves are finite and must be conserved for more important uses** such as transport, petrochemical industry etc. Besides, **the demands for desalted water would continue increasing as population grows and standards of living improve**. **Conservation measures** such as the modernisation of water networks to minimise leakages, the recycling of used water etc. will certainly reduce the future water demands slightly but they **would not be able to halt the dissemination of desalination plants and consequently of the fossil fuelled based systems for the production of needed electricity and heat**.¶ The following paragraphs illustrate the damaging consequences of such a policy by taking the example of the Mediterranean region.¶ Following the recent “Blue Plan” [2], the total available natural water resources (1), based on the statistics from 1990 to 1998, in the principle countries of the Mediterranean region, are as shown in Table 2.¶ The projected demands (3) for the year 2025 [31] are also included in Table 1.¶ It is obvious that available natural water resources would rather decrease in 2025 because of increased pollution, over exploitation and other human activities. However, to keep matters simple, it would be supposed that they would remain at the same level as in 1998.¶ It can be observed that, in 2025, the total projected water deficit (balance) in the Mediterranean region would of the order of 294 km3/per year.¶ Not all this required capacity would be met by desalination plants. Current contribution of desalination is of the order of 1 to 2 %. If it is supposed that in 2025, this contribution would be about 2.5 %, then the total required desalting capacity would be 7.3 km3/year (20.1 million m3/day).¶ According to the EC ExternE study2, the total emissions of GHG per MW(e).h of electricity produced by representative fossil fuelled power plants in France, are as presented in Table 3.¶ The specific heat and electricity consumptions of three main desalination plants are given in Table 4, [3].¶ The data presented in the above Tables allows to calculate the approximate3 total GHG emissions produced by the fossil fuelled plants and the three desalination plants.¶ Results for a total desalting capacity of 20.1 million m3/day are presented in Table 5.¶ It can thus be concluded that **for a desalting capacity of 20.1 million m3/day in the Mediterranean region alone, required in 2025, one would produce**, depending upon the energy source and the desalination process used,¶ 13 to **264 million tonnes/year of CO2**.¶ 1350 to **1 310 000 tonnes/year of SOx**.¶ 21 100 to **540 000 tonnes/year of NOx**.¶ 1190 to **40 000 tonnes/year of particles**.¶ The potential levels of GHG and particle emissions on the world scale could then be more than double these figures.¶ **These could naturally be avoided through the use of nuclear energy**.

#### Food price volatility irrelevant - stats prove

Barrett & Bellemare ’11

(Chris is a distinguished professor economics at Cornell and Marc is assistant professor of public policy at Duke, “Why Food Price Volatility Doesn’t Matter,” July 12th) <http://www.foreignaffairs.com/articles/67981/christopher-b-barrett-and-marc-f-bellemare/why-food-price-volatility-doesnt-matter>

Since volatile food prices do not necessarily harm poor consumers, it does not make sense to blame volatility for increased poverty or political unrest. In a recent [statistical analysis](http://marcfbellemare.com/wordpress/wp-content/uploads/2011/07/BellemareFoodPricesJune2011.pdf), the FAO [food price](http://en.wikipedia.org/wiki/2007%E2%80%932008_world_food_price_crisis) index and an indicator of political unrest were positively correlated. But a measure of food price volatility and political unrest had a strong negative correlation. Although the food price spikes that occurred in the late spring and early summer of 2008, at the end of 2010, and at the beginning of 2011 coincided with political unrest, increases in food price volatility more commonly occurs after, not before, patches of political unrest. So, although commentators and politicians frequently blame food price volatility for human suffering and political unrest, they are either misunderstanding or misrepresenting the problem. Perhaps not coincidentally, their emphasis on tempering price volatility favors the same large farmers who already enjoy tremendous financial support from G-20 governments.

### 2ac- K

**Our knowledge of China is accurate—their authors have flawed information**

**Chan 4**—PhD in Political Science from Minnesota U, Professor and Chair of the Department of Political Science at Colorado U at Boulder (Steve, Asian Affairs, Vol 31, No. 3 (Fall, 2004), “Extended Deterrence in the Taiwan Strait: Learning from Rationalist Explanations in International Relations”, JSTOR, <http://www.jstor.org/stable/30172621>, p. 167, RBatra)

Rationalist interpretations do not imply that people are omnipotent in their ability to procure and process information. We know all too well that people are subject to a variety of cognitive and perceptual errors (for example, Jervis 1976; Levy 1997; Kahneman and Tversky 2000; Tversky and Kahneman 1977). This recognition of limits to rationality, however, hardly warrants general attributions of naiveté , even stupidity, to government leaders. On the contrary, it seems sensible to start from the premise that **officials know their counterparts far better than scholars may wish to acknowledge. Washington, Beijing, and Taipei, for instance, invest enormous time, effort, and resources in trying to gain an accurate understanding of each other. Academics have a hard time claiming any special insight or unique source of wisdom, whether it is based on mastery of the other side's language, intimate familiarity with its culture, or access to timely and sensitive information with restricted distribution. If anything, they are usually at a considerable disadvantage on these scores when compared to diplomats, intelligence analysts, and even journalists** and business people. **Indeed, academics in fields such as history and political science typically operate in the realm of common knowledge, outdated information, and mundane data**. This confession in turn implies that at least for some of us, our individual and collective forte lies with the analysis of persistent empirical patterns and the formulation of general models of foreign policy conduct.

**Only the permutation solves --- rigid rejection of “China threat” gets warped into a new orthodoxy and fuels extremism. Recognizing plural interpretations and linkages is more productive.**

**Callahan 5** (William A., Professor of Politics – University of Manchester, “How to Understand China: The Dangers and Opportunities of Being a Rising Power”, Review of International Studies, 31)

Although ‘China threat theory’ is ascribed to the Cold War thinking of foreigners who suffer from an enemy deprivation syndrome, the use of containment as a response to threats in Chinese texts suggests that Chinese strategists are also seeking to fill the symbolic gap left by the collapse of the Soviet Union, which was the key threat to the PRC after 1960. **Refutations of ‘China threat theory**’ do not seek to deconstruct the discourse of ‘threat’ as part of critical security studies. Rather they **are expressions of a geopolitical identity politics because they refute ‘Chinese’ threats as a way of facilitating the production of an America threat**, a Japan threat, an India threat, and so on. Uniting to fight these foreign threats affirms China’s national identity. Unfortunately, **by refuting China threat in this** bellicose **way** – that is by generating a new series of threats – **the China threat theory** texts **end up confirming the threat that they seek to deny**: Japan, India and Southeast Asia are increasingly threatened by China’s protests of peace.43 Moreover, the estrangement produced and circulated in China threat theory is not just among nation-states. The recent shift in the focus of the discourse from security issues to more economic and cultural issues suggests that China is estranged from the ‘international standards’ of the ‘international community’. After a long process of difficult negotiations, China entered the WTO in December 2001. Joining the WTO was not just an economic or a political event; it was an issue of Chinese identity.44 As Breslin, Shih and Zha describe in their articles in this Forum, this process was painful for China as WTO membership subjects the PRC to binding rules that are not the product of Chinese diplomacy or culture. Thus although China enters international organisations like the WTO based on shared values and rules, China also needs to distinguish itself from the undifferentiated mass of the globalised world. Since 2002, a large proportion of the China threat theory articles have been published in economics, trade, investment, and general business journals – rather than in international politics, area studies and ideological journals as in the 1990s. Hence China threat theory is one way to differentiate China from these international standards, which critics see as neo-colonial.45 Another way is for China to assert ownership over international standards to affirm its national identity through participation in globalisation.46 Lastly, some China threat theory articles go beyond criticising the ignorance and bad intentions of the offending texts to conclude that those who promote China threat must be crazy: ‘There is a consensus within mainland academic circles that there is hardly any reasonable logic to explain the views and practices of the United States toward China in the past few years. It can only be summed up in a word: ‘‘Madness’’ ’.47 Indians likewise are said to suffer from a ‘China threat theory syndrome’.48 This brings us back to Foucault’s logic of ‘rationality’ being constructed through the exclusion of a range of activities that are labelled as ‘madness’. The rationality of the rise of China depends upon distinguishing it from the madness of those who question it. **Like** Joseph Nye’s **concern** **that warnings of a China threat could become a self-fulfilling prophesy, China threat theory** texts vigorously **reproduce the dangers of the very threat they seek to deny**. Rather than adding to the debate, they end up policing what Chinese and foreigners can rationally say. Conclusion The argument of this essay is not that China is a threat. Rather, it has examined the productive linkages that knit together the image of China as a peacefully rising power and the discourse of China as a threat to the economic and military stability of East Asia. It would be easy to join the chorus of those who denounce ‘China threat theory’ as the misguided product of the Blue Team, as do many in China and the West. But that would be a mistake, because depending on circumstances anything – from rising powers to civilian aircraft – can be interpreted as a threat. The purpose is not to argue that interpretations are false in relation to some reality (such as that China is fundamentally peaceful rather than war-like), but that it is necessary to unpack the political and historical context of each perception of thre**at**. Indeed, ‘China threat’ has never described a unified American understanding of the PRC: it has always been one position among many in debates among academics, public intellectuals and policymakers. **Rather than inflate extremist positions** (in both the West and China) into irrefutable truth, **it is more interesting to examine the debates that produced the threat/opportunity dynamic**.

**AND PAN HIMSELF ADMITS THAT CHINA THREAT CONSTRUCTION IS INEVITABLE AND REFLEXIVELY BASED ON CHINESE STATE BEHAVIOUR.**

**Moran 2k11**

[lee, pride of the fleet: china’ first aircraft carrier…”, <http://www.dailymail.co.uk/news/article-2024425/Chinas-aircraft-carrier-takes-seas--fuelling-fears-countrys-military-strength.html>]

The official state **Xinhua news agency** **added**: 'Building a strong navy that is commensurate with **China's rising status is a necessary step and an inevitable choice for the country** to safeguard its increasingly globalised national interests.'¶ But **Chengxin Pan, an expert on China at Deakin University in Australia, warned it could unsettle neighbouring countries.**¶ He said: 'For many neighbours, it may symbolise something different and more unsettling.¶ **'It is inevitable that neighbouring countries will react with some alarm, especially given recent disputes in the South China Sea** as well as the maritime incident between China and Japan last year.'¶ Refitting and test work will now continue on the carrier.¶ The Varyag, yet to be officially renamed, was towed from Ukraine in 2001 as an empty shell without engines, weapons systems or other crucial equipment.¶ Ashley Townshend, at the Lowy Institute for International Policy in Sydney, said China would need at least three carriers if it was 'serious' about having a viable carrier strike group.¶ He also said that it would have to develop support ships and aircraft for any carrier group, which could take ten years.¶ China's neighbours India and Thailand already have aircraft carriers, and Australia has ordered two multi-purpose carriers. The United States operates 11.¶ The former chief of the Philippine's navy Admiral Ferdinand Golez said his country should not be worried by the development. He said: 'The Philippines should not be concerned with this development.¶ 'An aircraft carrier is an offensive tool but I don't think China has the intention to use it to bully its neighbours.'¶ Before the launch, a Pentagon spokesman played down the likelihood of any immediate leaps from China's carrier programme. ¶ But that is just one part of China's naval modernisation drive, which has forged ahead while other powers tighten their military budgets to cope with debt woes. ¶ China has been building new submarines, surface ships and anti-ship ballistic missiles as part of its naval modernisation, which has triggered regional jitters that have fed into long-standing territorial disputes, and could speed up military expansion across Asia.¶ In the past year, China has had run-ins at sea with Japan, Vietnam and the Philippines. The incidents - boat crashes and charges of territorial incursions - have been minor, but the diplomatic reaction often heated. ¶ Chengxin **Pan added: 'Overall, the perception of a rapidly rising and potentially threatening China is likely to be reinforced and Beijing will face enormous challenges in dispelling such a perception.**'

**Problem-solution impact is backwards---acting with a flawed epistemology allows us to change that epistemology.**

**Harris 7** (Graham, Adjunct Prf. @ Centre for Environment University of Tasmania, Seeking Sustainability in an age of complexity p. 9-10)

1 am not going to address the global 'litany' at length here. The arguments have been well made by others, especially and most elegantly by E. O. Wilson. What 1 wish to address here is the question: 'Can we grasp the complexity of it all and, if so, what do we do about it?' Given the fundamental nature of the problem the destruction of the biosphere and its ecosystem ser- vices together with the huge changes going on in human societies and cultures driven by globalisation and technological change the precautionary principle would suggest that even if the epistemology is flawed, the data are partial and the evidence is shaky, we should pay attention to the little we know and do whatever is possible to mitigate the situation even if we fundamentally disagree about the means and the ends. The only ethical course of action is, as John Ral- ston Saul writes," based on 'a sense of the other and of inclusive responsibility'. We know enough to act. Ethics is about uncertainty, doubt, system thinking and balancing difficult choices. It is about confronting the evidence**.** Over the past two or three decades, as there has been an increasing appre- ciation of the importance of good environmental management, and as western societies have become more open and the ICT revolution has made informa- tion much more widely available there has been a growing debate between the worlds of science, industry, government and the community around environ- mental ethics and environmental issues and their management. During this period new knowledge has been gained, ideas have changed (sometimes quite fundamentally) and there have been huge changes in government and social institutions and policies. We are all on a recursive journey together: we are lit- erally 'making it up as we go along'. This is not easy and there are no optimal solutions. This is an adaptive process requiring feedback from all parts of the system. Yes, there will be surprises. This is why it is so important that when we act we constantly reflect on what we know and what we are doing about it and where it is all going. As we reach the physical limits of the global biosphere the values we place on things are changing and must change further. A new environmental ethic is required, one that is less instrumental and more embracing. Traditionally there has tended to be a schism between those who take an anthropocentric view (that the world is there for us to use) and those who take the non-anthropocentric view (those who value nature in its own right). Orthodox anthropocentrisni dictates that non-human value is instrumental to human needs and interests. In contrast, non-anthropocentrics take an objectivist view and value nature intrinsically; some may consider the source of value in non-human nature to be independent of human consciousness.45 What is required is a more complex and systems view of ethics which finds a middle ground between the instrumentalist and objectivist views. Norton '46 for example, proposes an alternative and more complex theory of value - a universal Earth ethic - which values processes and dynamics as well as entities and takes an adaptive management view of changing system properties. For sustainable development to occur, choices about values will remain within the human sphere but we should no longer regard human preferences as the only criterion of moral significance. 'Humans and the planet have entwined destinies"' and this will be increasingly true in many and complex ways as we move forward. There are calls for an Earth ethic beyond the land ethic of Aldo Leopold.45 The science of ecology is being drawn into the web .49 Ecologists are becoming more socially and culturally aware and engaged" and the 'very doing' of ecology is becoming more ethical.tm' Some scientists are beginning to see themselves more as agents in relationships with society and less as observers.

**Paradigm wars are useless – combining epistemologies is key to intellectual and political progress. Only the perm solves.**

David A. **Lake. 2011**. Jerri-Ann and Gary E. Jacobs Professor of Social Sciences and Distinguished Professor of Political Science at the University of California, San Diego. Why “isms” are Evil: Theory, Epistemology, and Academic Sects as Impediments to Understanding and Progress. International Studies Quarterly 55, 465-480.

As I began, our task as scholars is to understand better the world in which we live. Our privileged position as scholars in society rests upon this goal, or at least its pursuit. **We do not produce understanding by ﬁghting theological wars between ourselves at either the theoretical or epistemological levels.** Rather, **we achieve understanding by asking questions about important phenomena that we do not now understand well, employing appropriate theories to answer these questions, and then being honest with ourselves and others about the strengths and weaknesses of the evidence we have been able to bring to bear**. Today, **no single theoretical or epistemological approach deserves hegemony. Diversity of theory and method is necessary, at least at this stage of our intellectual development**. Intellectual monocultures are rightfully feared. But the current cacophony is not what we should aspire to. **Rather than useful debate we have turned inward to self-contained research traditions and epistemologies** and, in turn, we focus on ﬁrst principles. **Intellectual progress does not come from proclaiming ever more loudly the superiority of one’s approach to audiences who have stopped listening. Let’s end the theological crusades and seek progress in understanding real problems of world politics**. Perhaps then we will earn the privileges society has accorded us.

## 1AR

### At Nat Gas

**New nuclear is cheaper than gas even at present prices**

**Conca 12**

James, Forbes, 8/11, "Nuclear Waste Confidence -- NRC Ruling No Big Deal", [www.forbes.com/sites/jamesconca/2012/08/11/nuclear-waste-confidence-nrc-ruling-no-big-deal/print/](http://www.forbes.com/sites/jamesconca/2012/08/11/nuclear-waste-confidence-nrc-ruling-no-big-deal/print/)

**Huh? Re-licensing nuclear reactors is the** absolute **cheapest form of energy**, about 2¢/kWhr for 20 years. **They are obviously referring to new natural gas plants versus new nuclear** GenIII **plants which is not impacted by this ruling at all. New nuclear is actually cheaper than new gas in the long run**, e.g., 20 years or more, **even at present gas prices**, but our society doesn’t like to plan for the long-term so it usually gets these things wrong. And **why anyone thinks gas plants are environmentally preferable to nuclear is odd from a carbon-emissions standpoint**.

**Popular**

#### SMRs are popular – there is only 1 vote against it and both parties cosponsor the plan – that’s Pendidikan 11

**Bipart support for SMR’s in Congress**

**E&E News 9-24**

“DOE Funding for Small Reactors Languishes as Parties Clash on Debt,” <http://www.eenews.net/public/Greenwire/2012/09/24/3>

Some of the nation's largest nuclear power companies are anxious to hear whether they will get a share of a $452 million pot from the Department of Energy for a new breed of reactors that the industry has labeled as a way to lessen the safety risks and construction costs of new nuclear power plants.¶ The grant program for these "small modular reactors," which was announced in January, would mark the official start of a major U.S. foray into the technology even as rising construction costs -- especially when compared to natural-gas-burning plants -- cause many power companies to shy away from nuclear plants.¶ DOE received four bids before the May 21 deadline from veteran reactor designers Westinghouse Electric Co. and Babcock & Wilcox Co., as well as relative newcomers Holtec International Inc. and NuScale Power LLC. Now the summer has ended with no announcement from DOE, even though the agency said it would name the winners two months ago.¶ As the self-imposed deadline passed, companies started hearing murmurs that a decision could come in September, or perhaps at the end of the year. To observers within the industry, it seems that election-year calculations may have sidelined the contest.¶ "The rumors are a'flying," said Paul Genoa, director of policy development at the Nuclear Energy Institute, in an interview last week. "All we can imagine is that this is now caught up in politics, and the campaign has to decide whether these things are good for them to announce, and how**."¶ Small modular reactors do not seem to be lacking in political support. The nuclear lobby** has historically **courted both Democrats and Republicans and** still **sees itself as being in a strong position with key appropriators on both sides of the aisle**.¶ Likewise, **top energy officials in the Obama administration have hailed the promise of the new reactors, and they haven't shown any signs of a change of heart.** DOE spokeswoman Jen Stutsman said last week that the department is still reviewing applications, but she did not say when a decision will be made.¶ "This is an important multiyear research and development effort, and we want to make sure we take the time during the review process to get the decision right," she wrote in an email.¶ That the grants haven't been given out during a taut campaign season, even as President Obama announces agency actions ranging from trade cases to creating new national monuments to make the case for his re-election, may be a sign that the reactors are ensnared in a broader feud over energy spending.¶ Grant recipients would develop reactor designs with an eye toward eventually turning those into pilot projects -- and the loan guarantees that these first-of-a-kind nuclear plants are using today to get financing would be blocked under the "No More Solyndras" bill that passed the House last week (Greenwire, Sept. 14).

#### SMR incentives are bipartisan---recent bills prove

King et al 11

Marcus, Associate Director of Research at The George Washington University's Elliott School of International Affairs, with a concurrent appointment as Associate Research Professor of International Affairs, LaVar Huntzinger and Thoi Nguyen, "Feasibility of Nuclear Power on U.S. Military Installations", March, www.cna.org/sites/default/files/research/Nuclear Power on Military Installations D0023932 A5.pdf

Favorable public perception has contributed to bipartisan congressional interest in building new nuclear capacity. Congress has introduced several bills that provide funding for new nuclear research and incentives for the nuclear industry. The Enabling the Nuclear Renaissance Act (ENRA) under consideration by the Senate contains many of the nuclear provisions found in previously introduced bills. In the area of small reactor technology, the legislation directs the Department of Energy (DOE) to develop a 50 percent cost-sharing program with industry, and it provides government funding at the rate of $100 million per year for 10 years. The bill also calls for the establishment of a program office within DOE to manage community led initiatives to develop “energy parks” on former DOE sites. The energy parks may include nuclear power plants [11

### DOD Shields

#### DOD energy programs don’t link---conservative won’t oppose

Davenport 12

Coral Davenport, energy and environment correspondent for National Journal. Prior to joining National Journal in 2010, Davenport covered energy and environment for Politico, and before that, for Congressional Quarterly. In 2010, she was a fellow with the Metcalf Institute for Marine and Environmental Reporting. From 2001 to 2004, Davenport worked in Athens, Greece, as a correspondent for numerous publications, including the Christian Science Monitor and USA Today, covering politics, economics, international relations and terrorism in southeastern Europe. She also covered the 2004 Olympic Games in Athens, and was a contributing writer to the Fodor’s, Time Out, Eyewitness and Funseekers’ guidebook series. Davenport started her journalism career at the Daily Hampshire Gazette in Northampton, Massachusetts, after graduating from Smith College with a degree in English literature. National Journal, 2/10/12, White House Budget to Expand Clean-Energy Programs Through Pentagon, ProQuest

The White House believes it has figured out **how to get more money for clean-energy** programs touted by President Obama **without having it become political roadkill** in the wake of the Solyndra controversy: **Put it in the Pentagon**. While details are thin on the ground, **lawmakers who work on both energy- and defense-spending** policy **believe the fiscal 2013 budget** request to be delivered to Congress on Monday probably **won't include** big **increases** for wind and solar power **through the Energy Department, a** major target for Republicans since solar-panel maker Solyndra defaulted last year on a $535 million loan guarantee. But **they** do **expect to see increases in spending on alternative energy in** the **Defense** Department, such as programs to replace traditional jet fuel with biofuels, supply troops on the front lines with solar-powered electronic equipment, build hybrid-engine tanks and aircraft carriers, and increase renewable-energy use on military bases. **While Republicans will** instantly **shoot down requests for fresh spending on Energy Department programs that could be likened to** the one that funded **Solyndra**, **many support** **alternative-energy programs for the military**. "I do expect to see the spending," said Rep. Jack Kingston, R-Ga., a member of the House Defense Appropriations Subcommittee, when asked about increased investment in alternative-energy programs at the Pentagon. "I think in the past three to five years this has been going on, but that it has grown as a culture and a practice - and it's a good thing." "If Israel attacks Iran, and we have to go to war - and the Straits of Hormuz are closed for a week or a month and the price of fuel is going to be high," Kingston said, "the question is, in the military, what do you replace it with? It's not something you just do for the ozone. It's strategic." Sen. **Lindsey Graham**, R-S.C., who sits on both the Senate Armed Services Committee and the Defense Appropriations Subcommittee, **said, "I don't see what they're doing in DOD as being Solyndra**." "We're not talking about putting $500 million into a goofy idea," Graham told National Journal . "We're talking about taking applications of technologies that work and expanding them. I wouldn't be for DOD having a bunch of money to play around with renewable technologies that have no hope. But from what I understand, there are renewables out there that already work." A senior House Democrat noted that **this wouldn't be the first time** that **the Pentagon has been utilized to advance policies that wouldn't otherwise be supported**. "They did it in the '90s with medical research," said Rep. Henry Waxman, D-Calif., ranking member of the House Energy and Commerce Committee. In 1993, when funding was frozen for breast-cancer research programs in the National Institutes of Health, Congress boosted the Pentagon's budget for breast-cancer research - to more than double that of the health agency's funding in that area. **Politically, the strategy makes sense**. **Republicans are ready to fire at the first sign of any pet Obama program, and renewable programs at the Energy Department are an exceptionally ripe target**. That's because of Solyndra, but also because, in the last two years, the Energy Department received a massive $40 billion infusion in funding for clean-energy programs from the stimulus law, a signature Obama policy. When that money runs out this year, a request for more on top of it would be met with flat-out derision from most congressional Republicans. **Increasing renewable-energy initiatives at the Pentagon can** also **help Obama advance his** broader, national **goals** for transitioning the U.S. economy from fossil fuels to alternative sources. As the largest industrial consumer of energy in the world, the U.S. military can have a significant impact on energy markets - if it demands significant amounts of energy from alternative sources, it could help scale up production and ramp down prices for clean energy on the commercial market. Obama acknowledged those impacts in a speech last month at the Buckley Air Force Base in Colorado. "The Navy is going to purchase enough clean-energy capacity to power a quarter of a million homes a year. And it won't cost taxpayers a dime," Obama said. "What does it mean? It means that the world's largest consumer of energy - the Department of Defense - is making one of the largest commitments to clean energy in history," the president added. "That will grow this market, it will strengthen our energy security." Experts also hope that Pentagon engagement in clean-energy technology could help yield breakthroughs with commercial applications. Kingston acknowledged that the upfront costs for alternative fuels are higher than for conventional oil and gasoline. For example, the Air Force has pursued contracts to purchase biofuels made from algae and camelina, a grass-like plant, but those fuels can cost up to $150 a barrel, compared to oil, which is lately going for around $100 a barrel. Fuel-efficient hybrid tanks can cost $1 million more than conventional tanks - although in the long run they can help lessen the military's oil dependence, Kingston said Republicans recognize that the up-front cost can yield a payoff later. "It wouldn't be dead on arrival. But we'd need to see a two- to three-year payoff on the investment," Kingston said. Military officials - particularly Navy Secretary Ray Mabus, who has made alternative energy a cornerstone of his tenure - have been telling Congress for years that the military's dependence on fossil fuels puts the troops - and the nation's security - at risk. Mabus has focused on meeting an ambitious mandate from a 2007 law to supply 25 percent of the military's electricity from renewable power sources by 2025. (Obama has tried and failed to pass a similar national mandate.) Last June, the **DOD rolled out its first department-wide energy policy to coalesce alternative and energy-efficient initiatives across the military services**. In January, the department announced that a study of military installations in the western United States found four California desert bases suitable to produce enough solar energy - 7,000 megawatts - to match seven nuclear power plants. And so far, those **moves have met with approval from congressional Republicans**. Even so, any request for new Pentagon spending will be met with greater scrutiny this year. The Pentagon's budget is already under a microscope, due to $500 billion in automatic cuts to defense spending slated to take effect in 2013. But **even with** those **challenges**, **clean-energy spending** probably **won't stand out** as much **in** the **military budget as it would in the Energy Department budget**. Despite its name, the Energy Department has traditionally had little to do with energy policy - its chief portfolio is maintaining the nation's nuclear weapons arsenal. Without the stimulus money, last year only $1.9 billion of Energy's $32 billion budget went to clean-energy programs. A spending increase of just $1 billion would make a big difference in the agency's bottom line. But **it would** probably **be easier to tuck another** $1 billion or $**2 billion** **on clean-energy spending into the Pentagon's $518 billion budget**. **Last year**, **the Pentagon spent** about $**1 billion on renewable energy** and energy-efficiency programs across its departments.

### Lobbies

#### Nuke lobbies will rally behind the plan - guarantees bipartisan support because they control key congressional leadership spots - that’s Samuelsohn ‘11

#### That outweighs their links

Squassoni ‘12

[Sharon Squassoni serves as director and senior fellow of the Proliferation Prevention Program at CSIS. Prior to joining CSIS, Ms. Squassoni was a senior associate in the Nuclear Nonproliferation Program at the Carnegie Endowment for International Peace. From 2002-2007, Ms. Squassoni advised Congress as a senior specialist in weapons of mass destruction at the Congressional Research Service. “The Future of Nuclear Power in the US.” Federation of American Scientists, February 2012. ETB]

Concerns about contamination of the soil and water by radioactivity lay relatively dormant in recent years because of the strong support of the U.S. government for nuclear power and the portrayal of nuclear energy as “clean, green and secure.” Marketing campaigns by the Nuclear Energy Institute (NEI) portraying nuclear energy as “clean air” energy and by the NEI-funded the Clean and Safe Energy Coalition were likely influential.16 On the whole, opponents of nuclear energy generally have had less money to spend on media campaigns, and their message is less pithy. ey have stressed that nuclear power is not the solution to climate change and that it is dangerous, polluting, unsafe, and expensive. The accident at Fukushima returned safety and waste concerns to headline news. Shortly after the accident, a Gallup poll showed 44 percent of the public in favor (in contrast to 59 percent the previous year) and 47 percent opposing nuclear power.17 Figure 6 below shows the results of a Pew Research Center poll conducted about a week after Fukushima.18

### PC Not Key

**Biden outweighs**

**Hirsh 12-31**

Michael is Chief Correspondent for the Atlantic, “Joe Biden: The Most Influential Vice President in History,”

Now, if Barack Obama does leave a lasting legacy on gun violence that comes out of the terrible tragedy in Newtown, Conn., Biden will be a big part of it. And **if anything like an agreement is reached on fiscal issues, Biden is likely to be part of that as well. His long** Senate **tenure, and** the **many relationships he developed across the aisle, are** once again proving **crucial**. As I reported in the fall of 2010, shortly before the looming congressional election that gave the Republicans -- and the Tea Party -- the House, **no one has more experience working with the other party**, reaching across the aisle, and that talent may be critical to just keeping the government going in the coming months.¶ "He can sit down in foreign policy or other issues and find a common interest and drive the ideas forward. **Look at what he did with Jesse Helms and Strom Thurmond" in passing the chemical weapons treaty and crime bills**, respectively, in the 1990s, his former chief of staff (and later successor), Ted Kaufman, noted back then. "I mean, Jesse Helms and Strom Thurmond! You don't get more conservative than that."¶ Actually, you do, as the current breed of Republicans has demonstrated in this era. But if anyone can talk to Mitch McConnell, it's Joe Biden. Whose stock is still rising steadily.

# Round 3 v KU DH

## 1AC

### Plan

#### The United States Department of Defense should procure small modular reactors for the use of military bases in the United States.

### 1ac- Grid Adv

#### Grid disruptions are inevitable - only SMR’s can solve

Robitaille 12

(George, Department of Army Civilian, United States Army War College, “Small Modular Reactors: The Army’s Secure Source of Energy?” 21-03-2012, Strategy Research Project)

In recent years, the U.S Department of Defense (DoD) has identified a security issue at our installations related to the dependence on the civilian electrical grid. 1 The DoD depends on a steady source of electricity at military facilities to perform the functions that secure our nation. The flow of electricity into military facilities is controlled by a public grid system that is susceptible to being compromised because of the age of the infrastructure, damage from natural disasters and the potential for cyber attacks. Although most major functions at military installations employ diesel powered generators as temporary backup, the public grid may not be available to provide electricity when it is needed the most. The United States electrical infrastructure system is prone to failures and susceptible to terrorist attacks. 2 It is critical that the source of electricity for our installations is reliable and secure. In order to ensure that our military facilities possess a secure source of electricity, either the public system of electric generation and distribution is upgraded to increase its reliability as well as reducing its susceptibility to cyber attack or another source of electricity should be pursued. Although significant investments are being made to upgrade the electric grid, the current investment levels are not keeping up with the aging system. Small modular reactors (SMRs) are nuclear reactors that are about an order of magnitude smaller than traditional commercial reactor used in the United States. SMRs are capable of generating electricity and at the same time, they are not a significant contributor to global warming because of green house gas emissions. The DoD needs to look at small modular nuclear reactors (SMRs) to determine if they can provide a safe and secure source of electricity. Electrical Grid Susceptibility to Disruptions According to a recent report by the Defense Science Board, the DoD gets ninety nine percent of their electrical requirements from the civilian electric grid. 3 The electric grid, as it is currently configured and envisioned to operate for the foreseeable future, may not be reliable enough to ensure an uninterrupted flow of electricity for our critical military facilities given the influences of the aging infrastructure, its susceptibility to severe weather events, and the potential for cyber attacks. The DoD dependency on the grid is reflected in the $4.01 Billion spent on facilities energy in fiscal year 2010, the latest year which data was available. 4 The electricity used by military installations amounts to $3.76 billion. 5 As stated earlier, the DoD relies on the commercial grid to provide a secure source of energy to support the operations that ensure the security of our nation and it may not be available when we need it. The system could be taken down for extended periods of time by failure of aging components, acts of nature, or intentionally by cyber attacks. Aging Infrastructure. The U.S electric power grid is made up of independently owned power plants and transmission lines. The political and environmental resistance to building new electric generating power plants combined with the rise in consumption and aging infrastructure increases the potential for grid failure in the future. There are components in the U.S. electric grid that are over one hundred years old and some of the recent outages such as the 2006 New York blackout can be directly attributed to this out of date, aging infrastructure. 6 Many of the components of this system are at or exceeding their operational life and the general trend of the utility companies is to not replace power lines and other equipment until they fail. 7 The government led deregulation of the electric utility industry that started in the mid 1970s has contributed to a three decade long deterioration of the electric grid and an increased state of instability. Although significant investments are being made to upgrade the electric grid, the many years of prior neglect will require a considerable amount of time and funding to bring the aging infrastructure up to date. Furthermore, the current investment levels to upgrade the grid are not keeping up with the aging system. 8 In addition, upgrades to the digital infrastructure which were done to increase the systems efficiency and reliability, have actually made the system more susceptible to cyber attacks. 9 Because of the aging infrastructure and the impacts related to weather, the extent, as well as frequency of failures is expected to increase in the future. Adverse Weather. According to a 2008 grid reliability report by the Edison Electric Institute, sixty seven per cent of all power outages are related to weather. Specifically, lightning contributed six percent, while adverse weather provided thirty one percent and vegetation thirty percent (which was predominantly attributed to wind blowing vegetation into contact with utility lines) of the power outages. 10 In 1998 a falling tree limb damaged a transformer near the Bonneville Dam in Oregon, causing a cascade of related black-outs across eight western states. 11 In August of 2003 the lights went out in the biggest blackout in North America, plunging over fifty million people into darkness over eight states and two Canadian provinces. Most areas did not have power restored four or five days. In addition, drinking water had to be distributed by the National Guard when water pumping stations and/or purification processes failed. The estimated economic losses associated with this incident were about five billion dollars. Furthermore, this incident also affected the operations of twenty two nuclear plants in the United States and Canada. 12 In 2008, Hurricane Ike caused approximately seven and a half million customers to lose power in the United States from Texas to New York. 13 The electric grid suffered numerous power outages every year throughout the United States and the number of outages is expected to increase as the infrastructure ages without sufficient upgrades and weather-related impacts continue to become more frequent. Cyber Attacks. The civilian grid is made up of three unique electric networks which cover the East, West and Texas with approximately one hundred eighty seven thousand miles of power lines. There are several weaknesses in the electrical distribution infrastructure system that could compromise the flow of electricity to military facilities. The flow of energy in the network lines as well as the main distribution hubs has become totally dependent on computers and internet-based communications. Although the digital infrastructure makes the grid more efficient, it also makes it more susceptible to cyber attacks. Admiral Mr. Dennis C. Blair (ret.), the former Director of National Intelligence, testified before Congress that “the growing connectivity between information systems, the Internet, and other infrastructures creates opportunities for attackers to disrupt telecommunications, electrical power, energy pipelines, refineries, financial networks, and other critical infrastructures. 14 ” The Intelligence Community assesses that a number of nations already have the technical capability to conduct such attacks. 15 In the 2009 report, Annual Threat Assessment of the Intelligence Community for the Senate Armed Services Committee, Adm. Blair stated that “Threats to cyberspace pose one of the most serious economic and national security challenges of the 21st Century for the United States and our allies.”16 In addition, the report highlights a growing array of state and non-state actors that are targeting the U.S. critical infrastructure for the purpose of creating chaos that will subsequently produce detrimental effects on citizens, commerce, and government operations. These actors have the ability to compromise, steal, change, or completely destroy information through their detrimental activities on the internet. 17 In January 2008, US Central Intelligence Agency senior analyst Tom Donahue told a gathering of three hundred international security managers from electric, water, oil & gas, and other critical industry, that data was available from multiple regions outside the United States, which documents cyber intrusions into utilities. In at least one case (outside the U.S.), the disruption caused a power outage affecting multiple cities. Mr. Donahue did not specify who executed these attacks or why, but did state that all the intrusions were conducted via the Internet. 18 During the past twenty years, advances in computer technologies have permeated and advanced all aspects of our lives. Although the digital infrastructure is being increasingly merged with the power grid to make it more efficient and reliable, it also makes it more vulnerable to cyber attack. In October 2006, a foreign hacker invaded the Harrisburg, PA., water filtration system and planted malware. 19 In June 2008, the Hatch nuclear power plant in Georgia shut down for two days after an engineer loaded a software update for a business network that also rebooted the plant's power control system. In April 2009, The Wall Street Journal reported that cyber spies had infiltrated the U.S. electric grid and left behind software that could be used to disrupt the system. The hackers came from China, Russia and other nations and were on a “fishing expedition” to map out the system. 20 According to the secretary of Homeland Security, Janet Napolitano at an event on 28 October 2011, cyber–attacks have come close to compromising the country’s critical infrastructure on multiple occasions. 21 Furthermore, during FY11, the United States Computer Emergency Readiness Team took action on more than one hundred thousand incident reports by releasing more than five thousand actionable cyber security alerts and information products. 22 The interdependence of modern infrastructures and digital based systems makes any cyber attacks on the U.S. electric grid potentially significant. The December 2008 report by the Commission on Cyber Security for the forty fourth Presidency states the challenge plainly: “America’s failure to protect cyberspace is one of the most urgent national security problems facing the new administration”. 23 The susceptibility of the grid to being compromised has resulted in a significant amount of resources being allocated to ensuring the systems security. Although a substantial amount of resources are dedicated to protecting the nation’s infrastructure, it may not be enough to ensure the continuous flow of electricity to our critical military facilities. SMRs as they are currently envisioned may be able to provide a secure and independent alternative source of electricity in the event that the public grid is compromised. SMRs may also provide additional DoD benefit by supporting the recent government initiatives related to energy consumption and by circumventing the adverse ramifications associated with building coal or natural gas fired power plants on the environment.\

#### Cyber-attack is coming ---actors are probing grid weaknesses

**Reed 10/11** John, Reports on the frontiers of cyber war and the latest in military technology for Killer Apps at Foreign Policy, "U.S. energy companies victims of potentially destructive cyber intrusions", 2012, killerapps.foreignpolicy.com/posts/2012/10/11/us\_energy\_companies\_victims\_of\_potentially\_destructive\_cyber\_attacks

Foreign actors are probing the networks of key American companies in an attempt to gain control of industrial facilities and transportation systems, Defense Secretary Leon Panetta revealed tonight.¶ "We know that foreign **cyber actors are probing America's critical infrastructure networks**," said Panetta, disclosing previously classified information during a speech in New York laying out the Pentagon's role in protecting the U.S. from cyber attacks. "They are targeting the computer control systems that operate chemical, **electricity** and water plants, and those that guide transportation thorough the country."¶ He went on to say that the U.S. government knows of "specific instances where intruders have gained access" to these systems -- frequently known as Supervisory Control and Data Acquisition (or SCADA) systems -- and that "they are seeking to create advanced tools to attack these systems and cause panic, destruction and even the loss of life," according to an advance copy of his prepared remarks.¶ The secretary said that **a coordinated attack on enough critical infrastructure could be a "cyber Pearl Harbor" that would "cause physical destruction and loss of life, paralyze and shock the nation, and create a profound new sense of vulnerability.**"¶ While there have been reports of criminals using 'spear phishing' email attacks aimed at stealing information about American utilties, Panetta's remarks seemed to suggest more sophisticated, nation-state backed attempts to actually gain control of and damage power-generating equipment. ¶ Panetta's comments regarding the penetration of American utilities echo those of a private sector cyber security expert Killer Apps spoke with last week **who said that the networks of American electric companies were penetrated, perhaps in preparation for a Stuxnet-style attack**.¶ Stuxnet is the famous cyber weapon that infected Iran's uranium-enrichment centrifuges in 2009 and 2010. Stuxnet is believed to have caused some of the machines to spin erratically, thereby destroying them.¶ "**There is hard evidence** that there has been penetration of our power companies, and given Stuxnet, that is a staging step before destruction" of electricity-generating equipment, the expert told Killer Apps. Because uranium centrifuges and power turbines are both spinning machines, "**the attack is identical -- the one to take out the centrifuges and the one to take out our power systems is the same attack**."¶ "If a centrifuge running at the wrong speed can blow apart" so can a power generator, said the expert. "If you do, in fact, spin them at the wrong speeds, you can blow up any rotating device."¶ Cyber security expert Eugene Kaspersky said two weeks ago that one of his greatest fears is someone reverse-engineering a sophisticated cyber weapon like Stuxnet **-- a relatively easy task** -- and he noted that Stuxnet itself passed through power plants on its way to Iran. "Stuxnet infected thousands of computer systems all around the globe, I know there were power plants infected by Stuxnet very far away from Iran," Kaspersky said.

**Defense doesn’t apply---Stuxnet changed the game**

**Gross 11** Michael Joseph, Vanity Fair contributing editor, he covers topics including politics, technology, and national security, has also written extensively for The New York Times, The Boston Globe, and GQ, attended Williams College, and later studied at Princeton Theological Seminary. After graduating, he wrote speeches for Massachusetts Governor William Weld, “A Declaration of Cyber-War”, April, http://www.vanityfair.com/culture/features/2011/04/stuxnet-201104?currentPage=all

Regardless of how well it worked, there is no question that Stuxnet is something new under the sun. At the very least, it is a blueprint for a new way of **attacking industrial-control systems**. In the end, the most important thing now publicly known about Stuxnet is that Stuxnet is **now publicly known.** That knowledge is, on the simplest level, a warning: **America’s own critical infrastructure is a sitting target for attacks like this**. That aside, if Stuxnet really did attack Iran’s nuclear program, it could be called the first unattributable act of war. The implications of that concept are confounding. Because cyber-weapons pose an almost **unsolvable problem of sourcing**—who pulled the trigger?—war could evolve into something **more and more like terror**. Cyber-conflict makes military action more like a **never-ending game of uncle**, where the fingers of weaker nations are perpetually bent back. The wars would often be secret, waged by members of anonymous, elite brain trusts, none of whom would ever have to look an enemy in the eye. For people whose lives are connected to the targets, the results could be **as catastrophic as a bombing** **raid, but would be even more disorienting**. People would suffer, but would never be certain whom to blame.¶ **Stuxnet is the Hiroshima of cyber-war**. That is its true significance, and all the speculation about its target and its source should not blind us to that larger reality. **We have crossed a threshold, and there is no turning back**.

#### Small nuclear reactors key to prevent bases from being vulnerable to grid outages- renewables fail and grid shutdown triggers nuclear war

Andres and Breetz 11

(Richard B. Andres is Professor of ¶ national Security Strategy at the ¶ national War College and a Senior fellow and energy and environmental ¶ Security and Policy Chair in the Center ¶ for Strategic research, institute for national Strategic Studies, at the national Defense University. Hanna L. Breetz is a doctoral candidate in the Department of Political Science at the Massachusetts institute of technology, “Small Nuclear Reactors ¶ for Military Installations:¶ Capabilities, Costs, and ¶ Technological Implications” Institute for National Strategic Studies, <http://www.ndu.edu/press/lib/pdf/strforum/sf-262.pdf>, SEH)

Grid Vulnerability. DOD is unable to provide its ¶ bases with electricity when the civilian electrical grid is ¶ offline for an extended period of time. Currently, domestic military installations receive 99 percent of their ¶ electricity from the civilian power grid. As explained in a ¶ recent study from the Defense Science Board:¶ DOD’s key problem with electricity is that critical ¶ missions, such as national strategic awareness and ¶ national command authorities, are almost entirely ¶ dependent on the national transmission grid . . . ¶ [which] is fragile, vulnerable, near its capacity ¶ limit, and outside of DOD control. In most cases, ¶ neither the grid nor on-base backup power provides¶ sufficient reliability to ensure continuity of critical ¶ national priority functions and oversight of ¶ strategic missions in the face of a long term (several ¶ months) outage.¶ 7¶ The grid’s fragility was demonstrated during the 2003 ¶ Northeast blackout in which 50 million people in the ¶ United States and Canada lost power, some for up to a ¶ week, when one Ohio utility failed to properly trim trees. ¶ The blackout created cascading disruptions in sewage ¶ systems, gas station pumping, cellular communications, ¶ border check systems, and so forth, and demonstrated the ¶ interdependence of modern infrastructural systems.¶ 8¶ More recently, awareness has been growing that ¶ the grid is also vulnerable to purposive attacks. A report sponsored by the Department of Homeland Security suggests that a coordinated cyberattack on the grid ¶ could result in a third of the country losing power for ¶ a period of weeks or months.¶ 9¶ Cyberattacks on critical ¶ infrastructure are not well understood. It is not clear, for ¶ instance, whether existing terrorist groups might be able ¶ to develop the capability to conduct this type of attack. It ¶ is likely, however, that some nation-states either have or ¶ are working on developing the ability to take down the ¶ U.S. grid. In the event of a war with one of these states, ¶ it is possible, if not likely, that parts of the civilian grid ¶ would cease to function, taking with them military bases ¶ located in affected regions.¶ Government and private organizations are currently ¶ working to secure the grid against attacks; however, it is ¶ not clear that they will be successful. Most military bases ¶ currently have backup power that allows them to function for a period of hours or, at most, a few days on their ¶ own. If power were not restored after this amount of time, ¶ the results could be disastrous. First, military assets taken ¶ offline by the crisis would not be available to help with disaster relief. Second, during an extended blackout, global ¶ military operations could be seriously compromised; this ¶ disruption would be particularly serious if the blackout ¶ was induced during major combat operations. During the ¶ Cold War, this type of event was far less likely because the United States and Soviet Union shared the common understanding that blinding an opponent with a grid blackout could escalate to nuclear war. America’s current opponents, however, may not share this fear or be deterred ¶ by this possibility.¶ In 2008, the Defense Science Board stressed that ¶ DOD should mitigate the electrical grid’s vulnerabilities by turning military installations into “islands” of ¶ energy self-sufficiency.¶ 10¶ The department has made efforts to do so by promoting efficiency programs that ¶ lower power consumption on bases and by constructing ¶ renewable power generation facilities on selected bases. ¶ Unfortunately, these programs will not come close to ¶ reaching the goal of islanding the vast majority of bases. ¶ Even with massive investment in efficiency and renewables, most bases would not be able to function for more ¶ than a few days after the civilian grid went offline. Unlike other alternative sources of energy, small reactors have the potential to solve DOD’s vulnerability to ¶ grid outages. Most bases have relatively light power demands when compared to civilian towns or cities. Small ¶ reactors could easily support bases’ power demands separate from the civilian grid during crises. In some cases, ¶ the reactors could be designed to produce enough power ¶ not only to supply the base, but also to provide critical ¶ services in surrounding towns during long-term outages.¶ Strategically, islanding bases with small reactors ¶ has another benefit. One of the main reasons an enemy ¶ might be willing to risk reprisals by taking down the ¶ U.S. grid during a period of military hostilities would ¶ be to affect ongoing military operations. Without the ¶ lifeline of intelligence, communication, and logistics ¶ provided by U.S. domestic bases, American military operations would be compromised in almost any conceivable contingency. Making bases more resilient to ¶ civilian power outages would reduce the incentive for ¶ an opponent to attack the grid. An opponent might ¶ still attempt to take down the grid for the sake of disrupting civilian systems, but the powerful incentive to ¶ do so in order to win an ongoing battle or war would ¶ be greatly reduced.

**Grid failure wrecks US critical mission operations**

**Stockton 11** Paul, assistant secretary of defense for Homeland Defense and Americas’ Security Affairs, “Ten Years After 9/11: Challenges for the Decade to Come”, <http://www.hsaj.org/?fullarticle=7.2.11>

The cyber threat to the DIB is only part of a much larger challenge to DoD. Potential adversaries are seeking asymmetric means to cripple our force projection, warfighting, and sustainment capabilities, by targeting the critical civilian and defense supporting assets (within the United States and abroad) on which our forces depend. This challenge is not limited to man-made threats; DoD must also execute its mission-essential functions in the face of disruptions caused by naturally occurring hazards.20 Threats and hazards to DoD mission execution include incidents such as earthquakes, naturally occurring pandemics, solar weather events, and industrial accidents, as well as kinetic or virtual attacks by state or non-state actors. Threats can also emanate from insiders with ties to foreign counterintelligence organizations, homegrown terrorists, or individuals with a malicious agenda. From a DoD perspective, this global convergence of unprecedented threats and hazards, and vulnerabilities and consequences, is a particularly problematic reality of the post-Cold War world. Successfully deploying and sustaining our military forces are increasingly a function of interdependent supply chains and privately owned infrastructure within the United States and abroad, including transportation networks, cyber systems, commercial corridors, communications pathways, and energy grids. This infrastructure largely falls outside DoD direct control. Adversary actions to destroy, disrupt, or manipulate this highly vulnerable homeland- and foreign-based infrastructure may be relatively easy to achieve and extremely tough to counter. Attacking such “soft,” diffuse infrastructure systems could significantly affect our military forces globally – potentially blinding them, neutering their command and control, degrading their mobility, and isolating them from their principal sources of logistics support. The Defense Critical Infrastructure Program (DCIP) under Mission Assurance seeks to improve execution of DoD assigned missions to make them more resilient. This is accomplished through the assessment of the supporting commercial infrastructure relied upon by key nodes during execution. By building resilience into the system and ensuring this support is well maintained, DoD aims to ensure it can "take a punch as well as deliver one."21 It also provides the department the means to prioritize investments across all DoD components and assigned missions to the most critical issues faced by the department through the use of risk decision packages (RDP).22 The commercial power supply on which DoD depends exemplifies both the novel challenges we face and the great progress we are making with other federal agencies and the private sector. Today’s commercial electric power grid has a great deal of resilience against the sort of disruptive events that have traditionally been factored into the grid’s design. Yet, the grid will increasingly confront threats beyond that traditional design basis. This complex risk environment includes: disruptive or deliberate attacks, either physical or cyber in nature; severe natural hazards such as geomagnetic storms and natural disasters with cascading regional and national impacts (as in NLE 11); long supply chain lead times for key replacement electric power equipment; transition to automated control systems and other smart grid technologies without robust security; and more frequent interruptions in fuel supplies to electricity-generating plants. These risks are magnified by globalization, urbanization, and the highly interconnected nature of people, economies, information, and infrastructure systems. The department is highly dependent on commercial power grids and energy sources. As the largest consumer of energy in the United States, DoD is dependent on commercial electricity sources outside its ownership and control for secure, uninterrupted power to support critical missions. In fact, approximately 99 percent of the electricity consumed by DoD facilities originates offsite, while approximately 85 percent of critical electricity infrastructure itself is commercially owned. This situation only underscores the importance of our partnership with DHS and its work to protect the nation’s critical infrastructure – a mission that serves not only the national defense but also the larger national purpose of sustaining our economic health and competitiveness. DoD has traditionally assumed that the commercial grid will be subject only to infrequent, weather-related, and short-term disruptions, and that available backup power is sufficient to meet critical mission needs. As noted in the February 2008 Report of the Defense Science Board Task Force on DoD Energy Strategy, “In most cases, neither the grid nor on-base backup power provides sufficient reliability to ensure continuity of critical national priority functions and oversight of strategic missions in the face of a long term (several months) outage.”23 Similarly, a 2009 GAO Report on Actions Needed to Improve the Identification and Management of Electrical Power Risks and Vulnerabilities to DoD Critical Assets stated that DoD mission-critical assets rely primarily on commercial electric power and are vulnerable to disruptions in electric power supplies.24 Moreover, these vulnerabilities may cascade into other critical infrastructure that uses the grid – communications, water, transportation, and pipelines – that, in turn, is needed for the normal operation of the grid, as well as its quick recovery in emergency situations. To remedy this situation, the Defense Science Board (DSB) Task Force recommended that DoD take a broad-based approach, including a focused analysis of critical functions and supporting assets, a more realistic assessment of electricity outage cause and duration, and an integrated approach to risk management that includes greater efficiency, renewable resources, distributed generation, and increased reliability. DoD Mission Assurance is designed to carry forward the DSB recommendations. Yet, for a variety of reasons – technical, financial, regulatory, and legal – DoD has limited ability to manage electrical power demand and supply on its installations. As noted above, DHS is the lead agency for critical infrastructure protection by law and pursuant to Homeland Security Presidential Directive 7. The Department of Energy (DOE) is the lead agency on energy matters. And within DoD, energy and energy security roles and responsibilities are distributed and shared, with different entities managing security against physical, nuclear, and cyber threats; cost and regulatory compliance; and the response to natural disasters. And of course, production and delivery of electric power to most DoD installations are controlled by commercial entities that are regulated by state and local utility commissions. The resulting paradox: DoD is dependent on a commercial power system over which it does not – and never will – exercise control.

**Loss of mission effectiveness causes nuclear war in every hotspot**

**Kagan and O’Hanlon 7** Frederick, resident scholar at AEI and Michael, senior fellow in foreign policy at Brookings, “The Case for Larger Ground Forces”, April 2007, http://www.aei.org/files/2007/04/24/20070424\_Kagan20070424.pdf

We live at a time when wars not only rage in nearly every region but threaten to erupt in many places where the current relative calm is tenuous. To view this as a strategic military challenge for the United States is not to espouse a specific theory of America’s role in the world or a certain political philosophy. Such an assessment flows directly from the basic bipartisan view of American foreign policy makers since World War II that overseas threats must be countered before they can directly threaten this country’s shores, that the basic stability of the international system is essential to American peace and prosperity, and that no country besides the United States is in a position to lead the way in countering major challenges to the global order. Let us highlight the threats and their consequences with a few concrete examples, emphasizing those that involve key strategic regions of the world such as the Persian Gulf and East Asia, or key potential threats to American security, such as the spread of nuclear weapons and the strengthening of the global Al Qaeda/jihadist movement. The Iranian government has rejected a series of international demands to halt its efforts at enriching uranium and submit to international inspections. What will happen if the US—or Israeli—government becomes convinced that Tehran is on the verge of fielding a nuclear weapon? North Korea, of course, has already done so, and the ripple effects are beginning to spread. Japan’s recent election to supreme power of a leader who has promised to rewrite that country’s constitution to support increased armed forces—and, possibly, even nuclear weapons— may well alter the delicate balance of fear in Northeast Asia fundamentally and rapidly. Also, in the background, at least for now, Sino Taiwanese tensions continue to flare, as do tensions between India and Pakistan, Pakistan and Afghanistan, Venezuela and the United States, and so on. Meanwhile, the world’s nonintervention in Darfur troubles consciences from Europe to America’s Bible Belt to its bastions of liberalism, yet with no serious international forces on offer, the bloodletting will probably, tragically, continue unabated. And as bad as things are in Iraq today, they could get worse. What would happen if the key Shiite figure, Ali al Sistani, were to die? If another major attack on the scale of the Golden Mosque bombing hit either side (or, perhaps, both sides at the same time)? Such deterioration might convince many Americans that the war there truly was lost—but the costs of reaching such a conclusion would be enormous. Afghanistan is somewhat more stable for the moment, although a major Taliban offensive appears to be in the offing. Sound US grand strategy must proceed from the recognition that, over the next few years and decades, the world is going to be a very unsettled and quite dangerous place, with Al Qaeda and its associated groups as a subset of a much larger set of worries. The only serious response to this international environment is to develop armed forces capable of protecting America’s vital interests throughout this dangerous time**. Doing so requires a military capable of a wide range of missions**—including not only deterrence of great power conflict in dealing with potential hotspots in Korea, the Taiwan Strait, and the Persian Gulf but also associated with a variety of Special Forces activities and stabilization operations. For today’s US military, which already excels at high technology and is increasingly focused on re-learning the lost art of counterinsurgency, this is first and foremost a question of finding the resources to field a large-enough standing Army and Marine Corps to handle personnel intensive missions such as the ones now under way in Iraq and Afghanistan. Let us hope there will be no such large-scale missions for a while. But preparing for the possibility, while doing whatever we can at this late hour to relieve the pressure on our soldiers and Marines in ongoing operations, is prudent. At worst, the only potential downside to a major program to strengthen the military is the possibility of spending a bit too much money. **Recent history shows no link between having a larger military and its overuse**; indeed, Ronald Reagan’s time in office was characterized by higher defense budgets and yet much less use of the military, an outcome for which we can hope in the coming years, but hardly guarantee. While the authors disagree between ourselves about proper increases in the size and cost of the military (with O’Hanlon preferring to hold defense to roughly 4 percent of GDP and seeing ground forces increase by a total of perhaps 100,000, and Kagan willing to devote at least 5 percent of GDP to defense as in the Reagan years and increase the Army by at least 250,000), we agree on the need to start expanding ground force capabilities by at least 25,000 a year immediately. Such a measure is not only prudent, it is also badly overdue.

#### We control empirics

Wohlforth 8—Daniel Webster Professor of Government, Dartmouth. BA in IR, MA in IR and MPhil and PhD in pol sci, Yale (William, Unipolarity, Status Competition, and Great Power War, October 2008, World Politics Vol. 61, Iss. 1; pg. 28, 31 pgs, Proquest)

Despite increasingly compelling findings concerning the importance of status seeking in human behavior, research on its connection to war waned some three decades ago.38 Yet empirical studies of the relationship between both systemic and dyadic capabilities distributions and war have continued to cumulate. If the relationships implied by the status theory run afoul of well-established patterns or general historical findings, then there is little reason to continue investigating them. **The clearest empirical implication** of the theory **is that** status **competition is unlikely to cause great power military conflict in unipolar systems**. If status competition is an important contributory cause of great power war, then, ceteris paribus, unipolar systems should be markedly less war-prone than bipolar or multipolar systems. And this appears to be the case. As Daniel Geller notes in a review of the empirical literature: "**The only polar structure that appears to influence conflict probability is unipolarity**."39 In addition, a larger number of studies at the dyadic level support the related expectation that narrow capabilities gaps and ambiguous or unstable capabilities hierarchies increase the probability of war.40 These studies are based entirely on post-sixteenth-century European history, and most are limited to the post-1815 period covered by the standard data sets. Though the systems coded as unipolar, near-unipolar, and hegemonic are all marked by a high concentration of capabilities in a single state, these studies operationalize unipolarity in a variety of ways, often very differently from the definition adopted here. An ongoing collaborative project looking at ancient interstate systems over the course of two thousand years suggests that historical systems that come closest to the definition of unipolarity used here exhibit precisely the behavioral properties implied by the theory. 41 As David C. Kang's research shows, the East Asian system between 1300 and 1900 was an unusually stratified unipolar structure, with an economic and militarily dominant China interacting with a small number of geographically proximate, clearly weaker East Asian states.42 Status politics existed, but actors were channeled by elaborate cultural understandings and interstate practices into clearly recognized ranks. Warfare was exceedingly rare, and the major outbreaks occurred precisely when the theory would predict: when China's capabilities waned, reducing the clarity of the underlying material hierarchy and increasing status dissonance for lesser powers. Much more research is needed, but initial exploration of other arguably unipolar systems-for example, Rome, Assyria, the Amarna system-appears consistent with the hypothesis.43 Status Competition and Causal Mechanisms Both theory and evidence demonstrate convincingly that competition for status is a driver of human behavior, and social identity theory and related literatures suggest the conditions under which it might come to the fore in great power relations. Both the systemic and dyadic findings presented in large-N studies are broadly consistent with the theory, but they are also consistent with power transition and other rationalist theories of hegemonic war.

**Hegemonic strategy inevitable- the only question is efficacy**

**Calleo ‘10**

Calleo, Director – European Studies Program and Professor @ SAIS, ‘10¶ (David P, “American Decline Revisited,” Survival, 52:4, 215 – 227)

The history of **the past two decades suggest**s **that adjusting to a plural world is not easy for the U**nited **S**tates. **As** its economic **strength is increasingly challenged by relative decline, it clings all the more to its peerless military prowess.** As the wars in **Iraq and Afghanistan have shown**, **that** overwhelming military power, evolved over the Cold War, is less and less effective. In many respects, **America's geopolitical imagination seems frozen in the posture of the Cold War. The** lingering **pretension to be the dominant power** everywhere **has encouraged** the United States to hazard **two** unpromising **land wars, plus a diffuse** and interminable **struggle against 'terrorism'.** Paying for these wars and the pretensions behind them confirms the United States in a new version of Cold War finance. Once more, unmanageable fiscal problems poison the currency, an old pathology that firmly reinstates the nation on its path to decline. It was the hegemonic Cold War role, after all, that put the United States so out of balance with the rest of the world economy. **In its hegemonic Cold War position, the U**nited **S**tates **found it necessary to run very large deficits and was able to finance them** simply **by creating and exporting** more and more **dollars**. The consequence is today's restless mass of accumulated global money. Hence, whereas the value of all global financial assets in 1980 was just over 100% of global output, by 2008, even after the worst of the financial implosion, that figure had exploded to just under 300%.25 Much of this is no doubt tied up in the massive but relatively inert holdings of the Chinese and Japanese. But **thanks to today's instantaneous electronic transfers**, **huge sums can be marshalled and deployed on very short notice**. It is **this excess of volatile money** that arguably fuels the world's great recurring bubbles. It can **create the semblance of vast real wealth** for a time, but can also (with little notice) sow chaos in markets, wipe out savings and dry up credit for real investment. What constitutes a morbid overstretch in the American political economy thus ends up as a threat to the world economy in general. To lead itself and the world into a more secure future the United States must put aside its old, unmeasured geopolitical ambitions paid for by unlimited cheap credit. Instead, the United States needs a more balanced view of its role in history. But **America's** post-Soviet **pundits have**, unfortunately, **proved more skilful at perpetuating outmoded dreams of past glory** **than** at **promoting** the more modest visions appropriate to **a plural future**. One can always hope that newer generations of Americans will find it easier to adjust to pluralist reality. The last administration, however, was not very encouraging in this regard. III What about Barack Obama? So far, his economic policy has shown itself probably more intelligent and certainly more articulate than his predecessor's. His thinking is less hobbled by simple-minded doctrines. It accepts government's inescapable role in regulating markets and providing a durable framework for orderly governance and societal fellowship. To be sure, the Obama administration, following in the path of the Bush administration, has carried short-term counter-cyclical stimulation to a previously unimagined level. Perhaps so radical an expansion of credit is unavoidable under present circumstances. The administration is caught between the need to rebalance by scaling back and the fear that restraint applied now will trigger a severe depression. Obama's chief aide, Rahm Emanuel, is famous for observing: 'Rule one: Never allow a crisis to go to waste. They are opportunities to do big things.'26 So far, Obama's administration has made use of its crisis to promote an unprecedented expansion of welfare spending.27 Much of the spending is doubtless good in itself and certainly serves the administration's strong counter-cyclical purposes. But at some point the need to pass from expansion to stabilisation will presumably be inescapable. Budget cuts will have to be found somewhere, and demographic trends suggest that drastic reductions in civilian welfare spending are unlikely. Elementary **prudence might suggest that today's** financial **crisis is an ideal occasion for America's** long-overdue **retreat** from geopolitical overstretch, a time for bringing America's geopolitical pretensions into harmony with its diminishing foreign possibilities and expanding domestic needs. The opportunities for geopolitical saving appear significant. According to the Congressional Budget Office (CBO), current military plans will require an average military budget of $652bn (in 2010 dollars) each year through 2028. The estimate optimistically assumes only 30,000 troops will be engaged abroad after 2013. As the CBO observes, these projections exceed the peak budgets of the Reagan administration's military build-up of the mid-1980s (about $500bn annually in 2010 dollars). This presumes a military budget consuming 3.5% of GDP through 2020.28 Comparable figures for other nations are troubling: 2.28% for the United Kingdom, 2.35% for France, 2.41% for Russia and 1.36% for China.29 Thus, while **the** financial **crisis has** certainly made Americans fear for their economic future, it does **not** yet seem to have **resulted in a more modest view of the country's place in the world,** **or a more prudent approach to military spending.** Instead**, an addiction to hegemonic status continues to blight** the **prospects** for sound fiscal policy. Financing the inevitable deficits inexorably turns the dollar into an imperial instrument that threatens the world with inflation.

### 1ac- Afghanistan Advantage

**Afghanistan is destabilizing**

**Gartenstein-Ross 12/27**/12

[Daveed Gartenstein-Ross is the vice president of research and Bill Roggio is an adjunct fellow at the Foundation for Defense of Democracies. <http://www.defenddemocracy.org/media-hit/a-dangerous-neighbor-how-pakistans-deterioration-harms-afghanistan/> ETB]

**A critical factor behind Afghanistan's deteriorating state is the turn of events in Pakistan,** where the Taliban and al Qaeda have found a safe haven in recent years. After the October 2001 U.S. invasion of Afghanistan felled the Taliban, **most of al Qaeda's senior leadership relocated to Pakistan**'s federally administered tribal areas, the remote and mountainous regions that border Afghanistan, and set about finding allies within tribal society.¶ Pakistan's military mounted a campaign to flush al Qaeda out of the tribal areas after the group was connected to multiple assassination attempts against Pakistani president Pervez Musharraf, but the military suffered so many losses that Musharraf eventually concluded he had no choice but to deal with his would-be killers. In March and September 2006 he consummated the two halves of the Waziristan accords, peace agreements that essentially ceded Waziristan to the Taliban and al Qaeda. Musharraf also cut deals with Islamic militants in the regions of Swat, Bajaur, and Mohmand. The treaties, punctuated with frequent skirmishes, symbolized Pakistan's inability to confront its extremists.¶ The negotiation process only accelerated after a new parliamentary majority rode to power in February on a wave of anti-American sentiment. While negotiations and peace deals with militants have long been part of Pakistan's political landscape, the scale of negotiations under the new majority was unprecedented. Talks opened with virtually every militant outfit in the country, and the government has entered into seven agreements encompassing nine districts.¶ **It was easy to predict the failure of the Waziristan accords, in which the government received only unenforceable promises from extremists, and there is no reason to believe that the new accords will yield a different result. Rather, they are likely to increase the geographic areas that serve as safe havens for Pakistan's extremist groups-with predictable harm to Afghanistan.**

**Uniquely puts oil supply lines at risk**

**Gartenstein-Ross 12/27**/12

[Daveed Gartenstein-Ross is the vice president of research and Bill Roggio is an adjunct fellow at the Foundation for Defense of Democracies. <http://www.defenddemocracy.org/media-hit/a-dangerous-neighbor-how-pakistans-deterioration-harms-afghanistan/> ETB]

**In an effort to defeat NATO, the Taliban and allied groups are targeting coalition supply lines through Pakistan.** **More than 70 percent of NATO's supplies pass through the Torkham Gate in the Khyber tribal agency. The Taliban runs much of that province**, with Pakistani troops heavily patrolling the road to Afghanistan but little else. Despite this military presence, **the Taliban still periodically disrupts supply lines. In March, Taliban fighters blew up 36 parked oil tankers destined for Afghanistan** in what appeared to be a chain reaction triggered by an initial bomb blast. In July, an armed Taliban squad in Landikotal smashed the windows and punctured the tires of a NATO supply convoy. **The Taliban has distributed leaflets threatening drivers who deliver oil or other supplies to coalition forces.**

**Oil disruptions inevitable- threatens military capabilities**

**Rogers ‘12**

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**There is a lot of uncertainty in the future petroleum market that is stirring anxieties about assured access to energy**. Although technological breakthroughs in hydraulic fracturing (or “fracking”), ultradeep water offshore oil drilling and other techniques are unlocking new petroleum reserves in the western hemisphere to augment Middle East reserves, **demand for energy could** still **outpace supply** by mid-century, largely **as a result of demand from** major **developing economies** like China, Brazil, India and Turkey. As a result, **petroleum supplies could become** increasingly **tight**.¶ **The D**epartment **o**f **D**efense **increasingly faces concerns about assured access to energy resources** necessary to power the military. **Major supply disruptions** stemming from conflict in **the Persian** **Gulf** **that could close** (even if only temporarily) **the Strait of Hormuz, or a natural disaster that takes** **U.S.** domestic petroleum **refineries offline pose major challenges for the** U.S. **military** and its dependence on petroleum. And even though legislation gives the Department of Defense priority access to U.S. domestic petroleum reserves, some policymakers share concerns that a **long-term disruption could exhaust** those **supplies and put at risk the U.S. military’s ability to conduct its missions.**

**SMRs key to solve- makes forward bases in Afghanistan self-sufficient and increase force effectiveness - renewables will fail**

**Andres and Breetz ‘11**

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Operational Vulnerability. **Operational energy use** ¶ **represents a second serious vulnerability for the U.S.** ¶ **military**. In recent years, **the military has become significantly more effective by making greater use of technology in the field. The price of this improvement has been** ¶ **a vast increase in energy use**. Over the last 10 years, for ¶ instance, **the Marine Corps has more than tripled its operational use of energy.** **Energy** and water **now make up** ¶ **70 percent of the logistics burden for troops operating in** ¶ **forward locations in** the wars in **Afghanistan** and Iraq. ¶ **This burden represents a severe vulnerability** and is costing lives. In 2006, troop losses from logistics convoys became so serious that Marine Corps Major General Richard Zilmer sent the Pentagon a “Priority 1” request for ¶ renewable energy backup.¶ 11¶ This unprecedented request ¶ put fuel convoy issues on the national security agenda, ¶ triggering several high-level studies and leading to the ¶ establishment of the Power Surety Task Force, which ¶ fast-tracked energy innovations such as mobile power ¶ stations and super-insulating spray foam. Currently, the ¶ Marine Corps is considering a goal of producing all nonvehicle energy used at forward bases organically and substantially increasing the fuel efficiency of vehicles used in ¶ forward areas.¶ Nevertheless, **attempts to solve** the current energy ¶ use problem **with efficiency** measures **and renewable** ¶ **sources are unlikely to** fully **address this** vulnerability. ¶ Wind, solar, and hydro generation along with tailored ¶ cuts of energy use in the field can reduce the number ¶ of convoys needed to supply troops, but **these measures will quickly reach limits and have** their own **challenges, such as visibility,** open **exposure, and intermittency. Deploying vehicles with greater fuel efficiency will further reduce convoy vulnerability but will not** ¶ **solve the problem.**¶ **A strong consensus has been building within planning circles that small reactors have the potential to** significantly **reduce liquid fuel use and**, consequently, **the** ¶ **need for convoys to supply** power at **forward locations.** ¶ **Just over 30 percent of operational fuel used in Afghanistan today goes to generating electricity. Small reactors** ¶ **could easily generate all electricity needed to run large** ¶ **forward operating bases. This** innovation **would,** for instance, **allow** the Marine Corps to meet its goal of **selfsufficient bases. Mobile reactors also have the potential** ¶ **to make the Corps** significantly **lighter and more mobile** ¶ **by reducing its logistics tail.**

**Supply line vulnerability is a choke point that threatens all US operations in Afghanistan- reducing oil dependence is a key force multiplier that allows for effective counter-insurgency operations**

**Rogers ‘12**

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**There are clear operational advantages to reducing the fuel required by military personnel in theater**. In particular, **reducing fuel consumption** also **curbs the demand for petroleum that has to be trucked across dangerous territory where** the fuel and the **soldiers** and contractors **transporting it are vulnerable to** insurgent **attack.**¶According to a 2009 Army Environmental Policy Institute study, for every 24 fuel convoys deployed in Afghanistan, one U.S soldier is wounded or killed. Those casualty counts are even more striking in the aggregate: the most recent estimates from the Department of Defense found that between 2003 and 2007, more **than 3,000 Army personnel and private contractors were wounded or killed by insurgents attacking fuel** and water **convoys in Iraq and Afghanistan.**¶And besides the need to reduce unnecessary causalities, **curbing the amount of fuel that has to be transported into a combat zone can act as a force multiplier, enabling soldiers that would otherwise be guarding convoys to reenter the fight.**¶There are also financial advantages to reducing operational energy requirements that are becoming increasingly relevant in a fiscally constrained budget environment. In general, **reducing total energy consumption can help insulate the D**epartment **o**f **D**efense **from** dramatic **energy price spikes**. The Department of Defense estimates that every $1 increase in a barrel of oil adds approximately $130 million to the military’s energy bill. Moreover, **fuel consumed in combat zones is by its nature more expensive due to the fully burdened cost of fuel** — that is, the total cost from acquiring the fuel from a supplier to delivering it to troops at the tactical edge in countries like Afghanistan. The personnel and transportation costs of delivering fuel by jet, truck or helicopter add to the initial $2 a gallon cost of fuel. Although the fully burdened cost of fuel has been suggested by some to top $400 a gallon, the Marine Energy Assessment Team, or MEAT, offers a more conservative assessment. According to the findings from a 2009 visit to Afghanistan, DOD’s Defense Energy Support Center paid $2.19 per gallon for fuel. When the fuel was delivered to the operational level — a forward operating base — in Afghanistan, the price increased to $6.39 a gallon. The MEAT then estimated that it cost $11.70 per gallon at the tactical edge — for those military units deployed outside the wire, presumably at remote outposts.¶ The uniqueness of each war often makes it difficult for defense planners to develop lessons learned from one conflict and apply them directly to the next one — except when it comes to operational energy. **The experiences of fueling the force** during the wars **in** Iraq and **Afghanistan** **have revealed a critical choke point that the U.S. military can address: the delivery of fuel to troops in combat.** The Department of Defense is leading efforts today **to reduce fuel requirements** and — where possible — plug in renewable energy technologies in lieu of diesel generators and other systems requiring loads of fuel, **enabl**ing **the U.S. military to be more effective war fighters by managing the risks of delivering fuel in conflict**. At the end of the day it is about reducing the amount of petroleum needed to fuel the force.

**Instability spills over to Pakistan- triggers nuclear war**

**Foust ‘9**

[Joshua Foust, associate editor for Current Intelligence, The Case for Afghanistan: Strategic Considerations, 2009, http://www.registan.net/index.php/2009/08/27/the-case-for-afghanistan-strategic-considerations/]

And lest anyone think it is appropriate to write off the India-Pakistan conflict as somebody else’s problem, it is never somebody else’s problem when nuclear weapons are involved. As Jari Lindholm reminded, India and Pakistan have come a hair’s breadth from nuclear conflict twice over Kashmir. And like it or not, it is a compelling and vital American interest **to prevent nuclear conflict in South Asia**—which **makes “fixing” Afghanistan** in some way also a **vital American interest.** Regional security is one of those topics that gets mentioned casually by many pundits but never really articulated. It is by far Ahmed Rashid’s most convincing argument, that supporting stability in Central and South Asia is a compelling interest not just for the U.S., but for the West in general. **When it comes to Pakistan**, the big danger is not in a Taliban takeover, or even in the Taliban seizure of nuclear weapons—I have never believed that the ISI could be that monumentally stupid (though they are incredibly stupid for letting things get this far out of hand). **The big danger,** as it has been since 1999, **is that insurgents, bored or underutilized in Afghanistan, will spark another confrontation between India and Pakistan, and that that confrontation will spillover into nuclear conflict.** That is worth blood and treasure to prevent.

**Afghanistan failure causes great power war- triggers India-China conflict**

**Fox 2011** (Robert Fox, international reporter and associate at the Corriere della Sera in Milan, July 12, 2011, “Afghanistan: If we’re not careful, WW3 is imminent,” The Week, http://goo.gl/PlUTV)

**There are growing fears that** a speedy **withdrawal** of western troops **from Afghanistan**, accompanied by a fudged deal to bring the Taliban back into power in some sort of coalition, **could trigger** another dreadful round of **civil war.** And, **given** the **meddling** already undertaken **by** neighbours such as **Pakistan and Iran, this** **civil war could quickly become a regional war. This** in turn **could morph into a contest** of global significance **between India and China and their proxies and allies.** In short, **welcome to the Third World War** in the 21st century. There is a list of concerns which suggest this might happen. First there is the endemic corruption in Kabul under President Karzai. This is about to be highlighted by the IMF's attempt to sort out the crash of the Kabul Bank, with a loss of some $700 million. The problem is not just the Kabul bank, but banks in general across Afghanistan, which the kleptocrats of Kabul seem to regard as their personal piggy banks. Then there is Karzai himself, who seems to be trying to bend or break the constitution so he can run for a third term in two years' time – banned under the present rules. The armed services and police are also a concern. Though recruiting and training have made huge strides, with more than 250,000 under arms now, there are worries about the continuing imbalance between the different ethnic groups, with the Tajiks and Hazara over-represented, and the recruiting of southern Pashtuns still limping. **The danger is that the** Afghan **army will split on ethnic lines when Afghanistan gains** full **control of its security in 2015.** In a civil war, the southern Pashtuns would turn to the Pakistan army and ISI intelligence service, who are more deeply involved in backing Islamist militants than previously thought, according to some devastating reports for the New York Times by Carlotta Gall.

**Sino-Indian military disputes spiral and go nuclear**

**Caryl ‘10**

(CHRISTIAN CARYL “Nuclear arms race between China and India” JULY 13, 2010http://www.defence.pk/forums/indian-defence/65480-nuclear-arms-race-between-china-india.html, TSW)

Europeans and Americans, who have dominated world affairs for so long, are understandably fascinated by the recent rise of China and India. **It's obvious that the rapid economic resurgence of these two great Asian powers fundamentally alters the global rules of the game**.¶ China and India have built up a $60-billion-per-year trading relationship, and for years they've insisted that they want to work more closely on a variety of fronts. **Yet** **that expressed desire for collaboration co-exists uneasily with a long-running strategic rivalry**. **Parts of their mutual border remain in dispute. China has long supported Pakistan, India's main enemy**, **while the Indians have often befriended competitors of the Chinese** (**be it Moscow or Washington**). Lately Beijing has been cultivating relationships among countries in Southeast Asia and the Indian Ocean -- including Bangladesh, Myanmar, and Sri Lanka -- to protect the flow of commerce and access to supplies of natural resources. That has the Indians fearing encirclement. ¶ Lately, though, another **element is threatening to complicate the strategic calculus: the nuclear factor.** In themselves, of course, nuclear weapons are nothing new to either country. China has been a nuclear power for decades, while India conducted its first nuclear test in 1974 (though most outsiders tend to think of 1998, when New Delhi conducted a series of underground explosions designed to establish its bona fides as a genuine nuclear power). **Although both countries have sworn off first use, both have built up formidable deterrents designed to retaliate against any attackers.**¶ So what's new? A lot. **Concurrent with their rising economic might, China and India have set about modernizing their militaries to lend extra muscle to their growing strategic ambitions** -- and **given their complicated history, that can't help but spark worries**. "**China has the most active and diverse ballistic missile development program in the world**," noted one U.S. report. "**China's ballistic missile force is expanding in both size and types of missiles**." China's Dongfeng long-range missiles boast independently controlled multiple warheads, mobility, and solid fuel (meaning that they can be fired with little notice). That's just one of many areas in which the Chinese have demonstrated their advanced technological capabilities. In January China shot down one of its own satellites with a missile -- once again demonstrating, as it did with a previous test in 2007, that it's well down the path toward a ballistic missile defense system.¶ **That test unnerved the Indians, who saw the prospect of Chinese space weapons as a potential threat to the credibility of their own nuclear deterrent**. The **Indians**, meanwhile, **have been hard at work on a new generation of long-range missiles of their own.** The Agni-5, which is set for a test flight by the end of this year, has a projected range of 5,000 to 6,000 kilometers -- meaning that it would be able to hit even the northernmost of China's cities. The Indians are also conducting sea trials of their first ballistic missile submarine, the Arihant, which could be ready for deployment within another year or two.¶ It is undoubtedly true that the two countries mainly have other potential enemies in mind. China is primarily concerned about deterring potential attacks by the world's leading nuclear power, the United States, while India's strategic calculations focus on the threat from Pakistan. **Yet strategic logic is creating the potential for direct friction between Beijing and New Delhi on several fronts**. **The two countries are already engaged in a naval arms race** as **they jockey for influence in the waters around South Asia**. **Tensions have also been mounting over the two countries' border disputes** -- **especially the one involving the disputed area of Arunachal Pradesh (which is controlled by the Indians)**. The **Indians complain of a rising number of Chinese incursions into the area**; a remark by the Chinese ambassador to India a few years ago, when he claimed the territory as China's, stirred up public outrage. The Chinese, who regard Arunachal Pradesh as part of Tibet, worry in turn about a buildup of Indian troops in the region.¶ Rajeswari Pillai Rajagopalan of the Observer Research Foundation in New Delhi notes one concern. Starting in 2007, the Chinese military began a major upgrade of its missile base near the city of Delingha in Qinghai province, next to Tibet. **In addition to the intermediate-range missiles already stationed in the region, Rajagopalan says there are indications the Chinese** may **have beefed up the force** with long-range DF-31s and DF-31As -- **thus threatening not only northern India, including Delhi, but targets in the south as well.** It's entirely possible, she acknowledges in a 2007 paper, that the Chinese move could be aimed primarily at countering Russian missiles stationed in Siberia, but warns that "what the Chinese may consider a routine exercise may send a wrong signal and have serious implications." For his part, former U.S. diplomat Charles Freeman says that he regards Indian fears of a Chinese nuclear buildup as exaggerated, but worries thatafateful **mismatch of perceptions could already be spur**ring both countries toward **a** genuine **nuclear arms race**.¶ **The extent to which the two militaries are getting on each other's nerves became apparent in a bit of high-ranking trash-talking earlier this year**. **India's chief military science office**r, V.K. Saraswat, **declared that new advances in his country's ballistic missile technology meant that "**as far as cities in China and Pakistan are concerned, **there will be no target that we want to hit but can't hit**." **That prompted a retort from Rear Adm. Zhang Zhaozhong of China's National Defense University, who pointedly derided the "low level" of Indian technology**. "In developing its military technology," Zhang said, "China has never taken India as a strategic rival, and none of its weapons were specifically designed to contain India." **If that was meant to console anyone south of the border, it doesn't seem to have worked**.¶ **The best time to talk about an arms race, of course, is before it really gathers steam.** Krishnaswami Subrahmanyam, former chairman of India's National Security Advisory Board, says that China and India should take their nuclear concerns to the Conference on Disarmament, a multilateral negotiating forum at the United Nations. **But that, of course, would require the Chinese to acknowledge that there's a problem, which they might not be willing to do.** Rajagopalan notes that India and Pakistan have managed to set up some effective confidence-building measures on their common border, but that India and China have yet to do the same (aside from a few stillborn efforts in the early 1990s). Instituting mechanisms to warn each other of pending missile tests might be a start. "I think there's a great need for that," she says. "**Otherwise these kinds of tensions can spiral out of control." You can say that again.**

### Adv 3 China

#### Global SMR development’s inevitable – only a question of whether the US leads

Hiruo 10
(Elaine, Managing Editor of Platts, "SMR technology gives US chance at market leadership, vendors say," 9-2-10, Lexis)

**The US** **nuclear industry lost its leadership** position **in the global market for large reactors and now has the opportunity to secure that role for s**mall **m**odular **r**eactor**s,** some SMR vendors told a subcommittee of the Blue Ribbon Commission on America's Nuclear Future August 30.¶ But they stressed their **companies will need the federal government's help to beat foreign competitors to the market.**¶ **"We're at a unique crossroads right now**," Christofer Mowry, president of Babcock and Wilcox Nuclear Energy, told the reactor and fuel cycle technology subcommittee during its two-day meeting in Washington. B&W is one of several US companies — including Hyperion Power Generation, NuScale and Westinghouse — developing an SMR design.¶ "Other countries want a technology that has been built in the host country first," Paul Lorenzini, CEO of NuScale, told the panel. "**There are lots of** small reactor **designs out there,**" he said. Both the Koreans and Japanese have SMR programs, according to industry executives on the speakers panel. **The question is**, Mowry said, **who enters the** global **market first with a reactor already operating on its home turf.**

#### Delaying commercialization allows China to solidify their lead

Wheeler 12
(Brian, editor of Power Engineering magazine, "Developing Small Modular Reactor Designs in the U.S," 4-1-12, <http://www.power-eng.com/articles/npi/print/volume-5/issue-2/nucleus/developing-small-modular-reactor-designs-in-the-us.html>)

The development of small modular reactors in the U.S. continues to gain support as the country searches for clean energy options. Although concepts are still being designed, **the U.S. D**epartment **o**f **E**nergy **gave the sector a boost** in March **when it released** **a** Funding Opportunity Announcement to establish **cost-shared agreements** **to support the design and licensing of SMRs.** A total of $450 million will be made available to support two SMRs over five years.¶ "America's choice is clear," said Energy Secretary Steven Chu. "We can either develop the next generation of clean energy technologies, which will help create thousands of jobs and export opportunities here in America, or we can wait for other countries to take the lead."¶ The Energy Department said SMRs are about one-third the size of current nuclear power plants and are designed to offer a host of safety, siting, construction and economic benefits. The size, according to DOE, makes SMRs ideal for small electric grids and locations that cannot support large reactors. Also, the reduced cost due to factory production may make the SMR more attractive to utilities seeking to add a smaller amount of power.¶ "We really see a market right now that includes utilities that don't have a large financial base and that are interested in clean, sustainable power. They are looking at the SMR as an investment of a billion dollars versus several billion dollars for large nuclear," said John Goossen, vice president of Innovation and SMR Development at Westinghouse. "These utilities, in most cases, do not need large chunks of power and are looking to add power incrementally as part of their plans for growth." In February, the Electric Power Research Institute and the Oak Ridge National Laboratory released a study that stated the U.S. has the potential to generate 201 GW from SMRs. For their study, a small modular reactor was labeled as 350 MWe or less. The DOE defines an SMR as 300 MWe or less. The study stated that "350 MWe was considered a reasonable bounding estimate of an initial SMR installation."¶ **The U.S. is leading the world in the amount of SMR designs, but China could be the first country to have a SMR design operational.** Launched in 2011, **a** 200 MWe HTR-PM **reactor is under construction with the support of China Huaneng Group, China Nuclear Engineering and Construction, and Tsinghua University's INET,** according to the World Nuclear Association.¶ "**The U.S. needs to move faster if we are going to compete with the** South Koreans, the **Chinese** and the Russians," said Bob Prince, vice chairman and CEO, Gen4 Energy.

#### SMR commercialization recovers leadership lost to china

Rosner and Goldberg 11

(Robert Rosner, astrophysicist and founding director of the Energy Policy Institute at Chicago. He was the director of Argonne National Laboratory from 2005 to 2009, Stephen Goldberg, Special Assistant to the Director, Argonne National Laboratory ¶ Senior Fellow, Energy Policy Institute at Chicago¶ Research Coordinator, Global Nuclear Future Initiative ¶ American Academy of Arts and Sciences, “Small Modular Reactors – Key to Future Nuclear Power ¶ Generation in the U.S.” Energy Policy Institute at Chicago, <http://csis.org/files/attachments/111129_SMR_White_Paper.pdf>, SEH)

As stated earlier, SMRs have the potential to achieve significant greenhouse gas emission¶ reductions. They could provide alternative baseload power generation to facilitate the retirement¶ of older, smaller, and less efficient coal generation plants that would, otherwise, not be good¶ candidates for retrofitting carbon capture and storage technology. They could be deployed in¶ regions of the U.S. and the world that have less potential for other forms of carbon-free¶ electricity, such as solar or wind energy. There may be technical or market constraints, such as¶ projected electricity demand growth and transmission capacity, which would support SMR¶ deployment but not GW-scale LWRs. From the on-shore manufacturing perspective, a key point¶ is that the manufacturing base needed for SMRs can be developed domestically. Thus, while the¶ large commercial LWR industry is seeking to transplant portions of its supply chain from current¶ foreign sources to the U.S., **the SMR industry offers the potential to establish a large domestic¶ manufacturing base building upon already existing U.S. manufacturing infrastructure and¶ capability,** **including the Naval shipbuilding and underutilized domestic nuclear component and¶ equipment plants**. The study team learned that a number of sustainable domestic jobs could be¶ created – that is, the full panoply of design, manufacturing, supplier, and construction activities –¶ if the U.S. can establish itself as a credible and substantial designer and manufacturer of SMRs.¶ While many SMR technologies are being studied around the world, a **strong U.S.¶ commercialization** program **can enable U.S. industry to be first to market SMRs,** thereby **serving¶ as a fulcrum for** export growth as well as a lever in **influencing international decisions on¶ deploying both** nuclear **reactor and** nuclear **fuel cycle tech**nology. **A** viable **U.S.-centric SMR¶ industry would** enablethe U.S. to **recapture** technological **leadership in** commercial **nuclear¶ tech**nology, **which has been lost to** suppliers in France, Japan, Korea, Russia, and, now rapidly¶ emerging, **China**.

**Ceding nuclear leadership to China leads to unchecked Chinese hege in Asia – kills US regional leadership**

**Cullinane ‘11**

[Scott Cullinane is a graduate student at the Institute of World Politics in Washington, D.C <http://www.ensec.org/index.php?option=com_content&view=article&id=319:america-falling-behind-the-strategic-dimensions-of-chinese-commercial-nuclear-energy&catid=118:content&Itemid=376> ETB]

Due to a confluence of events the United States has recently focused more attention on nuclear weapons policy than it has in previous years; however, the proliferation of commercial nuclear technology and its implications for America’s strategic position have been largely ignored. While the Unites States is currently a participant in the international commercial nuclear energy trade, **America’s** own **domestic construction of nuclear power plants has atrophied severely and the US risks losing its competitive edge in** the **nuclear energy** arena.¶ Simultaneously, the People’s Republic of **China** (PRC) **has made great strides in closing the nuclear** energy **development gap with America**. **Through a combination of importing technology, research from within China itself, and a disciplined policy approach the PRC is increasingly able to leverage the export of commercial nuclear power as part of its national strategy**. **Disturbingly, China does not share America’s commitment to stability, transparency, and responsibility when exporting nuclear technology**. This is a growing strategic weakness and risk for the United States**. To remain competitive and to be in a position to offset the PRC when required the American government should encourage** the **domestic** use of **nuclear power and spur** the forces of **tech**nological **innovation**.¶ History has recorded well American wartime nuclear developments which culminated in the July 1945 Trinity Test, but what happened near Arco, Idaho six years later has been overlooked. In 1951, scientists for the first time produced usable electricity from an experimental nuclear reactor. Once this barrier was conquered the atom was harnessed to generate electricity and permitted America to move into the field of commercial nuclear power. In the next five years alone the United States signed over 20 nuclear cooperation agreements with various countries. Not only did the US build dozens of power plants domestically during the 1960s and 1970s, the US Export-Import Bank also distributed $7.1 billion dollars in loans and guarantees for the international sale of 49 reactors. American built and designed reactors were exported around the world during those years. Even today, more than 60% of the world’s 440 operating reactors are based on technology developed in the United States. The growth of the US civilian nuclear power sector stagnated after the Three Mile Island incident in 1979 – the most serious accident in American civilian nuclear power history. Three Mile Island shook America’s confidence in nuclear power and provided the anti-nuclear lobby ample fuel to oppose the further construction of any nuclear power plants. In the following decade, 42 planned domestic nuclear power plants were cancelled, and in the 30 years since the Three Mile Island incident the American nuclear power industry has survived only through foreign sales and merging operations with companies in Asia and Europe. Westinghouse sold its nuclear division to Toshiba and General Electric joined with Hitachi. Even the highest levels of the American government came to cast nuclear power aside. President Bill Clinton bragged in his 1993 State of the Union Address that “we are eliminating programs that are no longer needed, such as nuclear power research and development.” ¶ **America’s slow pace of reactor construction over the past three decades has stymied innovation and caused the nuclear sector and its industrial base to shrivel**. While some aspects of America’s nuclear infrastructure still operate effectively, **many critical areas have atrophied.** For example, one capability that America has entirely lost is the means to cast ultra heavy forgings in the range of 350,000 – 600,000 pounds, which impacts the construction of containment vessels, turbine rotors, and steam generators. In contrast, Japan, China, and Russia all possess an ultra heavy forging capacity and South Korea and India plan to build forges in this range. Likewise, the dominance America enjoyed in uranium enrichment until the 1970s is gone. The current standard centrifuge method for uranium enrichment was not invented in America and today 40% of the enriched uranium US power plants use is processed overseas and imported. Another measure of how much the US nuclear industry has shrunk is evident in the number of companies certified to handle nuclear material. In the 1980s the United States had 400 nuclear suppliers and 900 holders of N-stamp certificates (N-stamps are the international nuclear rating certificates issued by the American Society of Mechanical Engineers). By 2008 that number had reduced itself to 80 suppliers and 200 N-stamp holders. A recent Government Accountability Office report, which examined data from between 1994 and 2009, found the US to have a declining share of the global commercial nuclear trade. However, during that same period over 60 reactors were built worldwide. Nuclear power plants are being built in the world increasingly by non-American companies.¶ The American nuclear industry entered the 1960s in a strong position, yet over the past 30 years other countries have closed the development gap with America. **The implications of this change go beyond economics or prestige to include national security. These changes would be less threatening if friendly allies were the ones moving forward with developing a nuclear export industry; however, the quick advancement of the PRC in nuclear energy changes the strategic calculus for America.**¶ The shifting strategic landscape¶ **While America’s nuclear industry has languished, current changes in the world’s strategic layout no longer allow America the option of maintaining the status quo without being surpassed.** The drive for research, development, and scientific progress that grew out of the Cold War propelled America forward, but those priorities have long since been downgraded by the US government. **The economic development of formerly impoverished countries means that the US cannot assume continued dominance by default**. **The rapidly industrializing PRC is seeking its own place among the major powers of the world and is vying for hegemony in Asia; nuclear power is an example of their larger efforts to marshal their scientific and economic forces as instruments of national power.**¶ The rise of China is a phrase that connotes images of a backwards country getting rich off of exporting cheap goods at great social and environmental costs. Yet, this understanding of the PRC has lead many in the United States to underestimate China’s capabilities. The Communist Party of China (**CPC) has undertaken a comprehensive long-term strategy to transition from a weak state that lags behind the West to a country that is a peer-competitor to the United States. Nuclear technology provides a clear example of this.** ¶ In 1978, General Secretary Deng Xiaoping began to move China out of the destructive Mao era with his policies of 'reform and opening.' As part of these changes during the 1980s, the CPC began a concerted and ongoing effort to modernize the PRC and acquire advanced technology including nuclear technology from abroad. This effort was named Program 863 and included both legal methods and espionage. By doing this, the PRC has managed to rapidly catch up to the West on some fronts. In order to eventually surpass the West in scientific development the PRC launched the follow-on Program 973 to build the foundations of basic scientific research within China to meet the nation’s major strategic needs. These steps have brought China to the cusp of the next stage of technological development, a stage known as “indigenous innovation.”¶ ¶ In 2006 the PRC published their science and technology plan out to 2020 and defined indigenous innovation as enhancing original innovation, integrated innovation, and re-innovation based on assimilation and absorption of imported technology in order improve national innovation capability. The Chinese seek to internalize and understand technological developments from around the world so that they can copy the equipment and use it as a point to build off in their own research. This is a step beyond merely copying and reverse engineering a piece of technology. The PRC sees this process of absorbing foreign technology coupled with indigenous innovation as a way of leapfrogging forward in development to gain the upper hand over the West. **The PRC’s official statement on energy policy lists nuclear power as one of their target fields. When viewed within this context, the full range of implications from China’s development of nuclear technology becomes evident**. **The PRC is** now **competing with the U**nited **St**ates **in the areas of innovation and high-technology, two fields that have driven American power since World War Two**. **China’s economic appeal** is no longer merely the fact that it has cheap labor, but **is expanding its economic power in a purposeful way that directly challenges America’s position in the world**.¶ ¶ **The CPC uses the market to their advantage to attract nuclear technology and intellectual capital to China**. The PRC has incentivized the process and encouraged new domestic nuclear power plant construction with the goal of having 20 nuclear power plants operational by 2020. The Chinese Ministry of Electrical Power has described PRC policy to reach this goal as encouraging joint investment between State Owned Corporations and foreign companies. 13 reactors are already operating in China, 25 more are under construction and even more reactors are in the planning stages. ¶ In line with this economic policy, China has bought nuclear reactors from Westinghouse and Areva and is cooperating with a Russian company to build nuclear power plants in Taiwan. By stipulating that Chinese companies and personnel be involved in the construction process, China is building up its own domestic capabilities and expects to become self-sufficient. **China’s** State Nuclear Power Technology Corporation has **partnered with Westinghouse to build a new and larger reactor** based on the existing Westinghouse AP 1000 reactor. **This will give the PRC a reactor design of its own to then export**. **If the CPC is able to combine their control over raw materials, growing technical know-how, and manufacturing base, China will not only be a powerful economy, but be able to leverage this power to service its foreign policy goals as well.**¶ Even though the PRC is still working to master third generation technology, their scientists are already working on what they think will be the nuclear reactor of the future. China is developing Fourth Generation Fast Neutron Reactors and wants to have one operational by 2030. Additionally, a Chinese nuclear development company has announced its intentions to build the “world’s first high-temperature, gas-cooled reactor” in Shandong province which offers to possibility of a reactor that is nearly meltdown proof. A design, which if proved successful, could potentially redefine the commercial nuclear energy trade.¶ The risk to America¶ **The international trade of nuclear material is hazardous in that every sale and transfer increases the chances for an accident or for willful misuse of the material. Nuclear commerce must be kept safe in order for the benefits of nuclear power generation to be realized. Yet, China has a record of sharing dangerous weapons and nuclear material with unfit countries**. **It is a risk for America to allow China to become a nuclear exporting country with a competitive technical and scientific edge. In order to limit Chinese influence and the relative attractiveness of what they can offer, America must ensure its continuing and substantive lead in reactor technology.**¶ ¶ The PRC’s record of exporting risky items is well documented. It is known that during the 1980s **the Chinese shared nuclear weapon designs with Pakistan and continues to proliferate WMD-related material.** According to the Office of the Director of National Intelligence to Congress, **China sells technologies and components in the Middle East and South Asia that are dual use and could support WMD and missile programs.** Jane’s Intelligence Review reported in 2006 that China,¶ Despite a 1997 promise to Washington to halt its nuclear technology sales to Iran, such assistance is likely to continue. In 2005, Iranian resistance groups accused China of selling Iran beryllium, which is useful for making nuclear triggers and maraging steel (twice as hard as stainless steel), which is critical for fabricating centrifuges needed to reprocess uranium into bomb-grade material. ¶ **China sells dangerous materials in order to secure its geopolitical objectives, regardless if those actions harm world stability. There is little reason to believe China will treat the sale of nuclear reactors any differently. Even if the PRC provides public assurances that it will behave differently in the future, the CPC has not been truthful for decades about its nuclear material and weapons sales and hence lacks credibility**. For example, in 1983 Chinese Vice Premier Li Peng said that China does not encourage or support nuclear proliferation. In fact, it was that same year that China contracted with Algeria, then a non-NPT [Non-Proliferation Treaty] state, to construct a large, unsafeguarded plutonium production reactor. In 1991 a Chinese Embassy official wrote in a letter to the The Washington Post that 'China has struck no nuclear deal with Iran.' In reality, China had provided Iran with a research reactor capable of producing plutonium and a calutron, a technology that can be used to enrich uranium to weapons-grade. It has been reported that even after United Nation sanctions were put on Iran, Chinese companies were discovered selling “high-quality carbon fiber” and “pressure gauges” to Iran for use in improving their centrifuges.¶ In 2004 the PRC joined the Nuclear Suppliers Groups (NSG), gaining international recognition of their growing power in the nuclear field. In spite of this opportunity for China to demonstrate its responsibility with nuclear energy, it has not fulfilled it NSG obligations. The PRC has kept the terms of its nuclear reactor sale to Pakistan secret and used a questionable legal technicality to justify forgoing obtaining a NSG waiver for the deal. Additionally, China chose to forgo incorporating new safety measures into the reactors in order to avoid possible complications.¶ A further consequence of China exporting reactors is that these countries may wish to control the fuel cycle which provides the uranium to power their new reactors. The spread of fuel cycle technology comes with two risks: enrichment and reprocessing. Uranium can be enriched to between 3% and 5% for reactor use, but the process can be modified to produce 90% enriched uranium which is weapons-grade. Even if a country only produces low enriched uranium they could easily begin enriching at a higher level if they so choose**. Every new country that nuclear technology or information is spread to exponentially increases the risk of material being stolen, given to a third party or being used as the launching point for a weapons program**. **China’s history of proliferation and willingness to engage economically with very unsavory governments seems likely to increase the risks involving nuclear material.**

#### China will risk open conflict by asserting hegemony in the South China Sea- US leadership key to solve

Hung December ‘12

[Nguyen Manh Hung is associate professor of government and international politics, and faculty associate of the Center of Global Studies, George Mason University. <http://www.globalasia.org/V7N4_Winter_2012/Nguyen_Manh_Hung.html> ETB]¶

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| By 2009-2010, the heightened tension between China and the ASEAN claimants over the contested islands led to an internationalization of the conflict, with the US and other powers beginning to express a view on the disputes. That’s understandable, given that the South China Sea is the world’s second-busiest sea-lane, with more than half of the world’s super tankers and $5.3 trillion in annual trade passing through the area (US trade alone accounts for $1.2 trillion of that figure). The concern over China’s claims and assertive behavior, coupled with China’s lack of transparency in its military modernization program, have created an arms race in Southeast Asia and elicited strong reactions from major powers worried about the situation. India and Japan, for their part, are also concerned over freedom of navigation. Both countries have advocated peaceful resolution of the disputes, but have also increased their diplomatic, economic and naval presence in the area. The US, meanwhile, is in the midst of a policy pivot to the Asia-Pacific, committing 60 percent of its naval assets to the Pacific Ocean, and taking actions to strengthen and modernize “historic alliances” with Japan, South Korea, Australia, the Philippines and Thailand, as well as building “robust partnerships” throughout the region.4 Russia has also begun to voice its concern over the issue of freedom of navigation and “outside meddling” in the South China Sea. In May 2009, as the deadline for claims based on the United Nations Convention on the Law of the Sea (UNCLOS) approached, China was forced to put its cards on the table and Beijing officially presented its nine-dashed-line map, claiming control over 80 percent of the South China Sea and encroaching on territories claimed by other Southeast Asian countries. Almost immediately, the US Senate held a hearing on the South China Sea and in June unanimously passed a resolution “deploring China’s use of force in the South China Sea and supporting the continuation of operations by US armed forces in support of freedom of navigation rights in international water and air space in the South China Sea.” In June 2010, at the Shangri-La Dialogue in Singapore, heated exchanges over the South China Sea took place between China and the US, joined by other ASEAN countries. A month earlier, at the Strategic and Economic Dialogue between the US and China in Beijing, Chinese officials, in a move viewed as raising the stakes in the conflict, declared the country’s claims in the South China Sea to be a “core interest.”5 Influential elites in China view the South China Sea as “blue territory” — that is, as much a part of China’s sovereign territory as Tibet, Xinjiang or Taiwan.6 The US response came in the form of a speech by US Secretary of State Hillary Clinton at the ASEAN Regional Forum (ARF) in Hanoi in July, in which she made it clear that “The United States has a national interest in freedom of navigation, open access to Asia’s maritime commons and respect for international law in the South China Sea.” Significantly, American and Chinese understandings of “freedom of navigation” differ. The US believes it includes the right to conduct military exercises and collect intelligence and militarily useful data, while China wants foreign naval ships and aircraft to seek China’s permission before entering its “internal waters” in the South China Sea.7 Since conflicts of national interests between major world powers can easily lead to friction and war, the escalating tensions between China and the US over these maritime disputes should be a serious cause for concern. The Systemic Conflict From a systemic perspective, the US-China conflict over the South China Sea may be seen as conflict between a rising power and a status quo power. For decades the US, through its Seventh Fleet and its Pacific Command, was the undisputed naval power in the Pacific. The American defeat in Vietnam in the 1970s and its later involvement in the wars in Afghanistan and Iraq have changed the situation. While the US reduced its military presence in Asia and got bogged down in two costly and draining wars, China’s economy was growing and its military modernization program was gaining momentum; Beijing, as a result, has become a dominant regional power economically, politically and militarily. Chinese leaders departed from Deng Xiaoping’s famous dictum to “hide your intention, bide for time,” and began to flex China’s muscles, particularly over the South China Sea. China’s assertion of its “historical right” to claim the sea is weak and doesn’t conform to either UNCLOS or customary international law. What China has been doing represents nothing less than an attempt to rewrite international law and impose its will on the region, shape global political realities and influence the “rules of the road” for the international order.8 The US, in both words and deeds, has signaled that it does not accept this. It has strengthened its military presence in Asia, revitalized its strategic relations with old allies and helped improve the defense capabilities of small countries in the region. In July 2012, when China created a prefectural-level city at Sansha, a small island in the South China Sea, and established a military garrison there to “exercise sovereignty over all land features inside the South China Sea,” the US State Department reacted by publicly denouncing China’s action as “counter to collaborative diplomatic efforts to resolve differences and risks further escalating tensions in the region,” while Congressman Howard Berman, a leading member of the House Committee on Foreign Relations, confirmed that the administration of US President Barack Obama had “repeatedly made clear to Beijing that the US will not allow China to assert hegemony over the region.”9 Conflicts of interests between rising powers and status quo powers have in the past accelerated arms races and led to war. The key questions are, can such a collision course be altered, and can the core conflicts between the two powers be resolved? **Possible End Games** There are a number of possible scenarios for resolving the South China Sea disputes. The first is that China moderates its excessive claims and strikes a deal with other coastal nations, with third-party arbitration or adjudication if necessary, based on recognized international law on territorial seas, exclusive economic zones and continental shelves. Before adopting its nine-dashed line, China had drawn an eleven-dashed line map, two lines of which were in the Gulf of Tonkin.10 This, however, did not prevent China and Vietnam from achieving an agreement on the demarcation of sea borders in that gulf. Moreover, Chinese officials have repeatedly denied that China has officially declared the South China Sea its “core interest,” leaving open the possibility of coming to an understanding regarding conflicting claims. Some Chinese scholars and experts working in government think tanks have privately acknowledged “the problematic nature of China’s policy in the South China Sea,” particularly with regard to “the status of the nine-dotted line.” These analysts and strategic thinkers have expressed concern that the tense situation in the South China Sea could sidetrack China’s “course of reform.”11 This leaves the door open for discussion and provides the space in which China might entertain possible concessions that would avoid embroiling China and its Southeast Asian neighbors in a long argument over China’s excessive claims. The second scenario is one in which China, taking advantage of the differential in power between it and other rival claimants, relies on a combination of unilateral actions, brinkmanship, piecemeal advances and divide-and-conquer tactics to gradually and steadily establish actual control of the sea area within the nine-dashed line. The standoff between China and the Philippines at Scarborough Shoal was a perfect example of how this possible scenario might unfold. The Scarborough Shoal standoff began in May 2012 when a Philippine Navy frigate was sent to investigate the area and boarded Chinese fishing boats in an area it claimed belonged to the Philippines’ EEZ. China responded by sending two unarmed China Maritime Surveillance vessels to interpose themselves between the frigate and the fishing boats and let them escape. Both sides sent in reinforcements. At the height of the standoff, there were a handful of Philippine boats facing almost 100 Chinese vessels. Faced with the overwhelming number of Chinese ships and without international support, the Philippine had to cut a deal in which both sides withdrew their ships. But after all the Philippine boats had withdrawn, China roped off the entrance to the shoal, effectively establishing its de facto control over the contested area. With that fait accompli, a new status quo in favor of China was established. This tactic of resorting to low-grade pressure to create a series of new “facts” may lead to what Toshi Yoshihara termed “strategic fatigue,” which could, in the long run, weaken resistance by rival claimants and lead to a grudging acceptance by the US of China’s claims.12 With this achieved, China would have effective control of navigation in the South China Sea and could dictate the use of that important sea-lane of communication. This approach is being resisted by ASEAN claimants and by other major powers that share the Pacific Ocean. Its success or failure will depend on two things: 1) whether China succeeds in its “divide-and-conquer” approach to ASEAN; and 2) whether ASEAN can summon the determination and capacity to act with a united front to resist China’s pressure and involve other major powers, especially the US. China’s current aggressive approach has caused friction and tension and, if unrestrained, may lead to military conflicts.13 In the long run, it will push many Asian countries closer to the US and may lead to a new kind of Cold War and containment, pitting a bloc of countries supporting the American vision of an Asian regional order against a group supporting the Chinese vision of an Asian regional order. This scenario is a nightmare for Southeast Asian countries that have worked so hard to strengthen ASEAN solidarity and promote the concept of ASEAN centrality, in order to avoid being caught up in the rivalry between the US and China. The third scenario is that China reaches an accommodation with the US, based on American recognition of China as an undisputed leader in the South China Sea, and a peaceful transition of leadership in the Asia-Pacific area from the US to China occurs. If this were to happen, it would unsettle all other Asian nations, big and small, but once the US began the accommodation process, other countries would simply have to fall in line. This process, however, would be dangerous globally and regionally. There is no guarantee, however, that if China were to dominate Asia, she would stop there. In response to the reality of a spectacularly rising China and an America burdened with economic problems and a dysfunctional government, scholars such as Adam Quinn have focused on the beginning of a power transition from the US, a declining power, to China, a rising power.14 Chinese strategic thinkers have not missed the possibility that the current contest over the South China Sea may represent the first steps toward this transition. Ding Gang, a senior editor at the Communist Party’s People’s Daily, commented: “It’s still unknown if the US plans to input equally massive manpower and financial resources as China has injected into this region. It’s very likely that the US lacks the motivation to do this in the long run. And China may become the strongest economic, political and military power in Asia.”15 The problem with this scenario is that it neglects the extent to which the two key players involved in this transition — China and the US — are regimes that represent incompatible visions of the future of the region and the world. A peaceful transition of power took place from the British Empire to the American Empire, largely because it was a case of one democracy replacing another, trading roles as the sentinels of shared regional interests. The British were willing to relinquish their dominance and were assured that, with another democracy taking the helm, its security and wellbeing were not threatened. But the clash between undemocratic revisionist powers (Germany, Italy and Japan) and democratic powers in the 1930s led to the Second World War. Regionally, this scenario would be most undesirable for smaller ASEAN countries and is unlikely to occur so long as the US has the capacity and the determination to maintain its supremacy in the Asia-Pacific region, a determination that has been strongly restated by US leaders, from the president to the secretaries of defense and state as well as by leading members of Congress.16 Aaron Friedberg points out that the ideological gap between China and the US is too great and the level of trust too low to facilitate an accommodation. He makes the case that China’s ultimate goal of regional hegemony would run counter to the US “grand strategy, which has remained constant for decades: to prevent the domination of either end of the Eurasian landmass by one or more potentially hostile powers.”17  |

**Territorial disputes snowball - causes nuclear conflict**

**Chakraborty 10**

(Tuhin Subhro Chakraborty, Research Associate at Rajiv Gandhi Institute for Contemporary Studies (RGICS), his primary area of work is centered on East Asia and International Relations. His recent work includes finding an alternative to the existing security dilemma in East Asia and the Pacific and Geo Political implications of the ‘Rise of China’. Prior to joining RGICS, he was associated with the Centre for Strategic Studies and Simulation, United Service Institution of India (USI) where he examined the role of India in securing Asia Pacific. He has coordinated conferences and workshops on United Nation Peacekeeping Visions and on China’s Quest for Global Dominance. He has written commentaries on issues relating to ASEAN, Asia Pacific Security Dilemma and US China relations. He also contributed in carrying out simulation exercise on the ‘Afghanistan Scenario’ for the Foreign Service Institute (FSI). Tuhin interned at the Indian Council of World Affairs (ICWA), Sapru House, wherein he worked on the Rise of People’s Liberation Army (PLA) military budget and its impact on India. He graduated from St. Stephen’s College, Delhi and thereafter he undertook his masters in East Asian Studies from University of Delhi. His areas of interest include China, India-Japan bilateral relations, ASEAN, Asia Pacific security dynamics and Nuclear Issues, The United States Service Institution of India, 2010, “The Initiation & Outlook of ASEAN Defence Ministers Meeting (ADMM) Plus Eight”, <http://www.usiofindia.org/Article/?pub=Strategic%20Perspective&pubno=20&ano=739>)

The first ASEAN Defence Ministers Meeting Plus Eight (China, India, Japan, South Korea, Australia, New Zealand, Russia and the USA) was held on the 12th of October. When this frame work of ADMM Plus Eight came into news for the first time it was seen as a development which could be the initiating step to a much needed security architecture in the Asia Pacific. Asia Pacific is fast emerging as the economic center of the world, consequently securing of vulnerable economic assets has becomes mandatory. The source of threat to economic assets is basically unconventional in nature like natural disasters, terrorism and maritime piracy. This coupled with the conventional security threats and **flashpoints** **based on territorial disputes** and political differences **are** very much a part of the region posing **a major security challenge.¶** As mentioned ADMM Plus Eight can be seen as the first initiative on such a large scale where the security concerns of the region can be discussed and areas of cooperation can be explored to keep the threats at bay. The defence ministers of the ten ASEAN nations and the eight extra regional countries (Plus Eight) during the meeting have committed to cooperation and dialogue to counter insecurity in the region. One of the major reasons for initiation of such a framework has been the new face of threat which is non-conventional and transnational which makes it very difficult for an actor to deal with it in isolation. Threats related to violent extremism, maritime security, vulnerability of SLOCs, transnational crimes have a direct and indirect bearing on the path of economic growth. Apart from this the existence of **territorial** **disputes** especially **on the maritime** **front** **plus** **the** issues related to political differences, **rise of China** and dispute on the Korean Peninsula **has aggravated the security dilemma** in the region **giving rise to** areas of **potential** **conflict**. This can be seen as a more of a conventional threat to the region.¶ The question here is that how far this ADMM Plus Eight can go to address the conventional security threats or is it an initiative which would be confined to meetings and passing resolution and playing second fiddle to the ASEAN summit. It is very important to realize that when one is talking about effective security architecture for the Asia Pacific one has to talk in terms of addressing the conventional issues like the **territorial** and political **disputes**. These issues **serve as bigger flashpoint which can snowball into** a major conflict which has the possibility of turning into a **nuclear conflict.**

### Solvency

#### DoD acquisition of SMR’s ensures rapid military adoption and commercialization, and prevents unfavorable tech lock-in

**Andres and Breetz 11**

Richard Andres, Professor of National Security Strategy at the National War College and a Senior Fellow and Energy and Environmental Security and Policy Chair in the Center for Strategic Research, Institute for National Strategic Studies, at the National Defense University, and Hanna Breetz, doctoral candidate in the Department of Political Science at The Massachusetts Institute of Technology, Small Nuclear Reactorsfor Military Installations:Capabilities, Costs, andTechnological Implications, [www.ndu.edu/press/lib/pdf/StrForum/SF-262.pdf](http://www.ndu.edu/press/lib/pdf/StrForum/SF-262.pdf)

Thus far, this paper has reviewed two of DOD’s most pressing energy vulnerabilities—grid insecurity and fuel convoys—and explored how they could be addressed by small reactors. We acknowledge that there are many uncertainties and risks associated with these reactors. On the other hand, **failing to pursue these technologies raises its own set of risks for DOD,** which we review in this section: first, **small reactors may fail to be commercialized in the U**nited **S**tates; second, **the designs that get locked in by the private market may not be optimal for DOD’s needs**; and third, **expertise on small reactors may become concentrated in foreign countries**. **By taking an early “first mover” role in the small reactor market, DOD could mitigate these risks and secure the long-term availability and appropriateness of these technologies for U.S. military applications.** The “Valley of Death.” Given the promise that small reactors hold for military installations and mobility, **DOD has a compelling interest in ensuring that they make the leap from paper to production**. However, **if DOD does not provide an initial** demonstration and **market, there is a chance that the U.S. small reactor industry may never get off the ground**. **The leap from the laboratory to the marketplace is so difficult to bridge that it is widely referred to as the “Valley of Death.”** **Many promising technologies are never commercialized due to a variety of market failures**— **including technical and financial uncertainties**, information asymmetries, **capital market imperfections, transaction costs**, and environmental and security externalities— **that impede financing and early adoption** **and can lock innovative technologies out of the marketplace**. 28 In such cases, **the Government can help a worthy technology to bridge the Valley of Death by accepting the first mover costs and demonstrating the technology’s scientific and economic viability**.29 [FOOTNOTE 29: **There are** numerous **actions that the Federal Government could take**, such as conducting or funding research and development, stimulating private investment, demonstrating technology, mandating adoption, and guaranteeing markets. **Military procurement** is thus only one option, but it has often **played a decisive role in technology development and is likely to be the catalyst for the U.S. small reactor industry.** See Vernon W. Ruttan, Is War Necessary for Economic Growth? (New York: Oxford University Press, 2006); Kira R. Fabrizio and David C. Mowery, “The Federal Role in Financing Major Inventions: Information Technology during the Postwar Period,” in Financing Innovation in the United States, 1870 to the Present, ed. Naomi R. Lamoreaux and Kenneth L. Sokoloff (Cambridge, MA: The MIT Press, 2007), 283–316.] Historically, **nuclear power has been “the most clear-cut example . . . of an important general-purpose technology that in the absence of military** and defense related **procurement would not have been developed at all.”**30 **Government involvement is likely to be crucial for innovative, next-generation nuclear technology** as well. Despite the widespread revival of interest in nuclear energy, Daniel Ingersoll has argued that radically innovative **designs face an uphill battle, as “the high capital cost of nuclear plants and the painful lessons learned during the first nuclear era have created a prevailing fear of first-of-a-kind designs**.”31 In addition, **M**assachusetts **I**nstitute of **T**echnology reports on the Future of Nuclear Power **called for the Government to provide modest “first mover” assistance to the private sector due to several barriers that have hindered the nuclear renaissance**, such as securing high up-front costs of site-banking, gaining NRC certification for new technologies, and demonstrating technical viability.32 It is possible, of course, that small reactors will achieve commercialization without DOD assistance. As discussed above, they have garnered increasing attention in the energy community. Several analysts have even argued that small reactors could play a key role in the second nuclear era, given that they may be the only reactors within the means of many U.S. utilities and developing countries.33 However, **given the tremendous regulatory hurdles and technical and financial uncertainties, it appears far from certain that the U.S. small reactor industry will take off. If DOD wants to ensure that small reactors are available in the future, then it should pursue a leadership role now.** Technological Lock-in. **A second risk is that if small reactors do reach the market without DOD assistance, the designs that succeed may not be optimal for DOD’s applications**. **Due to a variety of positive feedback and increasing returns to adoption** (including demonstration effects, technological interdependence, network and learning effects, and economies of scale), **the designs that are initially developed can become “locked in.”**34 **Competing designs**—even if they are superior in some respects or better for certain market segments— **can face barriers to entry that lock them out of the market. If DOD wants to ensure that its preferred designs are not locked out, then it should take a first mover role on small reactors.** It is far too early to gauge whether the private market and DOD have aligned interests in reactor designs. On one hand, Matthew Bunn and Martin Malin argue that what the world needs is cheaper, safer, more secure, and more proliferation-resistant nuclear reactors; presumably, many of the same broad qualities would be favored by DOD.35 **There are many varied market niches that could be filled by small reactors, because there are many different applications** and settings in which they can be used, and it is quite possible that some of those niches will be compatible with DOD’s interests.36 On the other hand, **DOD may have specific needs** (transportability, for instance) **that would not be a high priority for any other market segment.** Moreover, while DOD has unique technical and organizational capabilities that could enable it to pursue more radically innovative reactor lines, DOE has indicated that it will focus its initial small reactor deployment efforts on LWR designs.37 **If DOD wants to ensure that its preferred reactors are developed and available in the future, it should take a leadership role now. Taking a first mover role does not** necessarily **mean that DOD would be “picking a winner” among small reactors**, as the market will probably pursue multiple types of small reactors. **Nevertheless, DOD leadership would likely have a profound effect on the industry’s timeline and trajectory.** Domestic Nuclear Expertise. From the perspective of larger national security issues, **if DOD does not catalyze the small reactor industry, there is a risk that expertise in small reactors could become dominated by foreign companies**. A 2008 Defense Intelligence Agency report warned that the United States will become totally dependent on foreign governments for future commercial nuclear power unless the military acts as the prime mover to reinvigorate this critical energy technology with small, distributed power reactors.38 **Several of the most prominent small reactor concepts rely on technologies perfected at Federally funded laboratories and research programs**, including the Hyperion Power Module (Los Alamos National Laboratory), NuScale (DOE-sponsored research at Oregon State University), IRIS (initiated as a DOE-sponsored project), Small and Transportable Reactor (Lawrence Livermore National Laboratory), and Small, Sealed, Transportable, Autonomous Reactor (developed by a team including the Argonne, Lawrence Livermore, and Los Alamos National Laboratories). **However, there are scores of competing designs under development from over a dozen countries. If DOD does not act early to support the U.S. small reactor industry, there is a chance that the industry could be dominated by foreign companies**. Along with other negative consequences, **the decline of the U.S. nuclear industry decreases the NRC’s influence on the technology that supplies the world’s rapidly expanding demand for nuclear energy. Unless U.S. companies begin to retake global market share, in coming decades France, China, South Korea, and Russia will dictate standards on nuclear reactor reliability, performance, and proliferation resistance**.

**DoD key- avoids regulations**

Butler 11

Glen Butler, Lt. Col., 2011, Not Green Enough, [www.mca-marines.org/gazette/not-green-enough](http://www.mca-marines.org/gazette/not-green-enough)

**SMRs have relatively low plant cost**, can replace aging fossil plants, and do not emit greenhouse gasses. Some are as small as a “hot tub” and can be stored underground, dramatically increasing safety and security from terrorist threats.25 Encouragingly, in fiscal year 2010 (FY10) the **DoE allocated** $0 to **the U.S. SMR Program**; in FY11, they’ve requested $38.9 million. This **funding is to support** two main activities—**public/private partnerships to advance** SMR **designs and research** **and** development and **demonstrations**. According to the DoE’s website, one of the planned program accomplishments for FY11 is to “collaborate with the Department of Defense (DoD) . . . to assess the feasibility of SMR designs for energy resources at DoD installations.”26 The Marine Corps should vigorously seek the opportunity to be a DoD entity providing one platform for this feasibility assessment.27 Fourth, **SMR** technology **offers** the Marine Corps **a**nother **unique means to lead from the front**—not just of the other Services but also of **the Nation, and** even **the world**.28 **This** potential Pete Ellis **moment should be seized**. There are simple steps we could take, and others stand ready to lead if we are not.30 But **the temptation to “wait and see” and “let the others do it; then we’ll adopt it” mentality is not** always **best**. **Energy security demands boldness**, not timidity. To be fair, nuclear technology comes with challenges, of course, and with questions that have been kicked around for decades. An April 1990 Popular Science article asked, “Next Generation Nuclear Reactors—Dare we build them?” and included some of the same verbiage heard in similar discussions today.31 Compliance with National Environment Policy Act requirements necessitates lengthy and detailed preaction analyses, critical community support must be earned, and disposal challenges remain. Still, none of these hurdles are insurmountable. Yet despite the advances in safety, security, and efficiency in recent years, nuclear in the energy equation remains the new “n-word” for most military circles. And despite the fact that the FY10 National Defense Authorization Act called on the DoD to “conduct a study [of] the feasibility of nuclear plants on military installations,” the Office of the Secretary of Defense has yet to fund the study. Fifth**, the** **cumbersome, bureaucratic certification** **process** **of** **the** Nuclear Regulatory Commission (**NRC**), often **enough to scare away potential entrepreneurs and investors, is not** **necessarily** **a roadblock to success**. The NRC is “responsible for licensing and regulating the operation of commercial nuclear power plants in the United States.” **Military installations offer unique platforms that** could likely **bypass** an extended **certification** process. **With established expertise and a long safety record in nuclear reactor certification**, operations, training, and maintenance, the Naval Nuclear Propulsion Program comprises the civilian and military personnel who: . . . design, build, operate, maintain, and manage the nuclear-powered ships and the many facilities that support the U.S. nuclear-powered naval fleet.”34 **Bypassing the NRC and initiating SMR experimentation** under ADM Hyman Rickover’s legacy umbrella of naval reactors **could shorten the process to a reasonable level for** Marine and naval **installations**.35

#### They have the personnel and expertise

Robitaille 12

(George, Department of Army Civilian, United States Army War College, “Small Modular Reactors: The Army’s Secure Source of Energy?” 21-03-2012, Strategy Research Project)

Section 332 of the FY2010 National Defense Authorization Act (NDAA), “Extension and Expansion of Reporting Requirements Regarding Department of Defense Energy Efficiency Programs,” requires the Secretary of Defense to evaluate the cost and feasibility of a policy that would require new power generation projects established on installations to be able to provide power for military operations in the event of a commercial grid outage.28 A potential solution to meet this national security requirement, as well as the critical needs of nearby towns, is for DoD to evaluate SMRs as a possible source for safe and secure electricity. **Military facilities depend on reliable sources of energy to operate, train, and support national security missions. The power demand for most military facilities is not very high, and could easily be met by a SMR.** Table 1 provides the itemized description of the annual energy requirements in megawatt of electricity (MWe) required for the three hundred seventy four DoD installations.29 DoD History with SMRs **The concept of small reactors for electrical power generation is not new**. In fact, **the DoD built and operated small reactors for applications on land and at sea**. **The U.S. Army operated eight nuclear power plants from 1954 to 1977. Six out of the eight reactors built by the Army produced operationally useful power for an extended period, including the first nuclear reactor to be connected and provide electricity to the commercial grid**. 30 The Army program that built and operated compact nuclear reactors was ended after 1966, not because of any safety issues, but strictly as a result of funding cuts in military long range research and development programs. In essence, it was determined that the program costs could only be justified if there was a unique DoD specific requirement. At the time there were none.31 Although it has been many years since these Army reactors were operational, the independent source of energy they provided at the time is exactly what is needed again to serve as a secure source of energy today. Many of the nuclear power plant designs used by the Army were based on United States Naval reactors. Although the Army stopped developing SMRs, **the Navy as well as the private sector has continued to research, develop, and implement improved designs** to improve the safety and efficiency of these alternative energy sources. The U.S. Navy nuclear program developed twenty seven different power plant systems and almost all of them have been based on a light water reactor design.32 This design focus can be attributed to the inherent safety and the ability of this design to handle the pitch and roll climate expected on a ship at sea. **To date, the U. S Navy operated five hundred twenty six reactor cores in two hundred nineteen nuclear powered ships, accumulated the equivalent of over six thousand two hundred reactor years of operation and safely steamed one hundred forty nine million miles**. **The U.S. Navy has never experienced a reactor accident**.33 All of the modern Navy reactors are design to use fuel that is enriched to ninety three percent Uranium 235 (U235) versus the approximate three percent U235 used in commercial light water reactors. The use of highly enriched U235 in Navy vessels has two primary benefits, long core lives and small reactor cores.34 The power generation capability for naval reactors ranges from two hundred MWe (megawatts of electricity) for submarines to five hundred MWe for an aircraft carrier. A Naval reactor can expect to operate for at least ten years before refueling and the core has a fifty year operational life for a carrier or thirty to forty years for a submarine.35 As an example, the world’s first nuclear carrier, the USS Enterprise, which is still operating, celebrated fifty years of operations in 2011.36 The Navy nuclear program has set a precedent for safely harnessing the energy associated with the nuclear fission reaction. In addition, **the Navy collaborates with the private sector to build their reactors and then uses government trained personnel to serve as operators**. **Implementing the use of SMRs as a secure source of energy for our critical military facilities will leverage this knowledge and experience**.

**SMRs are cost-effective, safe, can be quickly deployed, and solve waste**

**Szondy 12**

David, freelance writer based in Monroe, Washington. An award-winning playwright, he has contributed to Charged and iQ magazine and is the author of the website Tales of Future Past, February 16, "Feature: Small modular nuclear reactors - the future of energy?", [www.gizmag.com/small-modular-nuclear-reactors/20860/](http://www.gizmag.com/small-modular-nuclear-reactors/20860/)

One way of getting around many of these problems is through the development of small modular reactors (**SMR**). These **are** reactors **capable of generating** about **300 megawatts** of power or less, **which is enough to run 45,000** US **homes**. Though small, SMRs are proper reactors. They are quite different from the radio-thermal generators (RTG) used in spacecraft and remote lighthouses in Siberia. Nuclear reactors such as **SMRs use controlled nuclear fission to generate power while RTGs use** natural **radioactive decay to power a** relatively simple **thermoelectric generator that can only produce**, at most, about **two kilowatts.¶** In terms of power, RTGs are the equivalent of batteries while small nuclear reactors are only "small" when compared to conventional reactors. They are hardly the sort that you would keep in the garage. In reality, SMR power plants would cover the area of a small shopping mall. Still, such an installation is not very large as power plants go and a reactor that only produces 300 megawatts may not seem worth the investment, but the US Department of Energy is offering US$452 million in matching grants to develop SMRs and private investors like the Bill Gates Foundation and the company of Babcock and Wilcox are putting up money for their own modular reactor projects.¶ The 60-year old breakthrough¶ **One reason for government and private industry to take an interest in SMRs is that they've** **been successfully employed for much longer than most people realize.** In fact, **hundreds have been steaming around the world inside** the hulls **of nuclear submarines and other warships for sixty years. They've also been used in merchant ships, icebreakers and as research and medical isotope reactors** at universities. There was even one installed in the Antarctic at McMurdo Station from 1962 to 1972. Now they're being considered for domestic use.¶ The case for SMRs¶ SMRs have a number of advantages over conventional reactors. For one thing, **SMRs are cheaper to construct and run.** This makes them very attractive to poorer, energy-starved countries; small, growing communities that don't require a full-scale plant; and remote locations such as mines or desalination plants. Part of the reason for this is simply that the reactors are smaller. Another is that, not needing to be custom designed in each case, the **reactors can be standardized and some types built in factories that are able to employ economies of scale.** The factory-built aspect is also important because **a factory is more efficient than on-site construction by as much as eight to one in terms of building time.** **Factory construction also allows SMRs to be built, delivered to the site, and then returned to the factory for dismantling** at the end of their service lives - **eliminating a major problem with old** conventional **reactors, i.e. how to dispose of them.¶** **SMRs** also **enjoy** a good deal of **design flexibility. Conventional reactors are** usually **cooled by water** - a great deal of water - **which means that the reactors need to be situated near rivers or coastlines. SMRs**, on the other hand, **can be cooled by air, gas, low-melting point metals or salt.** This means that **SMRs can be placed in remote**, inland **areas** where it isn't possible to site conventional reactors.¶ Safety¶ This cooling system is often passive. In other words, it relies more on the natural circulation of the cooling medium within the reactor's containment flask than on pumps. This passive cooling is one of the ways that **SMRs can improve safety**. Because modular reactors are smaller than conventional ones, **they contain less fuel**. This means that **there's less of a mass to be affected if an accident occurs.** If one does happen, **there's less radioactive material that can be released** into the environment and makes it easier to design emergency systems. Since they are smaller and use less fuel, **they are easier to cool effectively, which** greatly **reduces the likelihood of a catastrophic accident or meltdown** in the first place.¶ This also means that **accidents proceed much slower in modular reactors** than in conventional ones. **Where the latter need accident responses in** a matter of hours or **minutes**, **SMRs can be responded to in** hours or **days**, which reduces the chances of an accident resulting in major damage to the reactor elements.¶ **The SMR designs that reject water cooling in favor of gas, metal or salt have their own safety advantages**. Unlike water-cooled reactors, **these media operate at a lower pressure.** **One of the hazards of water cooling is that a cracked pipe or a damaged seal can blow radioactive gases out** like anti-freeze out of an overheated car radiator**. With low-pressure media, there's less force to push gases out and there's less stress placed on the containment vessel. It** also **eliminates one of the** frightening **episodes of the Fukushima accident where the water in the vessel broke down into hydrogen and oxygen and then exploded.¶** Another advantage of modular design is that some **SMRs are small enough to be installed below ground.** That is cheaper, faster to construct and less invasive than building a reinforced concrete containment dome. There is also the point that **putting a reactor in the ground makes it less vulnerable to earthquakes. Underground installations make modular reactors easier to secure and install** in a much smaller footprint. **This makes SMRs particularly attractive to military customers who need to build power plants for bases quickly.** **Underground installation also enhances security** with fewer sophisticated systems needed, which also helps bring down costs.¶ **SMRs can help with proliferation, nuclear waste and fuel supply issues because, while some modular reactors are based on conventional pressurized water reactors and burn enhanced uranium, others use less conventional fuels. Some**, for example, can **generate power from** what is now regarded as "**waste", burning depleted uranium and plutonium left over** from conventional reactors. **Depleted uranium is** basically U-238 from which the fissible U-235 has been consumed. It's also much **more abundant** in nature than U-235, **which has the potential of providing the world with energy for thousands of years. Other reactor design**s don't even use uranium. Instead, they **use thorium**. This fuel is also incredibly abundant, is easy to process for use as fuel and has the added bonus of being utterly useless for making weapons, so it can provide power even to areas where security concerns have been raised.¶ But there's still the sticking point that modular reactors are, by definition, small. That may be fine for a submarine or the South Pole, but what about places that need more? Is the alternative conventional nuclear plants? It turns out that the answer is no. **Modular reactors don't need to be used singly. They can be set up in batteries of five or six** or even more, **providing as much power as an area needs.** And if one unit needs to be taken off line for repairs or even replacement, it needn't interfere with the operation of the others.

**Nuclear power is inevitable**

IAEA applications

Middle class

Population growth

Urbanization

Warming

Desal

**Ebinger and Squassoni 11**

Charles K Ebinger and Sharon Squassoni 11, Charles is senior fellow and director of the Energy Security Initiative at the Brookings Institution, Sharon is senior fellow and director of the Proliferation Prevention Program at the Center for Strategic and International Studies, “Industry and Emerging Nuclear Energy Markets” in “Business and Nonproliferation”, googlebooks

As mentioned previously, **a notable feature of the nuclear renaissance is the widespread interest in nuclear power, especially in countries without a commercial nuclear infrastructure. According to the** International Atomic Energy Agency (**IAEA**), at least **sixty-five countries have expressed** such **interest**, most from outside the industrialized economies of the Organization of Economic Cooperation and Development (OECD), the main locus of nuclear power capacity at present. **Most of the capacity growth up to 2030 is expected to occur in the Middle East, South Asia, Southeast Asia, and the Far East**. As part of this growth, **eleven developing countries are serious candidates for first reactors**, although progress in carrying out their plans varies widely (see table 4-1). **These countries are drawing new suppliers into the nuclear market** (notably China, India, and South Korea) **and sparking activity among existing suppliers** such as Russia and Japan. Overall, however, many countries will not be able to follow through on growth plans owing to cost, limited grid capacity, and perhaps public resistance. **Countries are moving toward nuclear energy**, not the mention other sources of primary fuel, in large part **because of mounting demand: between 2008 and 2035 global electricity consumption is expected to increase 80 percent, and 80 percent of that growth will take place in non-OECD countries**. **Underlying this large increase in electricity demand are population growth, urbanization, concerns about CO2 emissions from fossil fuel combustion, energy security, and pressure from a growing middle class for goods and services using or produced by electricity**. **Over this period, global population will rise from 6.7 billion to 8.5 billion, with 7.2 billion of the total living in non-OECD countries**. **Most of this increase will take place in China, India, and the Middle East**, with the balance in the rest of the developing world, while the share of the global population in the OECD and Russia will decline. Today nearly 1.4 billion people have no electricity, a figure that may well increase with further population growth, despite movement into the modern energy economy. **Urbanization will undoubtedly push demand up as well**. For the first time in history, a majority of the world’s population is living in urban areas, a trend likely to continue, especially in developing countries. **With the movement of hundreds of millions of people from rural areas to cities, more communities will turn from traditional** and often free **fuels** (wood, forest residues, agricultural wastes, bagasse, and dung) **to modern fuels such as electricity, natural gas, and petroleum products**. **The dramatic growth of the middle class in a number of emerging market nations is also having a large impact on energy consumption. The World Bank predicts that by 2030 the middle class in these nations will jump to 1.2 billion from 430 million in 2000**. It is estimated that in India alone, a country that before Fukushima was developing plans for nuclear power, the number of households with an annual disposal income of $5,000-$15,000 will increase from 36 percent of the population in 2010 to more than 58 percent by 2020. **Climate change**, too, **will have some of its largest impact in developing countries**, which, according to the International Energy Agency (IEA), will be responsible for nearly all of the projected global increase in CO2 emissions by 2035. In large part, the cause of this rise is coal-fired power in China and India. **The urgency of finding alternatives to coal is recognized by** others as well, including **Indonesia, Pakistan, Poland, South Africa, and Russia**. Compared with developed countries, developing nations rely far more on imported fossil fuels, especially oil, to generate power. When the price of oil on the world market rose to $147 a barrel in 2008, it became clear that dependence on imported fossil fuels for electricity generation can destroy a nation’s economy and that fuel diversification is vital for energy security. As prices climbed beyond $100 a barrel, Jordan, a country committed to introducing civilian nuclear energy, was particularly hard hit: 99 percent of its electricity is generated from either oil or gas, 96 percent of which is imported. **Developing countries also see nuclear energy as a possible source of power for desalination plants, especially in the** Gulf Cooperation Council (**GCC**) **countries and elsewhere in the Middle East**. **As the demand for freshwater supplies increases** – along with the emphasis on limited the use of fossil fuels to generates electricity because of the impact of emissions, price volatility, and supply disruptions – **the nuclear option will be considered even more viable**. Moreover, some **countries with large resources of oil or gas**, **such as the** United Arab Emirates (**UAE**) **and Saudi Arabia**, **are hoping nuclear power will help reduce their domestic use of these fuels in generating power and will boost the financial benefits of exporting them**. **For some developing countries, status and geopolitics are undoubtedly important factors in considering the development or expansion of a civilian nuclear energy program**. **In the view of Turkey’s energy minister** Hilmi Guler, for instance, **nuclear technology is a requirement for a seat at the table with the ten most developed countries in the world**.

## 2AC

### Case

#### No labor shortage

Reinhardt and Murray ’08, [Sonya Reinhardt, Master of Environmental Management degree in the Nicholas School of the Environment and Earth Sciences of Duke University, Dr. Brian Murray, Prof of Environmental Management degree in the Nicholas School of the Environment and Earth Sciences of Duke University, May 2008“Economic Barriers to the Expansion of Nuclear Power in the United States”, <http://dukespace.lib.duke.edu/dspace/bitstream/handle/10161/526/MP_sbr7_a_200805.pdf>]

A labor shortage is not a large enough barrier to stop an expansion of new nuclear power. Not only is the nuclear industry recruiting the next generation of nuclear power plant workers, but labor immigration, which has traditionally solved this problem during other labor shortage periods, may also relieve this challenge. The global supply of uranium is not a large enough barrier to halt a new nuclear power plant build. The spot prices will continue to be volatile since the 2007 agreement between Ux Consulting and Nymex, which introduced the trading of uranium futures products for the frst time, but uranium extraction will continue to be viable for at least the next 50 years.

**Emerging dynamics means conflict will escalate- 6 reasons**

- no cooling off periods

- New ASEAN secretary general is anti-China

- New ASEAN chair is too weak to hammer out a deal

- India getting involved

- more resources will be found

- new Chinese leadership won’t back down

**Kurlantzick 12/6**/12

[Joshua Kurlantzick, Fellow for Southeast Asia @ Council on Foreign Relations. <http://blogs.cfr.org/asia/2012/12/06/south-china-sea-going-to-get-worse-before-it-might-gets-better/> ETB]

This week’s latest South China Sea incident, in which a Chinese fishing boat cut a Vietnamese seismic cable —at least according to Hanoi— is a reminder that, despite the South China Sea dominating nearly every meeting in Southeast Asia this year, **the situation in the Sea appears to be getting worse.** **This is in contrast to flare-ups in the past, when after a period of tension, as in the mid-1990s, there was usually a cooling-off period**. Although there have been several **brief cooling-off periods** in the past two years, including some initiated by senior Chinese leaders traveling to Southeast Asia, **they have not stuck, and the situation continues to deteriorate** and get more dangerous.¶ **In the new year, it will likely get even worse. Here’s why:**¶ **The new** Association of Southeast Asian Nations (**ASEAN) secretary-general comes from Vietnam**. Over the past three years, a more openly forceful **China has found it difficult to deal with ASEAN leaders who even voice ASEAN concerns**. But **these leaders,** like former Thai foreign minister and ASEAN Secretary-General Surin Pitsuwan, were **nothing compared to the new ASEAN secretary-**general, Vietnamese Deputy Foreign Minister Le Luong Minh. Although he is a career diplomat and certainly can be suave and attentive, **he** is still a former Vietnamese official, and undoubtedly **will bring** with him some of **the Vietnamese perspective toward China, which is quickly turning more acrid.**¶ **This year’s ASEAN chair is Brunei**. Keeping to its tradition of rotating the chair every year, in 2013 ASEAN will be headed by Brunei. Although some might think Brunei’s leadership will be better for stability than the 2012 ASEAN leadership of Cambodia, perceived by many other ASEAN members as carrying China’s water, the fact that **Brunei** is just as much of a diplomatic minnow as Cambodia **will mean there is no powerful wrangler in the chair’s seat to hammer out a common ASEAN perspective.** Were Indonesia or Singapore the chair, the situation might be different.¶ **India is playing a larger** and larger **role in the South China Sea, adding even more potential players to the mix, and more powerful navies**. **The recent warning by Beijing that India and Vietnam should not engage in joint exploration is only going to lead to a harsher Indian response, since Indian elites pay far more attention to —and are more easily aggrieved by— China than the reverse.**¶ **The more they look, the more likely they will fin**d. As reported by the New York Times, “On Monday, China’s National Energy Administration named the South China Sea as the main offshore site for natural gas production. Within two years, China aims to produce 150 billion cubic meters of natural gas from fields in the sea, a significant increase from the 20 billion cubic meters produced so far, the agency said.” Although I do not think that the oil and gas potential in the Sea is the biggest driver of conflict, compared to its strategic value**, the more China** (and anyone else) **explores for energy in the Sea, the more likely they will** (eventually) **come up with potential deposits that will only raise the stakes**, if the forecasts of the Sea’s petroleum potential are to be believed.¶ **A new Chinese leadership is unlikely to want to show any weakness.** **With the leadership of this generation even more split than in the past, following** a contentious Party Congress, **continued infighting among acolytes of the major Chinese leaders,** and the Bo Xilai fiasco, **the new leadership is in no position, with Party members and the general educated public, to give any room on a contentious issue like the South China Sea.**¶The Obama administration has passed its period of focusing on more effective dialogue and crisis mediation with China. Officials from the administration’s first term, who naturally had the highest hopes for better dialogue, are gone, with many of them leaving just as convinced as their Bush predecessors that real dialogue was difficult if not impossible. Don’t expect a second term to yield better results with such a dialogue.

### Immigration

**Budget fights outweigh---consumes agenda**

**Helderman 1/1** Rosalind S, "After a 'fiscal cliff' deal, what next?", 2013, www.washingtonpost.com/politics/after-a-fiscal-cliff-deal-what-next/2012/12/31/b9d9a452-5384-11e2-bf3e-76c0a789346f\_story.html?wprss=rss\_politics

**Assuming the deal is approved** by the House, **it will** nevertheless **give way to a nearly continuous series of fights that will consume the first part of the year, even as** President **Obama might hope to shift Congress’s attention to immigration** reform **and gun control**.¶ “**It’s become less** like **a** fiscal **cliffhanger and more like a journey over the fiscal mountains**,” said Rep. Jeff Fortenberry (R-Neb.).¶ **The next big deadline is likely to come around the end of February**, when the Treasury Department will exhaust the measures now in place **to extend the** nation’s $16.4 trillion **debt ceiling**. At that point, the government will not be able to pay its bills unless Congress votes to raise the nation’s legal borrowing limit.¶ **Republicans hope to use that** moment **to force Obama and congressional Democrats to agree to major spending cuts in return** for the increase — **in what could be a sequel to the contentious face-off over the debt limit in** the summer of **2011**.¶ Provided Monday’s deal is approved, **in** early **March would come another deadline: the $110 billion cut in spending**, half from the Pentagon, **delayed as part of this deal**.¶ **A month** or so **later** — on March 27 — **a short-term measure that funds government agencies will lapse. Without a renewal, the government will shut down, setting up another possible showdown**.¶ “**Round two’s coming**,” said Sen. Lindsey O. Graham (R-S.C.). “**And we’re going to have one hell of a contest about the direction and the vision of this country**.”¶ Many **Republicans believe they’ll have more leverage** then than they do now **because the debate over tax rates on the wealthy will be settled.**

**Gun fights thump**

**Price 1/3**

[Bob, Bob Price is a political commentator for TexasGOPVote.com. He is an expert about issues related to border security and illegal immigration. “Immigration Reform Program Announced by Obama Administration” <http://texasgopvote.com/issues/fix-immigration/immigration-reform-program-announced-obama-administration-004981>]

The order in which these two issues are addressed could have a lot to do with their outcome. **If the President pushes for gun control first, he will fire up many Democrats and nearly all Republicans** against him **at the expense of much political capital making immigration reform almost impossible** as a next step. However,  **if he pushes the immigration reform first, he may well re-awaken the Tea Party groups causing them to become mobilized** and activated which would further endanger any gun control legislation.

**Immigration reform won’t pass – Democratic strategy to intentionally fail**

**Munro 12/31/12**

(Neil Munro “Obama promises new immigration plan but keeps endgame close to his vest” 1:44 AM 12/31/2012 <http://dailycaller.com/2012/12/31/obama-promises-new-immigration-plan-but-keeps-endgame-close-to-his-vest/?print=1>, TSW)

**President Barack Obama promised** Dec. 30 **to introduce an immigration bill during 2013**, but activists on all sides of the debate are trying to understand his strategy.¶ He **may be gunning** **for** a **victory in the mid-term** elections by **introducing a bill** **so radical** that **it will spark** an emotional **controversy** from whites, which would then spur many angry Latinos to vote Democratic in the 2014 midterm elections, said Robert de Posada, former head of a GOP-affiliated group, The Latino Coalition.¶ “The word that I’ve heard from many, i**s [that he will] submit a very, very liberal plan that most Republicans will not support, that most southern and moderate Democrats will not support**,” he said.¶ **When the bill fails,** **“they can announce once again that they tried [and that Latinos] need to rally in the next election**,” said Posada, who helped President George W. Bush win 40 percent of the Latino vote in 2004, during the housing boom.¶

**Not at the top of the docket, Obama focused on energy**

**Munro 12/31/12**

(Neil Munro “Obama promises new immigration plan but keeps endgame close to his vest” 1:44 AM 12/31/2012 <http://dailycaller.com/2012/12/31/obama-promises-new-immigration-plan-but-keeps-endgame-close-to-his-vest/?print=1>, TSW)

“I’ve said that fixing our broken immigration system is a top priority,” he told interviewer David Gregory, who is now under police investigation for violating D.C. law by brandishing a 30-bullet magazine on his Dec. 23 show.¶ “I will introduce legislation in the first year to get that done,” Obama said.¶ “I think we have talked about it long enough. We know how we can fix it. We can do it in a comprehensive way that the American people support. That’s something we should get done.”¶ Gregory did not challenge any of Obama’s claims, nor did he question Obama about how his bill would impact the high unemployment rate among low-skilled Americans, especially African-Americans, in a an increasingly high-tech economy.¶ However, **Obama’s** language **suggested** that increased Latino **immigration is a lower priority** for him **than other measures, and that he’s concerned any revamp would fail because of** public **opposition**.¶ Many **previous** immigrationreform **bills** have **died when** leading **supporters** quietly **backed away amid** furious **public opposition** to what was perceived as an attempt at a general amnesty. In 2007, then-Sen. **Obama voted against a temporary-worker provision in a pending immigration bill, helping kill the overall legislatio**n.¶ During his first term as president, Obama declined to push a comprehensive immigration bill, despite promising such a revamp while on the 2008 campaign trail.¶ In his NBC interview, **Obama showed more enthusiasm about other priorities**.¶ “**We’ve got a huge opportunity around energy,**” he said, “**The most immediate thing I’ve got to do** … is make sure that taxes are not going up on middle class families,” he claimed. Another priority, he added, is “rebuilding our infrastructure, which is broken.”¶ Obama also touted his new project to counter gun-violence. “Anybody who was up in Newtown, who talked to the parents, who talked to the families, understands that, you know, something fundamental in America has to change … you know, that was the worst day of my presidency,” he told Gregory.¶ “I will put forward a very specific [anti-violence] proposal based on the recommendations that Joe Biden’s task force is putting together as we speak,” he said.¶

**No vote till June**

**Foley & Stein 1/2**/2013

(Elise & Sam, HuffPost writers, “Obama's Immigration Reform Push To Begin This Month,” <http://www.huffingtonpost.com/2013/01/02/obama-immigration-reform_n_2398507.html> - Kurr)

It remains unclear what type of **immigration policies** the White House plans to push in January, but **turning them into law could be a long process**. Aides expect it will take about **two months to write a bipartisan bill, then another few months before it goes up for a vote, possibly in June**. A bipartisan group of senators are already working on a deal, although they are still in the early stages. **Rep. Zoe Lofgren (D-Calif.) will likely lead on the Democratic side in the House**. While many **Republicans have expressed interest in piecemeal reform, it's still unclear which of them plan to join the** push.

#### Plan’s popular- Bipart support

Pendidikan ‘11

Cinta writes for the Love and Like Education Blog, “Sanders is the Sole Vote Against Small Modular Reactor Research,” http://loveandlikeeducation.blogspot.com/2011/08/bernie-sanders-and-small-modular.html

Sanders is Sole Vote Against Small Modular Reactor Research¶ Bernie Sanders and Small Modular Reactors¶ Senator Bernie Sanders often speaks about his opposition to Vermont Yankee as having something to do with the age of the plant, the fact it is owned by Entergy, or his "state's rights" stance about regulating nuclear power plants.¶ Recently, however, Sanders made it clear that he is against nuclear power in any form and is proud of that opinion. On Senator Sanders website, he featured the fact that he was the only vote against "a pair of measures that would promote the development of small modular reactors."¶ One of these measures was the Nuclear Power Act S512. This act would authorize the Secretary of Energy to start a cost-shared program for development of small modular reactors (SMRs).¶ This act had strong bi-partisan support, being sponsored by 3 Republican and 4 Democratic Senators. The act requires research and development funds for SMRs. The Act is still in process, and does not have a firm dollar amount attached, but the dollar amount is likely to be small (in government terms, at least.). Current estimates are $100 million per fiscal year for four years, starting next year.¶ The act also requires that industry cost-share the expense. If industry doesn't think it is worth spending money on the research, the research will not receive government funding either.¶ As a background to the probable cost of this Act, we should note that President Obama requested $4.8 billion dollars for Department of Energy research, of which $3.2 billion is allocated for renewable energy and energy efficiency research. (This number has changed with the debt deal, but new numbers are not available at this time.)¶ Small Modular Reactors for The Future¶ Sander's opposition to this Nuclear Power Act will hurt America's chances to develop an important new exportable technology. Outside of Europe, the nuclear renaissance remains in full swing, with reactors being ordered and built in Arabia, China, India and Southeast Asia. Developing a strong set of SMR designs would be America's best chance to re-entering the world market for nuclear power.¶ SMRs are modular (assembled in a factory and delivered to the site), small (50 to 225 MW) and have many safety features, such as passive cooling. SMRs are expected to have a huge international market. They suitable for many places that do not have the population density or money for the current crop of huge reactors (1200 MW, built on site at great expense). SMRs would make nuclear power affordable and salable many places.¶ Westinghouse and Babcock & Wilcox have invested significant amounts of their own money in developing these products. The NRC is also active in assessing preliminary designs. At another Senate committee meeting on SMRs, Commissioner Magwood of the NRC said that he does not expect decisions made by the NRC to be the critical factor in the success or failure of SMRs. Magwood noted that SMRs have passive safety features and large water inventories; these would be considered during license review.¶ America Fallen Behind¶ America has fallen far behind the rest of the world in most nuclear technologies. Pressurized Water Reactors (PWRs) and Boiling Water Reactors (BWRs) were developed in this country. They are being sold all over the world, but not by United States companies. We're out of the running. Other countries licensed and improved our original technologies. Companies from France, Korea, Russia and China compete to build large reactors in China, Arabia, and Southeast Asia.¶ Three American companies have put millions of dollars into the development of SMRs: Westinghouse, Babcock & Wilcox, and NuScale (a small start-up). Many people in the nuclear industry feel that the race to develop the first successful SMR is a truly high-stakes race, being fought at the level of nationwide efforts. Luckily, SMR development has bi-partisan support, and Mr. Sanders was alone in his opposition to supporting American industry efforts to develop these plants.¶ Should Government Be Involved?¶ Of course, one can make a case that the government should get out of the energy research business altogether. If Senator Sanders wished to save tax dollars by cutting all energy-research programs, he might have a valid case. However, if the government does plan to spend money on energy research, cost-sharing with industry on a new nuclear technology is certainly a far better use of funds than many of the projects in the swollen DOE renewable budget.

#### DoD doesn’t link

**Appelbaum 12**

Binyamin, Defense cuts would hurt scientific R&D, experts say, The New York Times, 1-8, <http://hamptonroads.com/2012/01/defense-cuts-would-hurt-scientific-rd-experts-say>

Sarewitz, who studies the government's role in promoting innovation, said **the Defense Department had been** more successful **than other federal agencies because it is the** main user of the innovations that it finances**.** **The Pentagon, which spends billions** each year on weapons, equipment and technology, **has an** unusually direct stake in the outcome **of its** research and development **projects.**¶ "The central thing that distinguishes them from other agencies is that they are the customer," Sarewitz said. "You can't pull the wool over their eyes."¶ **Another factor is the Pentagon's relative insulation from politics, which has allowed it to sustain a long-term research agenda** in controversial areas**. No matter which party is in power,** **the Pentagon has continued to invest in clean-energy tech**nology, **for example,** in an effort to find ways to reduce one of its largest budget items, energy costs.

**Nuke lobby supports- guarantees bipart support**

**Samuelsohn ‘11** (Darren Samuelsohn, March 16, 2011, “Nuclear industry lobbyists' clout felt on Hill,” Politico, <http://www.politico.com/news/stories/0311/51367.html>)

Facing its biggest crisis in 25 years, the U.S. nuclear power industry can count on plenty of Democratic and Republican friends in both high and low places.¶ During the past election cycle alone, the Nuclear Energy Institute and more than a dozen companies with big nuclear portfolios have spent tens of millions of dollars on lobbying and campaign contributions to lawmakers in key leadership slots and across influential state delegations.¶ The donations and lobbying funds came at a critical moment for the nuclear industry as its largest trade group and major companies pushed for passage of a cap-and-trade bill.¶ While that effort failed, the money is sure to **keep doors open** on Capitol Hill as lawmakers consider any response to the safety issues highlighted by multiple nuclear reactor meltdowns in Japan in the aftermath of last week’s monster earthquake and tsunami.¶ “The bottom line is you’ve got a variety of industrial interests that care about nuclear power and have a heck of a lot of money to spend if their business and their bottom line is put in political jeopardy,” said Dave Levinthal, communications director at the Center for Responsive Politics. “As Congress is talking about potentially diving deeper, these companies bring a lot of resources and a heck of a lot of cash to bear if tDhis fight goes forward.”¶ NEI, the industry’s biggest voice in Washington, for example, spent $3.76 million to lobby the federal government and an additional $323,000 through its political action committee on a bipartisan congressional slate, including 134 House and 30 Senate candidates, according to data compiled by the CRP.¶ Alex Flint, NEI’s senior vice president for government affairs, said the spending is a byproduct of record high demand for his industry.¶ “The fact that the day after the election, both the president and [House Speaker John Boehner] said nuclear was an area where it’s something they can agree, it’s made us that much more in demand,” Flint said. “Our lobbying expenses have gone up more in large part because we have more people talking to more members of Congress.”

#### Winners win

Marshall and Prins ‘11

Bryan W. MARSHALL AND PRINS 11, Miami University, Department of Political Science AND Brandon C. PRINS, University of Tennessee & Howard H. Baker, Jr. Center for Public Policy, September 2011 “Power or Posturing? Policy Availability and Congressional Inﬂuence on U.S. Presidential Decisions to Use Force”, Presidential Studies Quarterly, http://onlinelibrary.wiley.com/doi/10.1111/j.1741-5705.2011.03885.x/pdf, [Stolarski]

Presidents rely heavily on Congress in converting their political capital into real policy success. Policy success not only shapes the reelection prospects of presidents, but it also builds the president’s reputation for political effectiveness and fuels the prospect for subsequent gains in political capital (Light 1982). Moreover, the president’s legislative success in foreign policy is correlated with success on the domestic front. On this point, some have largely disavowed the two-presidencies distinction while others have even argued that foreign policy has become a mere extension of domestic policy (Fleisher et al. 2000; Oldﬁeld and Wildavsky 1989) Presidents implicitly understand that there exists a linkage between their actions in one policy area and their ability to affect another. The use of force is no exception; in promoting and protecting U.S. interests abroad, presidential decisions are made with an eye toward managing political capital at home (Fordham 2002).

#### --Disad’s non-intrinsic to the plan - can pass the plan and vote to raise the pass \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – rational decisionmaker calculus

#### --Introduction of the plan should have caused the link – controversy happens even if you vote neg

#### Political capital isn’t key

Dickinson 9 professor of political science at Middlebury College (Matthew, “Sotomayor, Obama and Presidential Power,” May 26, 2009 Presidential Power http://blogs.middlebury.edu/presidentialpower/2009/05/26/sotamayor-obama-and-presidential-power/]

What is of more interest to me, however, is what her selection reveals about the basis of presidential power. Political scientists, like baseball writers evaluating hitters, have devised numerous means of measuring a president’s influence in Congress. I will devote a separate post to discussing these, but in brief, they often center on the creation of legislative “box scores” designed to measure how many times a president’s preferred piece of legislation, or nominee to the executive branch or the courts, is approved by Congress. That is, how many pieces of legislation that the president supports actually pass Congress? How often do members of Congress vote with the president’s preferences? How often is a president’s policy position supported by roll call outcomes? These measures, however, are a misleading gauge of presidential power – they are a better indicator of congressional power. This is because how members of Congress vote on a nominee or legislative item is rarely influenced by anything a president does. Although journalists (and political scientists) often focus on the legislative “endgame” to gauge presidential influence – will the President swing enough votes to get his preferred legislation enacted? – this mistakes an outcome with actual evidence of presidential influence. Once we control for other factors – a member of Congress’ ideological and partisan leanings, the political leanings of her constituency, whether she’s up for reelection or not – we can usually predict how she will vote without needing to know much of anything about what the president wants. (I am ignoring the importance of a president’s veto power for the moment.) Despite the much publicized and celebrated instances of presidential arm-twisting during the legislative endgame, then, most legislative outcomes don’t depend on presidential lobbying. But this is not to say that presidents lack influence. Instead, the primary means by which presidents influence what Congress does is through their ability to determine the alternatives from which Congress must choose. That is, presidential power is largely an exercise in agenda-setting – not arm-twisting. And we see this in the Sotomayer nomination. Barring a major scandal, she will almost certainly be confirmed to the Supreme Court whether Obama spends the confirmation hearings calling every Senator or instead spends the next few weeks ignoring the Senate debate in order to play Halo III on his Xbox. That is, how senators decide to vote on Sotomayor will have almost nothing to do with Obama’s lobbying from here on in (or lack thereof). His real influence has already occurred, in the decision to present Sotomayor as his nominee. If we want to measure Obama’s “power”, then, we need to know what his real preference was and why he chose Sotomayor. My guess – and it is only a guess – is that after conferring with leading Democrats and Republicans, he recognized the overriding practical political advantages accruing from choosing an Hispanic woman, with left-leaning credentials. We cannot know if this would have been his ideal choice based on judicial philosophy alone, but presidents are never free to act on their ideal preferences. Politics is the art of the possible. Whether Sotomayer is his first choice or not, however, her nomination is a reminder that the power of the presidency often resides in the president’s ability to dictate the alternatives from which Congress (or in this case the Senate) must choose. Although Republicans will undoubtedly attack Sotomayor for her judicial “activism” (citing in particular her decisions regarding promotion and affirmative action), her comments regarding the importance of gender and ethnicity in influencing her decisions, and her views regarding whether appellate courts “make” policy, they run the risk of alienating Hispanic voters – an increasingly influential voting bloc (to the extent that one can view Hispanics as a voting bloc!) I find it very hard to believe she will not be easily confirmed. In structuring the alternative before the Senate in this manner, then, Obama reveals an important aspect of presidential power that cannot be measured through legislative boxscores.

#### New tech and adaption solve food shortages

Michaels 11

Patrick Michaels is senior fellow in environmental studies at the CATO Institute. " Global Warming and Global Food Security," June 30, CATO, <http://www.cato.org/publications/commentary/global-warming-global-food-security>

While doing my dissertation I learned a few things about world crops. Serial adoption of new technologies produces a nearly constant increase in yields. Greater fertilizer application, improved response to fertilizer, better tractor technology, better tillage practices, old-fashioned genetic selection, and new-fashioned genetic engineering all conspire to raise yields, year after year.**¶** Weather and climate have something to do with yields, too. Seasonal rainfall can vary a lot from year-to-year. That's "weather." If dry years become dry decades (that's "climate") farmers will switch from corn to grain sorghum, or, where possible, wheat. Breeders and scientists will continue to develop more water-efficient plants and agricultural technologies, such as no-till production.**¶** Adaptation even applies to the home garden. The tomato variety "heat wave" sets fruit at higher temperatures than traditional cultivars.¶ However, Gillis claims that "[t]he rapid growth in farm output that defined the late 20th century has slowed" because of global warming.¶ His own figures show this is wrong. The increasing trend in world crop yields from 1960 to 1980 is exactly the same as from 1980 to 2010. And per capita grain production is rising, not falling.

#### No escalation

Fettweis 7

Asst Prof Poli Sci – Tulane, Asst Prof National Security Affairs – US Naval War College, 7

(Christopher, “On the Consequences of Failure in Iraq,” *Survival*, Vol. 49, Iss. 4, December, p. 83 – 98)

Without the US presence, a second argument goes, nothing would prevent Sunni-Shia violence from sweeping into every country where the religious divide exists. A Sunni bloc with centres in Riyadh and Cairo might face a Shia bloc headquartered in Tehran, both of which would face enormous pressure from their own people to fight proxy wars across the region. In addition to intra-Muslim civil war, cross-border warfare could not be ruled out. Jordan might be the first to send troops into Iraq to secure its own border; once the dam breaks, Iran, Turkey, Syria and Saudi Arabia might follow suit. The Middle East has no shortage of rivalries, any of which might descend into direct conflict after a destabilising US withdrawal. In the worst case, Iran might emerge as the regional hegemon, able to bully and blackmail its neighbours with its new nuclear arsenal. Saudi Arabia and Egypt would soon demand suitable deterrents of their own, and a nuclear arms race would envelop the region. Once again, however, none of these outcomes is particularly likely.Wider war No matter what the outcome in Iraq, the region is not likely to devolve into chaos. Although it might seem counter-intuitive, by most traditional measures the Middle East is very stable. Continuous, uninterrupted governance is the norm, not the exception; most Middle East regimes have been in power for decades. Its monarchies, from Morocco to Jordan to every Gulf state, have generally been in power since these countries gained independence. In Egypt Hosni Mubarak has ruled for almost three decades, and Muammar Gadhafi in Libya for almost four. The region's autocrats have been more likely to die quiet, natural deaths than meet the hangman or post-coup firing squads. Saddam's rather unpredictable regime, which attacked its neighbours twice, was one of the few exceptions to this pattern of stability, and he met an end unusual for the modern Middle East. Its regimes have survived potentially destabilising shocks before, and they would be likely to do so again. The region actually experiences very little cross-border warfare, and even less since the end of the Cold War. Saddam again provided an exception, as did the Israelis, with their adventures in Lebanon. Israel fought four wars with neighbouring states in the first 25 years of its existence, but none in the 34 years since. Vicious civil wars that once engulfed Lebanon and Algeria have gone quiet, and its ethnic conflicts do not make the region particularly unique. The biggest risk of an American withdrawal is intensified civil war in Iraq rather than regional conflagration. Iraq's neighbours will likely not prove eager to fight each other to determine who gets to be the next country to spend itself into penury propping up an unpopular puppet regime next door. As much as the Saudis and Iranians may threaten to intervene on behalf of their co-religionists, they have shown no eagerness to replace the counter-insurgency role that American troops play today. If the United States, with its remarkable military and unlimited resources, could not bring about its desired solutions in Iraq, why would any other country think it could do so?17 Common interest, not the presence of the US military, provides the ultimate foundation for stability. All ruling regimes in the Middle East share a common (and understandable) fear of instability. It is the interest of every actor - the Iraqis, their neighbours and the rest of the world - to see a stable, functioning government emerge in Iraq. If the United States were to withdraw, increased regional cooperation to address that common interest is far more likely than outright warfare.

#### Food shortages inevitable

Dawson ‘6

Thomas, January 5. American Chronicle, “Food for Thought and the Price of Food,” <http://www.americanchronicle.com/articles/viewArticle.asp?articleID=4533>

It may seem to many that we are living in a period in which there are potentially insurmountable problems facing us on every side. Certainly the world is on the precipice of a population explosion that we will be unable to sustain. The consumption of our natural resources and the destruction of our environment continue on a scale never imagined by the majority of us. However, nearly every generation of mankind has seen periods of hard times and some of us have experienced some very good times as well. The very nature of life on earth has been a history of turmoil and upheaval, from subsistence and mere survival to prosperity and a degree of security, and sometimes, back again. Don’t expect things to change for the better in the very near future regardless of our sophisticated economy. Consider the single aspect of food prices in the western world. Food has been relatively inexpensive in the western world, except in war-torn areas for the entire lifetime of our generation. This will probably not be the case for the next generation. It was only a few years ago that the population explosion was in the news all the time, almost to the same extent that we are currently preoccupied with the energy crunch usually referred to as “peak oil”, and the erosion of the western standard of living by “globalization”. The media let up on the problems of population growth because people got tired of hearing about it. After all, the western world didn’t appear to be particularly affected by it. The population explosion has since been generally ignored in the news until recently. That is not to infer that the problem went away. It took thousands of years of human history to produce and sustain a population of a billion people by the early nineteenth century. In the past 200 years, we have multiplied that population by six. There are now over six billion people in the world and we will add the next billion people in only about a dozen years. With the advent of the industrial revolution, the western world became trade oriented over the last couple of centuries. Since the cold war has ended, our international companies have seized opportunities to sharply increase their profits by arbitraging the labor markets of Asia while selling products at home; sometimes referred to as globalization. This employment of large numbers of people has given impetus and acceleration to the already rising prosperity of a small percentage of the population in various parts of Asia. This small increase in prosperity affecting such large numbers of people has spawned a demand for resources and commodities around the world. Suddenly, a few people in the more populated parts of the world have the monetary wherewithal to improve their standard of living and have hopes for a better life for their children. They have needs of infrastructure, electricity and transportation as well as food. Now the western world finds itself competing for limited resources, especially energy. The most efficient forms of energy are oil and gas. The owners of oil and gas find themselves in an enviable position where they have an asset worthy of preservation. They will probably never again allow the prices to fall very much for any extended period of time. The cost of energy and fertilizer (usually made from natural gas) are substantial costs in food production, not to mention the cost of transporting that food. The 2006 crops will be affected by the recent increase of prices in oil and gas. Expect food prices to accelerate their rise in the next year and continue to rise thereafter. To exacerbate the problem, many farmers around the world can now make more money raising crops for bio-diesel fuels than they can make raising food. Across South Asia, in the Amazon and elsewhere, farmers are razing the forests to plant crops capable of making biofuels. Even in this country, laws will be enacted to require some percentage of ethanol or the addition of some kind of bio-fuels to gasoline and diesel fuels to further subsidize and satisfy the farm lobby

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### CP

**Should means ought**

**Howard 5**

Taylor and Howard, 05 - Resources for the Future, Partnership to Cut Hunger and Poverty in Africa (Michael and Julie, “Investing in Africa's future: U.S. Agricultural development assistance for Sub-Saharan Africa”, 9/12, http://www.sarpn.org.za/documents/d0001784/5-US-agric\_Sept2005\_Chap2.pdf)
Other legislated DA earmarks in the FY2005 appropriations bill are smaller and more targeted: plant biotechnology research and development ($25 million), the American Schools and Hospitals Abroad program ($20 million), women’s leadership capacity ($15 million), the International Fertilizer Development Center ($2.3 million), and clean water treatment ($2 million). Interestingly, in the wording of the bill, Congress uses the term shall in connection with only two of these eight earmarks; the others say that USAID should make the prescribed amount available. **The difference between shall and should may have legal significance—one is clearly mandatory while the other is a strong admonition**—but it makes little practical difference in USAID’s need to comply with the congressional directive to the best of its ability.

**New reactor types aren’t ready and can’t be regulated turns their impacts – only LWRs can be deployed quickly**

**Shellenberger 12** (Michael, founder of the Breakthrough Institute, graduate of Earlham College and holds a masters degree in cultural anthropology from the University of California, Santa Cruz, "New Nukes: Why We Need Radical Innovation to Make New Nuclear Energy Cheap", September 11, http://thebreakthrough.org/index.php/programs/energy-and-climate/new-nukes/)

Arguably, **the** **biggest impact of Fukushima on the nuclear debate**, ironically, **has been to force a growing number of pro-nuclear environmentalists out of the closet,** including us. **The reaction to the accident by anti-nuclear campaigners and** many **Western publics** **put a fine point** on **the gross misperception of risk that informs so much anti-nuclear fear**. **Nuclear remains the only** **proven technology** **capable of reliably generating zero-carbon energy at a scale** **that can** have any **impact** on global **warming**. Climate change -- and, for that matter, the enormous present-day health risks associated with burning coal, oil, and gas -- simply dwarf any legitimate risk associated with the operation of nuclear power plants**. About 100,000 people die every year due to exposure to air pollutants from the burning of coal**. **By contrast**, **about 4,000 people have died from nuclear energy** -- **ever** -- almost entirely due to Chernobyl. But rather than simply lecturing our fellow environmentalists about their misplaced priorities, and how profoundly inadequate present-day renewables are as substitutes for fossil energy, we would do better to take seriously the real obstacles standing in the way of a serious nuclear renaissance. Many of these obstacles have nothing to do with the fear-mongering of the anti-nuclear movement or, for that matter, the regulatory hurdles imposed by the U.S. Nuclear Regulatory Commission and similar agencies around the world. **As long as nuclear technology is characterized by enormous upfront capital costs, it is likely to remain just a hedge** against overdependence on lower-cost coal and gas, **not the wholesale replacement** **it needs to be** to make a serious dent in climate change. Developing countries need large plants capable of bringing large amounts of new power to their fast-growing economies. But they also need power to be cheap. So long as coal remains the cheapest source of electricity in the developing world, it is likely to remain king. **The most worrying threat to the future of nuclear** **is**n't the political fallout from Fukushima -- it's **economic reality**. Even as new nuclear plants are built in the developing world, old plants are being retired in the developed world. For example, Germany's plan to phase-out nuclear simply relies on allowing existing plants to be shut down when they reach the ends of their lifetime. Given the size and cost of new conventional plants today, those plants are unlikely to be replaced with new ones. As such**, the combined political and economic constraints associated with current nuclear energy technologies mean that nuclear energy's share of global energy generation is unlikely to grow in the coming decades**, **as global energy demand is likely to increase faster than new plants can be deployed. To move the needle on nuclear energy** to the point that it might actually be capable of displacing fossil fuels, **we'll need new nuclear technologies that are cheaper and smaller**. **Today, there are a range of nascent, smaller nuclear power plant designs, some of them modifications of the current light-water reactor technologies used on submarines, and others, like thorium fuel and fast breeder reactors, which are based on entirely different nuclear fission technologies**. **Smaller, modular reactors can be built much faster and cheaper than traditional large-scale nuclear power plants.** **Next-gen**eration nuclear **reactors are designed to be incapable of melting down, produce drastically less radioactive waste, make it very difficult or impossible to produce weapons grade material,** **use less water, and require less maintenance.** Most of these designs **still face substantial technical hurdles before they will be ready for commercial demonstration. That means a great deal of research and innovation will be necessary to make these next generation plants viable and capable of displacing coal and gas**. **The United States could be a leader on developing these technologies**, **but unfortunately U.S. nuclear policy remains mostly stuck in the past.** **Rather than creating new solutions**, **efforts to restart the U.S. nuclear industry have** mostly **focused on** **encouraging utilities to build** the next generation of **large, light-water reactors with loan guarantees** **and various other subsidies** and regulatory fixes. With a few exceptions**, this is largely true elsewhere around the world as well.** Nuclear has enjoyed bipartisan support in Congress for more than 60 years, but the enthusiasm is running out. The Obama administration deserves credit for authorizing funding for two small modular reactors, which will be built at the Savannah River site in South Carolina. But a much more sweeping reform of U.S. nuclear energy policy is required. At present, **the Nuclear Regulatory Commission has little institutional knowledge of anything other than light-water reactors and virtually no capability to review or regulate alternative designs. This affects nuclear innovation in other countries as well, since the NRC remains, despite its many critics, the global gold standard for thorough regulation of nuclear energy. Most other countries follow the NRC's lead when it comes to establishing new technical and operational standards for the design, construction, and operation of nuclear plants**. **What's needed now is a new national commitment to the development,** testing, demonstration, **and** early stage **commercialization of** a broad range of **new nuclear technologies** -- from much smaller light-water reactors to **next gen**eration ones -- in search of a few designs that can be mass produced and deployed at a significantly lower cost than current designs. **This will require** both greater public support for nuclear innovation and **an entirely different regulatory framework** to review and approve new commercial designs. **In the meantime, developing countries will continue to build traditional, large** **nuclear** power **plants**. **But time is of the essence.** **With the lion's share of future carbon emissions coming from those emerging economic powerhouses,** **the need to develop smaller and cheaper designs that can scale faster is all the more important. A true nuclear renaissance** can't happen overnight. And it **won't happen so long as large and expensive light-water reactors remain our only option**. But **in the end,** **there is no credible path to mitigating climate change without a massive global expansion of nuclear energy.** **If you care about climate change, nothing is more important than developing the nuclear technologies we will need to get that job done.**

**CP takes forever---only LWRs solve**

**DOE 12** United States Department of Energy, “A Strategic Framework for SMR Deployment”, Nuclear Energy, February 24, <http://www.ne.doe.gov/smrsubcommittee/documents/SMR%20Strategic%20Framework.pdf>

Licensing¶ **The licensing challenge for new nuclear power systems is not unique to SMRs. The Generation III and III+ reactor** design**s** now **being pursued in the U.S. have undergone years of analysis** and review at a cost measured in hundreds of millions of dollars even though these are essentially improved versions of well-understood light water reactor (LWR) technology that is employed at every reactor in the country. Even the proposed SMRs that use uranium fuel and water cooling will face additional scrutiny for the design and operational characteristics that are novel compared to their larger cousins. These unique and largely unstudied characteristics, from a regulatory perspective, include the integration of primary system components into the reactor pressure vessel, the passive recirculation modes with low coolant flows under operating and accident conditions, and the potential operation of multiple reactor modules from a single control room. For SMRs that are designed to use different fuels or coolants, the licensing challenges will be more daunting as **the Nuclear Regulatory Commission (NRC) does not have staff with equivalent expertise in non-light water systems. Building a staff with this expertise and making the appropriate adjustments to the regulatory framework to address the unique operational and safety aspects of advanced reactors and fuel is likely to take years.**

#### No war - history supports

Tepperman ‘9

(Jonathan Tepperman a journalist based in New York City. “Why Obama should learn to love the bomb” Newsweek Nov 9, 2009 <http://jonathantepperman.com/Welcome_files/nukes_Final.pdf>)

**A growing** and compelling **body of research suggests** that **nuclear weapons** may not, in fact, make the world more dangerous, as Obama and most people assume. The bomb may actually **make us safer**. In this era of rogue states and trans-national terrorists, that idea sounds so obviously wrongheaded that few politicians or policymakers are willing to entertain it. But that’s a mistake. Knowing the truth about nukes would have a profound impact on government policy. Obama’s idealistic campaign, so out of character for a pragmatic administration, may be unlikely to get far (past presidents have tried and failed). But it’s not even clear he should make the effort. There are more important measures the U.S. government can and should take to make the real world safer, and these mustn’t be ignored in the name of a dreamy ideal (a nuke free planet) that’s both unrealistic and possibly undesirable. The argument that nuclear weapons can be agents of peace as well as destruction rests on two deceptively simple observations. First, nuclear weapons have not been used since 1945. Second, **there’s never been a** nuclear, or even a nonnuclear, **war between two states that possess them**. Just stop for a second and think about that: it’s hard to overstate how remarkable it is, especially given the singular viciousness of the 20th century. As Kenneth Waltz, the leading “nuclear optimist” and a professor emeritus of political science at UC Berkeley puts it, “We now have 64 years of experience since Hiroshima. It’s striking and against all historical precedent that for that substantial period, there has not been any war among nuclear states.” To understand why—and why the next 64 years are likely to play out the same way—you need to start by recognizing that **all states are rational** on some basic level. Their leaders may be stupid, petty, venal, even evil, but they tend to do things only when they’re pretty sure they can get away with them. Take war: **a country will start a fight only when it’s almost certain it can get what it wants at an acceptable price**. Not even Hitler or Saddam waged wars they didn’t think they could win. The problem **historically** has been that **leaders often make the wrong gamble and underestimate the other side**—and millions of innocents pay the price. **Nuclear weapons change all that by making the costs of war** obvious, inevitable, and unacceptable. Suddenly, when both sides have the ability to turn the other to ashes with the push of a button— and everybody knows it—the basic math shifts. Even the craziest tin-pot dictator is forced to accept that war with a nuclear state is unwinnable and thus not worth the effort. As Waltz puts it, “Why fight if you can’t win and might lose everything?” Why indeed? **The iron logic of deterrence** and mutually assured destruction **is so compelling**, it’s led to what’s known as the nuclear peace: the virtually unprecedented stretch since the end of World War II in which all the world’s major powers have avoided coming to blows. They did fight **proxy wars**, ranging from Korea to Vietnam to Angola to Latin America. But these **never matched the** furious **destruction of** full-on, great**-power war** (World War II alone was responsible for some 50 million to 70 million deaths). And since the end of the Cold War, such bloodshed has declined precipitously. Meanwhile, the nuclear powers have scrupulously avoided direct combat, and there’s very good reason to think they always will. There have been some near misses, but a close look at these cases is fundamentally reassuring—because in each instance, very different leaders all came to the same safe conclusion. Take the mother of all nuclear standoffs: the Cuban missile crisis. For 13 days in October 1962, the United States and the Soviet Union each threatened the other with destruction. But both countries soon stepped back from the brink when they recognized that a war would have meant curtains for everyone. As important as the fact that they did is the reason why: Soviet leader Nikita Khrushchev’s aide Fyodor Burlatsky said later on, “It is impossible to win a nuclear war, and both sides realized that, maybe for the first time.” The record since then shows the same pattern repeating: nuclear armed enemies slide toward war, then pull back, always for the same reasons. **The best recent example is India and Pakistan**, which fought three bloody wars after independence before acquiring their own nukes in 1998. **Getting their hands on weapons** of mass destruction didn’t do anything to lessen their animosity. But it did dramatically mellow their behavior. Since acquiring atomic weapons, the two sides have never fought another war.

#### No threat – weak leadership and no recent attacks

Zenko and Cohen 12

\*Fellow in the Center for Preventive Action at the Council on Foreign Relations, \*Fellow at the Century Foundation, (Micah and Michael, "Clear and Present Safety," March/April, Foreign Affairs, www.foreignaffairs.com/articles/137279/micah-zenko-and-michael-a-cohen/clear-and-present-safety

 NONE OF this is meant to suggest that the United States faces no major challenges today. Rather, the point is that the problems confronting the country are manageable and pose minimal risks to the lives of the overwhelming majority of Americans. None of them -- separately or in combination -- justifies the alarmist rhetoric of policymakers and politicians or should lead to the conclusion that Americans live in a dangerous world.¶ Take terrorism. Since 9/11, no security threat has been hyped more. Considering the horrors of that day, that is not surprising. But the result has been a level of fear that is completely out of proportion to both the capabilities of terrorist organizations and the United States' vulnerability. On 9/11, al Qaeda got tragically lucky. Since then, the United States has been preparing for the one percent chance (and likely even less) that it might get lucky again. But al Qaeda lost its safe haven after the U.S.-led invasion of Afghanistan in 2001, and further military, diplomatic, intelligence, and law enforcement efforts have decimated the organization, which has essentially lost whatever ability it once had to seriously threaten the United States.¶ According to U.S. officials, al Qaeda's leadership has been reduced to two top lieutenants: Ayman al-Zawahiri and his second-in-command, Abu Yahya al-Libi. Panetta has even said that the defeat of al Qaeda is "within reach." The near collapse of the original al Qaeda organization is one reason why, in the decade since 9/11, the U.S. homeland has not suffered any large-scale terrorist assaults. All subsequent attempts have failed or been thwarted, owing in part to the incompetence of their perpetrators. Although there are undoubtedly still some terrorists who wish to kill Americans, their dreams will likely continue to be frustrated by their own limitations and by the intelligence and law enforcement agencies of the United States and its allies.

### K

**SMRs solve inevitable water wars**

**Palley ‘11**

Reese Palley, The London School of Economics, 2011, The Answer: Why Only Inherently Safe, Mini Nuclear Power Plans Can Save Our World, p. 168-71

The third world has long been rent in recent droughts, by the search for water. In subsistence economies, on marginal land, **water is** not a convenience but **a matter of life and death**. As a result small **wars have been fought, rivers diverted, and wells poisoned in what could be a warning of what is to come as industrialized nations begin to face failing water supplies.** Quite aside from the demand for potable water is the dependence of enormous swaths of industry and agriculture on oceans of water used for processing, enabling, and cleaning a thousand processes and products. It is interesting to note that fresh water used in both industry and agriculture is reduced to a nonrenewable resource as agriculture adds salt and industry adds a chemical brew unsuitable for consumption. More than **one billion people in the world already lack access to clean water**, and things are getting worse. Over the next two decades, the average supply of water per person will drop by a third**, condemning millions of people to waterborne diseases and an avoidable premature death**.81 **So the stage is set for water access wars between the first and the third worlds, between neighbors downstream of supply, between big industry and big agriculture, between nations, between population** centers, and ultimately between you and the people who live next door for an already inadequate world water supply that is not being renewed. **As populations inevitably increase, conflicts will intensify**.82 It is only by virtue of the historical accident of the availability of nuclear energy that humankind now has the ability to remove the salt and other pollutants to supply all our water needs. The problem is that **desalination is an intensely local process.** Some localities have available sufficient water from renewable sources to take care of their own needs, but not enough to share with their neighbors, and it **is here that the scale of nuclear energy production must be defined locally.** Large scale 1,000 MWe plants can be used to desalinate water as well as for generating electricity However we cannot build them fast enough to address the problem, and, if built they would face the extremely expensive problem of distributing the water they produce. Better, much better, would be to use small desalinization plants sited locally. Beyond desalination for human use is the need to green some of the increasing desertification of vast areas such as the Sahara. Placing twenty 100 MWe plants a hundred miles apart along the Saharan coast would green the coastal area from the Atlantic Ocean to the Red Sea, a task accomplished more cheaply and quickly than through the use of gigawatt plants.83 This could proceed on multiple tracks wherever deserts are available to be reclaimed. Leonard Orenstein, a researcher in the field of desert reclamation, speculates: If most of the Sahara and Australian outback were planted with fast-growing trees like eucalyptus, the forests could draw down about 8 billion tons of carbon a year—nearly as much as people emit from burning fossil fuels today. As the forests matured, they could continue taking up this much carbon for decades.84 **The use of small, easily transported, easily sited, and walk away safe nuclear reactors dedicated to desalination is the only answer** to the disproportionate distribution of water resources that have distorted human habitation patterns for millennia. Where there existed natural water, such as from rivers, great cities arose and civilizations flourished. Other localities lay barren through the ages. **We now have the power, by means of SMRs profiled to local conditions, not only to attend to existing water shortages but also to smooth out disproportionate water distribution and create green habitation** where historically it has never existed**. The endless wars that have been fought, first over solid bullion gold and then over oily black gold, can now engulf us in the desperate reach for liquid blue gold. We need never fight these wars again as we now have the nuclear power to fulfill the biblical ability to “strike any local rock and have water gush forth.”**

**That solves indo-pak water wars that go nuclear.**

**Zahoor ‘11**

(Musharaf, is researcher at Department of Nuclear Politics, National Defence University, Islamabad, “Water crisis can trigger nuclear war in South Asia,” <http://www.siasat.pk/forum/showthread.php?77008-Water-Crisis-can-Trigger-Nuclear-War-in-South-Asia>, AM)

South Asia is among one of those regions where water needs are growing disproportionately to its availability. The high increase in population besides large-scale cultivation has turned South Asia into a water scarce region. The two nuclear neighbors **Pakistan and India share the waters of Indus Basin.** All the major rivers stem from the Himalyan region and pass through Kashmir down to the planes of Punjab and Sindh empty into Arabic ocean. **It is pertinent that the strategic importance of Kashmir, a source of all major rivers, for Pakistan and symbolic importance of Kashmir for India are maximum list positions.** Both the countries have fought two major wars in 1948, 1965 and a limited war in Kargil specifically on the Kashmir dispute. Among other issues, the newly born states fell into water sharing dispute right after their partition. Initially under an agreed formula, Pakistan paid for the river waters to India, which is an upper riparian state. After a decade long negotiations, both the states signed Indus Water Treaty in 1960. Under the treaty, India was given an exclusive right of three eastern rivers Sutlej, Bias and Ravi while Pakistan was given the right of three Western Rivers, Indus, Chenab and Jhelum. The tributaries of these rivers are also considered their part under the treaty. It was assumed that the treaty had permanently resolved the water issue, which proved a nightmare in the latter course. India by exploiting the provisions of IWT started wanton construction of dams on Pakistani rivers thus scaling down the water availability to Pakistan (a lower riparian state). The treaty only allows run of the river hydropower projects and does not permit to construct such water reservoirs on Pakistani rivers, which may affect the water flow to the low lying areas. According to the statistics of Hydel power Development Corporation of Indian Occupied Kashmir, India has a plan to construct 310 small, medium and large dams in the territory. India has already started work on 62 dams in the first phase. The cumulative dead and live storage of these dams will be so great that India can easily manipulate the water of Pakistani rivers. India has set up a department called the Chenab Valley Power Projects to construct power plants on the Chenab River in occupied Kashmir. India is also constructing three major hydro-power projects on Indus River which include Nimoo Bazgo power project, Dumkhar project and Chutak project. On the other hand, it has started Kishan Ganga hydropower project by diverting the waters of Neelum River, a tributary of the Jhelum, in sheer violation of the IWT. **The gratuitous construction of dams by India** has **created serious water shortages in Pakistan.** The construction of Kishan Ganga dam will turn the Neelum valley, which is located in Azad Kashmir into a barren land. **The water shortage will not only affect the cultivation but it has serious social, political and economic ramifications for Pakistan.** The farmer associations have already started protests in Southern Punjab and Sindh against the non-availability of water. These protests are so far limited and under control. The reports of international organizations suggest that the water availability in Pakistan will reduce further in the coming years. If the situation remains unchanged, **the violent mobs of villagers across the country will be a major law and order challenge** for the government. The water shortage has also created mistrust among the federative units, which is evident from the fact that the President and the Prime Minister had to intervene for convincing Sindh and Punjab provinces on water sharing formula. The Indus River System Authority (IRSA) is responsible for distribution of water among the provinces but in the current situation it has also lost its credibility. The provinces often accuse each other of water theft. In the given circumstances, Pakistan desperately wants to talk on water issue with India. The meetings between Indus Water Commissioners of Pakistan and India have so far yielded no tangible results. The recent meeting in Lahore has also ended without concrete results. India is continuously using delaying tactics to under pressure Pakistan. The Indus Water Commissioners are supposed to resolve the issues bilaterally through talks. The success of their meetings can be measured from the fact that Pakistan has to knock at international court of arbitration for the settlement of Kishan Ganga hydropower project. The recently held foreign minister level **talks** between both the countries ended inconclusively in Islamabad, **which only resulted in heightening** the mistrust and **suspicions.** The **water stress** in Pakistan is increasing day by day. The construction of dams will not only cause damage to the agriculture sector but India can manipulate the river water to create inundations in Pakistan. The rivers in Pakistan are also vital for defense during wartime. The control over the water will provide an edge to India during war with Pakistan. The **failure of diplomacy**, manipulation of IWT provisions by India and growing water scarcity in Pakistan and its social, political and economic repercussions for the country **can lead** both the countries **to**ward a **war.** The existent **A-symmetry between** the **conventional forces** of both the countries **will compel the weaker side to use nuclear weapons** to prevent the opponent from taking any advantage of the situation. Pakistan's nuclear programme is aimed at to create minimum credible deterrence. India has a declared nuclear doctrine which intends to retaliate massively in case of first strike by its' enemy. In 2003, India expanded the operational parameters for its nuclear doctrine. Under the new parameters, it will not only use nuclear weapons against a nuclear strike but will also use nuclear weapons against a nuclear strike on Indian forces anywhere. Pakistan has a draft nuclear doctrine, which consists on the statements of high ups. Describing the nuclear thresh-hold in January 2002, General Khalid Kidwai, the head of Pakistan's Strategic Plans Division, in an interview to Landau Network, said that Pakistan will use nuclear weapons in case India occupies large parts of its territory, economic strangling by India, political disruption and if India destroys Pakistan's forces. The **analysis of** the ambitious **nuclear doctrines** of boththe countries clearly **points out** that **any military confrontation** in the region **can result in a nuclear catastrophe. The rivers flowing from Kashmir are Pakistan's lifeline, which are essential for the livelihood of 170 million people of the country and the cohesion of federative units. The failure of dialogue will leave no option but to achieve the ends through military means.**

**Prior focus on ontology causes paralysis – having “good enough knowledge” is a sufficient condition for action**

**Kratochwil 8**

Kratochwil, professor of international relations – European University Institute, ‘8

(Friedrich, “The Puzzles of Politics,” pg. 200-213)

The lesson seems clear. **Even at the danger of “fuzzy boundaries”, when we deal with “practice**” ( just as with the “pragmatic turn”), **we would be well advised to rely on the use of the term rather than on its reference** (pointing to some property of the object under study), **in order to draw the bounds of sense and understand the meaning of the concept. My argument for the fruitful character of a pragmatic approach in IR,** therefore, **does not depend on a comprehensive mapping of the varieties of research in this area, nor on an arbitrary appropriation or exegesis of any specific and self-absorbed theoretical orientation**. For this reason, in what follows, I will not provide a rigidly specified definition, nor will I refer exclusively to some prepackaged theoretical approach. Instead, **I will sketch out the reasons for which a prag- matic orientation in social analysis seems to hold particular promise**. These reasons pertain both to the more general area of knowledge appropriate for praxis and to the more specific types of investigation in the field. The follow- ing ten points are – without a claim to completeness – intended to engender some critical reflection on both areas.¶ Firstly, **a pragmatic approach does not begin with objects** **or “things” (ontology), or with reason and method (epistemology**), **but with “acting**” (prattein), **thereby preventing some false starts**. Since, **as historical beings placed in a specific situations, we do not have the luxury of deferring decisions until we have found the “truth”, we have to act and must do so always under time pressures and in the face of incomplete information.** Pre- cisely **because the social world is characterised by strategic interactions, what a situation “is”, is hardly ever clear ex ante, because it is being “produced” by the actors and their interactions**, **and the multiple possibilities** are rife with incentives for (dis)information. **This puts a premium on** quick **diagnostic** and cognitive **shortcuts informing actors** about the relevant features of the situ- ation, and on leaving an alternative open (“plan B”) in case of unexpected difficulties. **Instead of** relying on **certainty and universal validity gained through abstraction** and controlled experiments, **we know that completeness and attentiveness to detail**, rather than to generality, **matter**. To that extent, likening practical choices to simple “discoveries” of an already independently existing “reality” which discloses itself to an “observer” – or relying on optimal strategies – is somewhat heroic.¶ These points have been made vividly by “realists” such as Clausewitz in his controversy with von Bülow, in which he criticised the latter’s obsession with a strategic “science” (Paret et al. 1986). While Clausewitz has become an icon for realists, only a few of them (usually dubbed “old” realists) have taken seriously his warnings against the misplaced belief in the reliability and use- fulness of a “scientific” study of strategy. Instead, most of them, especially “neorealists” of various stripes, have embraced the “theory”-building based on the epistemological project as the via regia to the creation of knowledge. A pragmatist orientation would most certainly not endorse such a position.¶ Secondly, **since acting in the social world often involves acting “for” some- one, special responsibilities arise that aggravate both the incompleteness of knowledge as well as its generality problem**. Since we owe special care to those entrusted to us, for example, as teachers, doctors or lawyers, **we cannot just rely on what is generally true, but have to pay special attention to the particular case**. Aside from avoiding the foreclosure of options, **we cannot refuse to act on the basis of incomplete information or insufficient know- ledge**, and the necessary diagnostic will involve typification and comparison, reasoning by analogy rather than generalization or deduction. Leaving out the particularities of a case, be it a legal or medical one, in a mistaken effort to become “scientific” would be a fatal flaw. Moreover, **there still remains the crucial element of “timing” – of knowing when to act**. Students of crises have always pointed out the importance of this factor but, in attempts at building a general “theory” of international politics analogously to the natural sci- ences, such elements are neglected on the basis of the “continuity of nature” and the “large number” assumptions. Besides, “timing” seems to be quite recalcitrant to analytical treatment.

**Biopower is necessary to preserve value to life**

**Ojakangas 2005.** Mika Ojakangas, Helsinki Collegium for Advanced Studies, FOUCAULT STUDIES, 2005, p. http://www.foucault-studies.com/no2/ojakangas1.pdf

In fact, the history of modern Western societies would be quite incomprehensible without taking into account that there exists a form of power which refrains from killing but which nevertheless is capable of directing people’s lives. The effectiveness of biopower can be seen lying precisely in that it refrains and withdraws before every demand of killing, even though these demands would derive from the demand of justice. In biopolitical societies, according to Foucault, capital punishment could not be maintained except by invoking less the enormity of the crime itself than the monstrosity of the criminal: "One had the right to kill those who represented a kind of biological danger to others." However, given that the "right to kill" is precisely a sovereign right, it can be argued that the biopolitical societies analyzed by Foucault were not entirely biopolitical. Perhaps, there neither has been nor can be a society that is entirely biopolitical. Nevertheless, the fact is that present day European societies have abolished capital punishment. In them, there are no longer exceptions. It is the very "right to kill" that has been called into question. However, it is not called into question because of enlightened moral sentiments, but rather because of the deployment of biopolitical thinking and practice. For all these reasons, Agamben’s thesis, according to which the concentration camp is the fundamental biopolitical paradigm of the West, has to be corrected. **The biopolitical paradigm of the West is not the concentration camp, but, rather, the presentday welfare society** and, **instead of homo-sacer, the paradigmatic figure of the biopolitical society can be seen,** for example**, in the middle class Swedish social democrat**. Although this figure is an object – and a product of the huge biopolitical machinery, it does not mean that he is permitted to kill without committing homicide. Actually, the fact that he eventually dies, seems to be his greatest "crime" against the machinery. (In biopolitical societies, death is not only "something to be hidden away," but, also, as Foucault stresses, the most "shameful thing of all.") Therefore**, he is not exposed to an unconditional threat of death, but rather to an unconditional retreat of all dying**. In fact, **the biopolitical machinery does not want to threaten him, but to encourage him, with all its material and spiritual capacities, to live healthily, to live long and to live happily – even when, in biological terms, he "should have been dead long ago". This is because bio power is not bloody power over bare life for its own sake but pure power over all life for the sake of the living. It is not power but the living, the condition of all life – individual as well as collective – that is the measure of the success of biopower.**

## 1AR

### Case

#### It’s quick

**Lamonica 12**

Martin Lamonica is a senior writer covering green tech and cutting-edge technologies [August 9, 2012, “A Glut of Natural Gas Leaves Nuclear Power Stalled,” http://www.technologyreview.com/news/428737/a-glut-of-natural-gas-leaves-nuclear-power/]

Ali **Azad, the chief business development officer at** energy company **Babcock & Wilcox, thinks the answer is making nuclear power smaller**, cheaper, and faster. His is one of a handful of companies developing **s**mall **m**odular **r**eactor**s** that **can be built in three years, rather than 10 or more, for a fraction of the cost of gigawatt-size reactors.** Although this technology is not yet commercially proven, the company has a customer in the Tennessee Valley Authority, which expects to have its first unit online in 2021 (see "A Preassembled Nuclear Reactor")

### K

**Reps don’t shape reality—focusing on them obscures material and political analysis which turns the criticism**

**Tuathail 96** (Gearoid, Department of Georgraphy at Virginia Polytechnic Institute, Political Geography, 15(6-7), p. 664, science direct)

While theoretical debates at academic conferences are important to academics, the discourse and concerns of foreign-policy decision- makers are quite different, so different that they constitute a distinctive problem- solving, theory-averse, policy-making subculture. **There is a danger that academics assume that the discourses they engage are more significant** in the practice of foreign policy and **the exercise of power than they really are**. This is not, however, to minimize the obvious importance of academia as a general institutional structure among many that sustain certain epistemic communities in particular states. In general, I do not disagree with Dalby’s fourth point about politics and discourse except to note that his statement-‘Precisely because reality could be represented in particular ways political decisions could be taken, troops and material moved and war fought’-evades the important question of agency that I noted in my review essay. **The assumption that it is representations that make action possible is inadequate by itself.** **Political, military and economic structures, institutions, discursive networks and leadership are all crucial in explaining social action and should be theorized together with representational practices**. Both here and earlier, Dalby’s reasoning inclines towards a form of idealism. In response to Dalby’s fifth point (with its three subpoints), it is worth noting, first, that his book is about the CPD, not the Reagan administration. He analyzes certain CPD discourses, root the geographical reasoning practices of the Reagan administration nor its public-policy reasoning on national security. Dalby’s book is narrowly textual; the general contextuality of the Reagan administration is not dealt with. Second, let me simply note that I find that the distinction between critical theorists and post- structuralists is a little too rigidly and heroically drawn by Dalby and others. Third, Dalby’s interpretation of the reconceptualization of national security in Moscow as heavily influenced by dissident peace researchers in Europe is highly idealist, an interpretation that ignores the structural and ideological crises facing the Soviet elite at that time. Gorbachev’s reforms and his new security discourse were also strongly self- interested, an ultimately futile attempt to save the Communist Party and a discredited regime of power from disintegration. The issues raised by Simon Dalby in his comment are important ones for all those interested in the practice of critical geopolitics. While I agree with Dalby that questions of discourse are extremely important ones for political geographers to engage**there is a danger of fetishizing this concern with discourse so that we neglect the institutional and the sociological, the materialist and the cultural, the political and the geographical contexts within which particular discursive strategies become significant**,. Critical geopolitics, in other words, should not be a prisoner of the sweeping ahistorical cant that sometimes accompanies ‘poststructuralism nor convenient reading strategies like the identity politics narrative; it needs to always be open to the patterned mess that is human history.

**Biopower is key to nuclear deterrence**

**Bogard 1991**. William Bogard, professor at Whitman College, 1991 [Social Science Journal, Vol. 28 Issue 3 p. 325]

 Although there are many places in the History of Sexuality that might indicate what Foucault had in mind was indeed what we commonly mean by “**deterrence**,” the general context remains one of discipline, **expanded to encompass the issues of bio-power and the control over life**. But there are a number of reasons to believe that such developments raise problems for the economy of power relations that, while related to those of discipline, are nonetheless conceptually distinct. The following appear to me to be the most relevant of those distinctions. With discipline, **the problem of power is that of producing and finalizing functions within a human multiplicity, to maximize utility through the strategic ordering of spatial and temporal relations, ultimately to foster or disallow life itself. With deterrence**, on the other hand, **we might say that the problem is one of reintroducing an asymmetry between opposing forces which have evolved too close to a point of equivalence or parity, or to a saturation point where it is no longer possible to increase their respective utilities**. <continued…> Where discipline sets forces in motion, deterrence indefinitely postpones the equivalence of forces. Here again, the case of nuclear deterrence serves as a paradigm, but this is only because it is the most concentrated and extreme form of a whole multiplicity of tactical maneuvers—of postponement, disinclination, destabilization, etc.—that, like the disciplines in the 1 8th century, have evolved into a general mechanism of domination, and which today pervades the most diverse institutional settings.

### Politics

**Bipart support for SMR’s in Congress**

**E&E News 9-24**

“DOE Funding for Small Reactors Languishes as Parties Clash on Debt,” <http://www.eenews.net/public/Greenwire/2012/09/24/3>

Some of the nation's largest nuclear power companies are anxious to hear whether they will get a share of a $452 million pot from the Department of Energy for a new breed of reactors that the industry has labeled as a way to lessen the safety risks and construction costs of new nuclear power plants.¶ The grant program for these "small modular reactors," which was announced in January, would mark the official start of a major U.S. foray into the technology even as rising construction costs -- especially when compared to natural-gas-burning plants -- cause many power companies to shy away from nuclear plants.¶ DOE received four bids before the May 21 deadline from veteran reactor designers Westinghouse Electric Co. and Babcock & Wilcox Co., as well as relative newcomers Holtec International Inc. and NuScale Power LLC. Now the summer has ended with no announcement from DOE, even though the agency said it would name the winners two months ago.¶ As the self-imposed deadline passed, companies started hearing murmurs that a decision could come in September, or perhaps at the end of the year. To observers within the industry, it seems that election-year calculations may have sidelined the contest.¶ "The rumors are a'flying," said Paul Genoa, director of policy development at the Nuclear Energy Institute, in an interview last week. "All we can imagine is that this is now caught up in politics, and the campaign has to decide whether these things are good for them to announce, and how**."¶ Small modular reactors do not seem to be lacking in political support. The nuclear lobby** has historically **courted both Democrats and Republicans and** still **sees itself as being in a strong position with key appropriators on both sides of the aisle**.¶ Likewise, **top energy officials in the Obama administration have hailed the promise of the new reactors, and they haven't shown any signs of a change of heart.** DOE spokeswoman Jen Stutsman said last week that the department is still reviewing applications, but she did not say when a decision will be made.¶ "This is an important multiyear research and development effort, and we want to make sure we take the time during the review process to get the decision right," she wrote in an email.¶ That the grants haven't been given out during a taut campaign season, even as President Obama announces agency actions ranging from trade cases to creating new national monuments to make the case for his re-election, may be a sign that the reactors are ensnared in a broader feud over energy spending.¶ Grant recipients would develop reactor designs with an eye toward eventually turning those into pilot projects -- and the loan guarantees that these first-of-a-kind nuclear plants are using today to get financing would be blocked under the "No More Solyndras" bill that passed the House last week (Greenwire, Sept. 14).

#### DOD energy programs don’t link---conservative won’t oppose

Davenport 12

Coral Davenport, energy and environment correspondent for National Journal. Prior to joining National Journal in 2010, Davenport covered energy and environment for Politico, and before that, for Congressional Quarterly. In 2010, she was a fellow with the Metcalf Institute for Marine and Environmental Reporting. From 2001 to 2004, Davenport worked in Athens, Greece, as a correspondent for numerous publications, including the Christian Science Monitor and USA Today, covering politics, economics, international relations and terrorism in southeastern Europe. She also covered the 2004 Olympic Games in Athens, and was a contributing writer to the Fodor’s, Time Out, Eyewitness and Funseekers’ guidebook series. Davenport started her journalism career at the Daily Hampshire Gazette in Northampton, Massachusetts, after graduating from Smith College with a degree in English literature. National Journal, 2/10/12, White House Budget to Expand Clean-Energy Programs Through Pentagon, ProQuest

The White House believes it has figured out **how to get more money for clean-energy** programs touted by President Obama **without having it become political roadkill** in the wake of the Solyndra controversy: **Put it in the Pentagon**. While details are thin on the ground, **lawmakers who work on both energy- and defense-spending** policy **believe the fiscal 2013 budget** request to be delivered to Congress on Monday probably **won't include** big **increases** for wind and solar power **through the Energy Department, a** major target for Republicans since solar-panel maker Solyndra defaulted last year on a $535 million loan guarantee. But **they** do **expect to see increases in spending on alternative energy in** the **Defense** Department, such as programs to replace traditional jet fuel with biofuels, supply troops on the front lines with solar-powered electronic equipment, build hybrid-engine tanks and aircraft carriers, and increase renewable-energy use on military bases. **While Republicans will** instantly **shoot down requests for fresh spending on Energy Department programs that could be likened to** the one that funded **Solyndra**, **many support** **alternative-energy programs for the military**. "I do expect to see the spending," said Rep. Jack Kingston, R-Ga., a member of the House Defense Appropriations Subcommittee, when asked about increased investment in alternative-energy programs at the Pentagon. "I think in the past three to five years this has been going on, but that it has grown as a culture and a practice - and it's a good thing." "If Israel attacks Iran, and we have to go to war - and the Straits of Hormuz are closed for a week or a month and the price of fuel is going to be high," Kingston said, "the question is, in the military, what do you replace it with? It's not something you just do for the ozone. It's strategic." Sen. **Lindsey Graham**, R-S.C., who sits on both the Senate Armed Services Committee and the Defense Appropriations Subcommittee, **said, "I don't see what they're doing in DOD as being Solyndra**." "We're not talking about putting $500 million into a goofy idea," Graham told National Journal . "We're talking about taking applications of technologies that work and expanding them. I wouldn't be for DOD having a bunch of money to play around with renewable technologies that have no hope. But from what I understand, there are renewables out there that already work." A senior House Democrat noted that **this wouldn't be the first time** that **the Pentagon has been utilized to advance policies that wouldn't otherwise be supported**. "They did it in the '90s with medical research," said Rep. Henry Waxman, D-Calif., ranking member of the House Energy and Commerce Committee. In 1993, when funding was frozen for breast-cancer research programs in the National Institutes of Health, Congress boosted the Pentagon's budget for breast-cancer research - to more than double that of the health agency's funding in that area. **Politically, the strategy makes sense**. **Republicans are ready to fire at the first sign of any pet Obama program, and renewable programs at the Energy Department are an exceptionally ripe target**. That's because of Solyndra, but also because, in the last two years, the Energy Department received a massive $40 billion infusion in funding for clean-energy programs from the stimulus law, a signature Obama policy. When that money runs out this year, a request for more on top of it would be met with flat-out derision from most congressional Republicans. **Increasing renewable-energy initiatives at the Pentagon can** also **help Obama advance his** broader, national **goals** for transitioning the U.S. economy from fossil fuels to alternative sources. As the largest industrial consumer of energy in the world, the U.S. military can have a significant impact on energy markets - if it demands significant amounts of energy from alternative sources, it could help scale up production and ramp down prices for clean energy on the commercial market. Obama acknowledged those impacts in a speech last month at the Buckley Air Force Base in Colorado. "The Navy is going to purchase enough clean-energy capacity to power a quarter of a million homes a year. And it won't cost taxpayers a dime," Obama said. "What does it mean? It means that the world's largest consumer of energy - the Department of Defense - is making one of the largest commitments to clean energy in history," the president added. "That will grow this market, it will strengthen our energy security." Experts also hope that Pentagon engagement in clean-energy technology could help yield breakthroughs with commercial applications. Kingston acknowledged that the upfront costs for alternative fuels are higher than for conventional oil and gasoline. For example, the Air Force has pursued contracts to purchase biofuels made from algae and camelina, a grass-like plant, but those fuels can cost up to $150 a barrel, compared to oil, which is lately going for around $100 a barrel. Fuel-efficient hybrid tanks can cost $1 million more than conventional tanks - although in the long run they can help lessen the military's oil dependence, Kingston said Republicans recognize that the up-front cost can yield a payoff later. "It wouldn't be dead on arrival. But we'd need to see a two- to three-year payoff on the investment," Kingston said. Military officials - particularly Navy Secretary Ray Mabus, who has made alternative energy a cornerstone of his tenure - have been telling Congress for years that the military's dependence on fossil fuels puts the troops - and the nation's security - at risk. Mabus has focused on meeting an ambitious mandate from a 2007 law to supply 25 percent of the military's electricity from renewable power sources by 2025. (Obama has tried and failed to pass a similar national mandate.) Last June, the **DOD rolled out its first department-wide energy policy to coalesce alternative and energy-efficient initiatives across the military services**. In January, the department announced that a study of military installations in the western United States found four California desert bases suitable to produce enough solar energy - 7,000 megawatts - to match seven nuclear power plants. And so far, those **moves have met with approval from congressional Republicans**. Even so, any request for new Pentagon spending will be met with greater scrutiny this year. The Pentagon's budget is already under a microscope, due to $500 billion in automatic cuts to defense spending slated to take effect in 2013. But **even with** those **challenges**, **clean-energy spending** probably **won't stand out** as much **in** the **military budget as it would in the Energy Department budget**. Despite its name, the Energy Department has traditionally had little to do with energy policy - its chief portfolio is maintaining the nation's nuclear weapons arsenal. Without the stimulus money, last year only $1.9 billion of Energy's $32 billion budget went to clean-energy programs. A spending increase of just $1 billion would make a big difference in the agency's bottom line. But **it would** probably **be easier to tuck another** $1 billion or $**2 billion** **on clean-energy spending into the Pentagon's $518 billion budget**. **Last year**, **the Pentagon spent** about $**1 billion on renewable energy** and energy-efficiency programs across its departments.

**Biden outweighs**

**Hirsh 12-31**

Michael is Chief Correspondent for the Atlantic, “Joe Biden: The Most Influential Vice President in History,”

Now, if Barack Obama does leave a lasting legacy on gun violence that comes out of the terrible tragedy in Newtown, Conn., Biden will be a big part of it. And **if anything like an agreement is reached on fiscal issues, Biden is likely to be part of that as well. His long** Senate **tenure, and** the **many relationships he developed across the aisle, are** once again proving **crucial**. As I reported in the fall of 2010, shortly before the looming congressional election that gave the Republicans -- and the Tea Party -- the House, **no one has more experience working with the other party**, reaching across the aisle, and that talent may be critical to just keeping the government going in the coming months.¶ "He can sit down in foreign policy or other issues and find a common interest and drive the ideas forward. **Look at what he did with Jesse Helms and Strom Thurmond" in passing the chemical weapons treaty and crime bills**, respectively, in the 1990s, his former chief of staff (and later successor), Ted Kaufman, noted back then. "I mean, Jesse Helms and Strom Thurmond! You don't get more conservative than that."¶ Actually, you do, as the current breed of Republicans has demonstrated in this era. But if anyone can talk to Mitch McConnell, it's Joe Biden. Whose stock is still rising steadily.

# Round 6 v Towson ??

## 1AC

**Contention One: Warming**

#### First, global warming is real – newest scientific studies

Spotts 11

Pete, staff writer for the Christian Science Monitor (“Climate study, funded in part by conservative group, confirms global warming,” 10/21/11, http://www.csmonitor.com/Environment/2011/1021/Climate-study-funded-in-part-by-conservative-group-confirms-global-warming)

A new climate study shows that since the mid-1950s, global average temperatures over land have risen by 0.9 degrees Celsius (1.6 degrees Fahrenheit), confirming previous studies that have found a climate that has been warming – in fits and starts – since around 1900. Most climate scientists attribute warming since the mid-1950, at least to some degree, to carbon dioxide emissions from human activities – burning coal, oil, and to a lesser extent gas, and from land-use changes. The latest results mirror those from earlier, independent studies by scientists at NASA's Goddard Institute for Space Studies in New York, the Hadley Center for Climate Prediction and Research in Britain, and the National Oceanic and Atmospheric Administration (NOAA). These previous efforts, however, came under fire from some climate-change skeptics who said they had detected serious flaws in the analytical methods and temperature records the three groups used. The new research, which has yet to be formally published but which appears in four papers posted on BerkeleyEarth.org, uses new analytical techniques and a much larger set of records than the previous studies did. Indeed, the new approach to analyzing temperatures records allowed the team to make use of partial and older records previous studies had rejected as unusable, explains Richard Muller, a physicist at the Lawrence Berkeley National Laboratory who coordinated the effort. In the end, the team's result shows that the earlier studies "were done carefully and that potential biases identified by climate-change skeptics did not seriously affect" the conclusions these studies reached, said Dr. Muller, who some climate activists have labeled a global-warming skeptic. The approach embodied in the main work "is very valuable, but may also need some refinement," says Kevin Trenberth, a climate scientist at the National Center for Atmospheric Research (NCAR) in Boulder, Colo. Besides confirming the temperature trend, the Berkeley group says it was able to rule out the urban heat-island effect as a significant contributor to global warming. And it was able to show that even with a large number of critical US recording stations operating inaccurately, those stations still showed long-term trends that were consistent with more reliable stations. In essence, any given measuring station may be off compared with surrounding stations. But if it's off by a consistent amount, long-term trends will still show up. The study also highlighted the regional differences in temperature trends that can lead people to say: What global warming? Over the past 70 years, the team found that about one-third of the measuring stations in its global sample indicated cooling trends. Two-thirds showed warming trends, with warm regions more than offsetting cool regions in developing a global average. Money for the new study, dubbed the Berkeley Earth Surface Temperature project, came from five foundations, including one established by Microsoft founder Bill Gates and another from the Charles Koch Charitable Foundation, widely seen as a source of money for conservative organizations and initiatives that have fought efforts to curb greenhouse-gas emissions. The work makes no attempt to attribute the rising temperatures to any particular cause. Nor does it include ocean temperatures, the subject of a future study. Still, this confirmation could help move the discussion toward solutions, suggests Caspar Ammann, another climate scientist at NCAR. With minor differences, trends in all four independent study groups' temperature records match up well from about 1900 on, with the Berkeley and NOAA analyses showing a slightly higher level for the mid-2000s than the NASA and Hadley analyses. "The rather irrational doubt and claims of a hoax simply don't make sense, and this work might help restart the discussion about what is next," Dr. Ammann says.

**Nuclear’s inevitable globally but won’t solve warming until the US develops SMR’s**

**Shellenberger 12** – et al and Ted Nordhaus—co-founders of American Environics and the Breakthrough Institute a think tank that works on energy and climate change – AND – Jesse Jenkins-Director of Energy and Climate Policy, the Breakthrough Institute (Michael, Why We Need Radical Innovation to Make New Nuclear Energy Cheap, 9/11, thebreakthrough.org/index.php/programs/energy-and-climate/new-nukes/)

Arguably, the biggest impact of Fukushima on the nuclear debate, ironically, has been to force a growing number of pro-nuclear environmentalists out of the closet, including us. The reaction to the accident by anti-nuclear campaigners and many Western publics put a fine point on the gross misperception of risk that informs so much anti-nuclear fear. **Nuclear remains the only proven technology capable of reliably generating zero-carbon energy at a scale that can have any impact on global warming. Climate change -- and**, for that matter, the enormous present-day **health risks associated with burning coal, oil, and gas** -- simply **dwarf any** legitimate **risk associated with** the operation of **nuclear** power **plants.** **About 100,000 people die every year due to exposure to air pollutants from the burning of coal**. By contrast, about 4,000 people have died from nuclear energy -- ever -- almost entirely due to Chernobyl.¶ But **rather than simply lecturing our fellow environmentalists about their misplaced priorities, and how profoundly inadequate present-day renewables are as substitutes for fossil energy, we would do better to take seriously the real obstacles standing in the way of a serious nuclear renaissance.** Many of these obstacles have nothing to do with the fear-mongering of the anti-nuclear movement or, for that matter, the regulatory hurdles imposed by the U.S. Nuclear Regulatory Commission and similar agencies around the world.¶ **As long as nuclear technology is characterized by enormous upfront capital costs**, **it is likely to** **remain just a hedge against overdependence on** lower-cost coal and **gas**, **not the wholesale replacement it needs to be to make a serious dent in climate change**. **Developing countries need** large **plants capable of bringing large amounts of** new **power to their fast-growing economies. But they also need power to be cheap.** So long as **coal** remains the cheapest source of electricity in the developing world, it **is likely to remain king.**¶ **The most worrying threat to the future of nuclear** **is**n't the political fallout from Fukushima -- it's **economic reality**. **Even as new nuclear plants are built in the developing world, old plants are being retired in the developed world.** For example, Germany's plan to phase-out nuclear simply relies on allowing existing plants to be shut down when they reach the ends of their lifetime. Given the size and cost of new conventional plants today, those plants are unlikely to be replaced with new ones. As such, the **combined political and economic constraints associated with current nuclear energy technologies mean that nuclear energy's share of global energy generation is unlikely to grow** in the coming decades, **as global energy demand is likely to increase faster than new plants can be deployed.¶** **To move the needle on nuclear energy to the point that it might actually be capable of displacing fossil fuels, we'll need new nuclear technologies that are cheaper and smaller**. Today, there are a range of nascent, smaller nuclear power plant designs, some of them modifications of the current light-water reactor technologies used on submarines, and others, like thorium fuel and fast breeder reactors, which are based on entirely different nuclear fission technologies. **Smaller, modular reactors can be built much faster and cheaper than traditional large-scale nuclear power plants**. Next-generation nuclear reactors are designed to be incapable of melting down, produce drastically less radioactive waste, make it very difficult or impossible to produce weapons grade material, useless water, and require less maintenance.¶ Most of these designs still face substantial technical hurdles before they will be ready for commercial demonstration. That means a great deal of research and innovation will be necessary to make these next generation plants viable and capable of displacing coal and gas. **The U**nited **S**tates **could be a leader on developing these technologies, but unfortunately U.S. nuclear policy remains mostly stuck in the past**. **Rather than creating new solutions**, efforts to restart **the U.S.** nuclear industry have mostly **focused on encouraging utilities to build the next generation of large,** light-water **reactors with loan guarantees** and various other subsidies and regulatory fixes. With a few exceptions, **this is** largely **true** elsewhere **around the world** as well.¶ Nuclear has enjoyed bipartisan support in Congress for more than 60 years, but the enthusiasm is running out. The Obama administration deserves credit for authorizing funding for two small modular reactors, which will be built at the Savannah River site in South Carolina. But a much more sweeping reform of U.S. nuclear energy policy is required. At present, **the N**uclear **R**egulatory **C**ommission haslittle institutional knowledge of anything other than light-water reactors and virtually no capability to review or regulate alternative designs. This **affects nuclear innovation in other countries** as well, **since the NRC remains, despite its many critics, the global gold standard for thorough regulation of nuclear energy.** Most **other countries follow the NRC's lead when it comes to establishing new technical and operational standards for the design, construction, and operation of nuclear plants.**¶ What's needed now is a new national commitment to the development, testing, demonstration, and early stage commercialization of a broad range of new nuclear technologies -- from much smaller light-water reactors to next generation ones -- in search of a few designs that can be mass produced and deployed at a significantly lower cost than current designs. This will require both greater public support for nuclear innovation and an entirely different regulatory framework to review and approve new commercial designs.¶ In the meantime, **developing countries will continue to build traditional, large nuclear power plants. But time is of the essence.** **With the lion's share of future carbon emissions coming from those** emerging economic **powerhouses**, **the need to develop smaller and cheaper designs that can scale faster is all the more important.**¶ **A true nuclear renaissance can't happen overnight. And it won't happen so long as large and expensive light-water reactors remain our only option. But in the end, there is no credible path to mitigating climate change without a massive global expansion of nuclear energy.** If you care about climate change, nothing is more important than developing the nuclear technologies we will need to get that job done.

**Nuclear’s critical to displace coal and stop catastrophic climate change**

**Moore 4**—co-founder of Greenpeace, is chairman and chief scientist of Greenspirit Strategies Ltd. (Patrick, Going Nuclear, <http://www.washingtonpost.com/wp-dyn/content/article/2006/04/14/AR2006041401209.html>)

In the early 1970s **when I** helped **found Greenpeace, I believed that nuclear energy was synonymous with nuclear holocaust,** as did most of my compatriots. That's the conviction that inspired Greenpeace's first voyage up the spectacular rocky northwest coast to protest the testing of U.S. hydrogen bombs in Alaska's Aleutian Islands. Thirty years on, my **views have changed, and** the rest of **the environmental movement needs to update its views**, too, **because nuclear energy may just be the energy source that can save our planet from** another possible disaster: **catastrophic climate change**.¶ Look at it this way: More than **600 coal-fired electric plants in the U**nited **S**tates **produce 36 percent of U.S. emissions** -- or **nearly 10 percent of global emissions** -- **of CO2**, the primary greenhouse gas responsible for climate change. **Nuclear energy is the only large-scale, cost-effective energy source that can reduce these emissions while continuing to satisfy** a **growing demand for power**. And these days it can do so safely.¶ I say that guardedly, of course, just days after Iranian President Mahmoud Ahmadinejad announced that his country had enriched uranium. "The nuclear technology is only for the purpose of peace and nothing else," he said. But there is widespread speculation that, even though the process is ostensibly dedicated to producing electricity, it is in fact a cover for building nuclear weapons.¶ And although I don't want to underestimate the very real dangers of nuclear technology in the hands of rogue states, we cannot simply ban every technology that is dangerous. That was the all-or-nothing mentality at the height of the Cold War, when anything nuclear seemed to spell doom for humanity and the environment. In 1979, Jane Fonda and Jack Lemmon produced a frisson of fear with their starring roles in "The China Syndrome," a fictional evocation of nuclear disaster in which a reactor meltdown threatens a city's survival. Less than two weeks after the blockbuster film opened, a reactor core meltdown at Pennsylvania's Three Mile Island nuclear power plant sent shivers of very real anguish throughout the country.¶ What nobody noticed at the time, though, was that Three Mile Island was in fact a success story: The concrete containment structure did just what it was designed to do -- prevent radiation from escaping into the environment. And although the reactor itself was crippled, there was no injury or death among nuclear workers or nearby residents. Three Mile Island was the only serious accident in the history of nuclear energy generation in the United States, but it was enough to scare us away from further developing the technology: There hasn't been a nuclear plant ordered up since then.¶ Today, there are 103 nuclear reactors quietly delivering just 20 percent of America's electricity. Eighty percent of the people living within 10 miles of these plants approve of them (that's not including the nuclear workers). Although I don't live near a nuclear plant, I am now squarely in their camp.¶ And I am not alone among seasoned environmental activists in changing my mind on this subject. **British atmospheric scientist** James **Lovelock**, father of the Gaia theory, **believes that nuclear energy is the** **only way to avoid catastrophic climate change**. Stewart Brand**, founder of the "Whole Earth Catalog," says the** environmental **movement must embrace nuclear energy to wean ourselves from fossil fuels**. On occasion, such opinions have been met with excommunication from the anti-nuclear priesthood: The late British Bishop Hugh Montefiore, founder and director of Friends of the Earth, was forced to resign from the group's board after he wrote a pro-nuclear article in a church newsletter.¶ There are signs of a new willingness to listen, though, even among the staunchest anti-nuclear campaigners. When I attended the Kyoto climate meeting in Montreal last December, I spoke to a packed house on the question of a sustainable energy future. I argued that the only way to reduce fossil fuel emissions from electrical production is through an aggressive program of renewable energy sources (hydroelectric, geothermal heat pumps, wind, etc.) plus nuclear. The Greenpeace spokesperson was first at the mike for the question period, and I expected a tongue-lashing. Instead, he began by saying he agreed with much of what I said -- not the nuclear bit, of course, but there was a clear feeling that all options must be explored.¶ Here's why: **Wind and solar** power have their place, but **because they are intermittent and unpredictable they simply can't replace big baseload plants such as** coal, **nuclear** and hydroelectric. Natural gas, a fossil fuel, is too expensive already, and its price is too volatile to risk building big baseload plants. Given that hydroelectric resources are built pretty much to capacity, **nuclear is,** by elimination, **the only viable substitute for coal.** It's that simple.¶ That's not to say that there aren't real problems -- as well as various myths -- associated with nuclear energy. Each concern deserves careful consideration:¶ · Nuclear energy is expensive. It is in fact one of the least expensive energy sources. In 2004, the average cost of producing nuclear energy in the United States was less than two cents per kilowatt-hour, comparable with coal and hydroelectric. Advances in technology will bring the cost down further in the future.¶ · Nuclear plants are not safe. Although Three Mile Island was a success story, the accident at Chernobyl, 20 years ago this month, was not. But Chernobyl was an accident waiting to happen. This early model of Soviet reactor had no containment vessel, was an inherently bad design and its operators literally blew it up. The multi-agency U.N. Chernobyl Forum reported last year that 56 deaths could be directly attributed to the accident, most of those from radiation or burns suffered while fighting the fire. Tragic as those deaths were, they pale in comparison to the more than 5,000 coal-mining deaths that occur worldwide every year. No one has died of a radiation-related accident in the history of the U.S. civilian nuclear reactor program. (And although hundreds of uranium mine workers did die from radiation exposure underground in the early years of that industry, that problem was long ago corrected.)¶ · Nuclear waste will be dangerous for thousands of years. Within 40 years, used fuel has less than one-thousandth of the radioactivity it had when it was removed from the reactor. And it is incorrect to call it waste, because 95 percent of the potential energy is still contained in the used fuel after the first cycle. Now that the United States has removed the ban on recycling used fuel, it will be possible to use that energy and to greatly reduce the amount of waste that needs treatment and disposal. Last month, Japan joined France, Britain and Russia in the nuclear-fuel-recycling business. The United States will not be far behind.¶ · Nuclear reactors are vulnerable to terrorist attack. The six-feet-thick reinforced concrete containment vessel protects the contents from the outside as well as the inside. And even if a jumbo jet did crash into a reactor and breach the containment, the reactor would not explode. There are many types of facilities that are far more vulnerable, including liquid natural gas plants, chemical plants and numerous political targets.¶ · Nuclear fuel can be diverted to make nuclear weapons. This is the most serious issue associated with nuclear energy and the most difficult to address, as the example of Iran shows. But just because nuclear technology can be put to evil purposes is not an argument to ban its use.¶ Over the past 20 years, one of the simplest tools -- the machete -- has been used to kill more than a million people in Africa, far more than were killed in the Hiroshima and Nagasaki nuclear bombings combined. What are car bombs made of? Diesel oil, fertilizer and cars. If we banned everything that can be used to kill people, we would never have harnessed fire.¶ The only practical approach to the issue of nuclear weapons proliferation is to put it higher on the international agenda and to use diplomacy and, where necessary, force to prevent countries or terrorists from using nuclear materials for destructive ends. And new technologies such as the reprocessing system recently introduced in Japan (in which the plutonium is never separated from the uranium) can make it much more difficult for terrorists or rogue states to use civilian materials to manufacture weapons.¶ The 600-plus **coal**-fired **plants emit** nearly **2 billion tons of CO2annually** -- **the equivalent of the exhaust from** about **300 million automobiles**. In addition, the Clean Air Council reports that **coal plants are responsible for 64 percent of sulfur dioxide emissions, 26 percent of nitrous oxides and 33 percent of mercury emissions**. **These pollutants** are **erod**ing **the** health of our **environment**, producing **acid rain, smog**, respiratory illness and mercury contamination.¶ Meanwhile, **the 103 nuclear plants** operating **in the U**nited **S**tates **effectively avoid** the release of 700 million tons of CO2emissions annually -- **the equivalent** of the **exhaust from** more than **100 million automobiles**. **Imagine if the ratio** of coal to nuclear **were reversed** so that only 20 percent of our electricity was generated from coal and 60 percent from nuclear. **This would go a long way toward cleaning the air and reducing greenhouse gas emissions.** Every responsible environmentalist should support a move in that direction.

**Nuclear is sustainable and doesn’t cause emissions**

**Gronlund 7** Nuclear power in a Warming world: Assessing the Risks, Addressing the Challenges, Lisbeth Gronlund; David Lochbaum; Edwin Lyman, Union of Concerned Scientists, http://www.ucsusa.org/assets/documents/nuclear\_power/nuclear-power-in-a-warming-world.pdf

**Nuclear power plants do not produce** global **warming emissions when they operate**. However, producing nuclear power requires mining and processing uranium ore, enriching uranium to create reactor fuel, manufacturing and transporting fuel, and building plants—all of which consume energy. Today much of that energy is provided by fossil fuels (although that may change if the United States takes steps to address global warming). ¶ However, **the** global **warming emissions associated with nuclear power even now are relatively modest**. Indeed, **its life cycle emissions are comparable to those of wind** power and hydropower. While estimates of life cycle greenhouse gas emissions vary with different assumptions and methodologies, **the basic conclusions of most analyses are consistent: for each unit of electricity generated, natural gas combustion results in roughly half the global warming emissions of coal combustion, while wind power, hydropower, and nuclear power produce only a few percent of emissions from coal combustion.** The life cycle emissions of photovoltaics (PVs) are generally somewhat higher than those for wind power, hydropower, and nuclear power, because manufacture of PVs entails greater global warming emissions.5¶ The greenhouse gas emissions stemming from nuclear power depend greatly on the technology used to enrich uranium. The technology now used in the United States—gaseous diffusion—requires a large amount of electricity: roughly 3.4 percent of the electricity generated by a typical U.S. reactor would be needed to enrich the uranium in the reactor’s fuel. 6¶ Because fossil fuels generate 70 percent of U.S. electricity, emissions from that enrichment would account for some 2.5 percent of the emissions of an average U.S. fossil fuel plant. However, **in the near future, U.S. uranium will be enriched using gaseous centrifuge technology, which consumes only 2.5 percent of the energy used by a diffusion plant. Thus this part of the nuclear power life cycle would result in very low emissions**.7

**SMRs are flexible and replace coal plants**

**Colvin 11**—Joe Colvin, President, American Nuclear Society, June 7, 2011, TESTIMONY BEFORE THECOMMITTEE ON ENERGY AND NATURAL RESOURCESUNITED STATES SENATE<http://theenergycollective.com/ansorg/58930/ans-president-joe-colvin-testifies-about-smr-legislation>

The ANS and its membership believe that the development of a new generation of small modular reactors has the potential to make a significant contribution to our long-term energy, economic, and national security. SMRs offer several unique advantages over their larger brethren.¶ First, they provide great operational flexibility. SMRs can be deployed in arid regions to produce large quantities of fresh water through desalination. They can be used as a heat source for industrial processes, including hydrogen production, fertilizers, production of synthetic fuels, and biofuels. They can be deployed in remote areas to produce energy for towns and military installations, as well as heat for mining operations and unconventional oil recovery. SMRs could be an attractive alternative for smaller U.S utilities, especially in the Midwest, that seek to replace their old, coal-fired generating **stations because of environmental considerations. These facilities would already have the necessary water, rail, and transmission facilities and the necessary infrastructure, thereby simplifying the installation process**.

**Continued reliance on coal kills 13,000 people every year and spreads hazardous pollution**

**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**.

**Coal plants contribute to warming and disproportionately affect low-income minority communities- this is a key concern for environmental justice**

**Israel ‘12**

[Brett, The Daily Climate, 11/16/12. <http://wwwp.dailyclimate.org/tdc-newsroom/2012/11/coal-power-injustice> ETB]

**Coal plants place a disproportionate burden on poor and** largely **minority communities, exposing residents to high levels of pollutants that affect public health,** according to a new report led by the National Association for the Advancement of Colored Peop¶ The report ranks all 378 coal-fired power plants in the United States according to a plant's impact on the health, economics and environment of nearby communities. **People living near coal plants are disproportionately poor and minorities,** the report found; the six million people living within three miles of those 378 plants have an average per capita income of $18,400 per year; 39 percent are people of color. ¶ "The message arising from this report is simple: These polluting, life-compromising coal plants must be closed," the NAACP concluded in its report, Coal Blooded: Putting Profits Before People. Coal plants are large emitters of mercury, lead, sulfur dioxide, nitrogen dioxide, and carbon dioxide – a potent greenhouse gas. **Along with contributing to climate change, pollution from coal plants is linked to asthma attacks, heart problems, and other diseases**.¶ Failing grades¶ The report also found that not all coal plants are equal. The impacts of some plants on the public health of nearby communities are measurably worse than others, the authors said. And more often than not, **the most offending plants are located in poor and largely minority communities.**¶ **The NAACP report gave** 75 coal **plants a "failing" grade on** their **environmental justice** scorecard and found that those plants were responsible for a heavy pollution burden: 14 percent of sulfur dioxide emissions and 13 percent of all nitrogen oxide emissions from all U.S. power plants came from those 75 power plants, according to the report. ¶ The four million people living near those 75 "failing" plants are even poorer and more isolated communities of color. The average per capita income within three miles of the 75 failing plants is $17,500 and nearly 53 percent of the people are minorities, the analysis found.¶ "**It's very easy right now to talk about climate change as something that is theoretical, to talk about the dirtiness caused by coal plants as something that is aesthetic"** said NAACP president Benjamin Todd Jealous. "**But** **when you** ... actually **meet with** people in **these communities**, **the stories** that they tell you – **about** their **children's lives being diminished, about** older people in the communities **lives being shortened** by the presence of these plants – **are disturbing**."

**These communities are also disproportionately affected by warming- failure to act causes untold suffering and perpetuates environmental injustice**

**NAACP ‘12**

[Lead Researcher-Author: ¶ Adrian Wilson¶ Doctoral Student, Dept. of Economics¶ University of Massachusetts at Amherst. Contributing Researchers-Authors: ¶ Jacqui Patterson, NAACP¶ Katie Fink, NAACP ¶ Kimberly Wasserman, LVEJO¶ Amanda Starbuck and Annie Sartor, Rainforest Action Network¶ Judy Hatcher¶ John Fleming. “Coal Blooded: Putting Profits Before People.” ETB]

Climate change is already ¶ devastating the Global South —¶ and that devastation will only ¶ accelerate as the 21¶ st¶ century ¶ continues. The public narrative ¶ has focused to a large extent on ¶ global warming causing rising sea ¶ levels, which will inundate lowlying countries such as Bangladesh ¶ and island-states in the Pacific ¶ Ocean.¶ **Another very threatening impact** ¶ **of global warming is the** ¶ **transformation that it will cause in** ¶ **global weather patterns** — generating ¶ increasingly severe weather and rising ¶ drought levels — **which will disproportionately affect people throughout the world who rely on** ¶ **subsistence agriculture** for their survival.¶ 44¶ In November 2011, a report by the ¶ Intergovernmental Panel on Climate Change linked increases in extreme weather events to ¶ human-caused climate change:¶ There is evidence that some [weather] extremes have [already] changed as a result of ¶ anthropogenic influences, including increases in atmospheric concentrations of greenhouse ¶ gases. It is likely that anthropogenic influences have led to warming of extreme daily minimum ¶ and maximum temperatures on the global scale. There is medium confidence that ¶ anthropogenic influences have contributed to intensification of extreme precipitation on the global scale. It is likely that there has been an anthropogenic influence on increasing extreme ¶ coastal high water due to increase in mean sea level.¶ 45¶ The Fourth Assessment Report of the Intergovernmental Panel on Climate Change states that ¶ global warming will cause the most dramatic impacts in Africa, in Asian and African mega ¶ deltas, and on small, low-lying islands (such as those in the Pacific Ocean); experts agree that ¶ people in Africa and South Asia will be more dramatically affected by these changes in weather ¶ patterns than people in the North America and Europe.¶ 46¶ However, global climate change is not only a threat to communities in the Global South. In ¶ recent years, politicians and regulatory agencies in the U.S. have begun to address the threat ¶ that global warming poses to communities here in the U.S. In 2007, the Supreme Court ruled ¶ that CO2 and other greenhouse gases are pollutants under the Clean Air Act, and directed the ¶ EPA to follow the requirements of the Act and determine whether greenhouse gases ¶ endangered public health or welfare.¶ 47¶ In 2009, the EPA responded to the Supreme Court, and ¶ found that the increased concentrations of greenhouse gases threaten the public health and ¶ welfare of current and future generations of U.S. citizens. The impacts of climate change cited ¶ by the EPA include, but are not limited to: increased drought; an increased number of heavy ¶ downpours and flooding; more frequent and intense heat waves and wildfires; greater sea level ¶ rise; more intense storms; and harm to water resources, agriculture, wildlife, and ecosystems.¶ 48¶ In reaching its finding, EPA noted that **certain populations may be especially vulnerable** to ¶ climateimpacts**, including people** living **in poverty, people who are elderly, people already in** ¶ **poor health, people with disabilities, people living alone,** **and/**or **Indigenous populations** ¶ dependent on one or a few natural resources. In developed areas, **environmental justice issues** ¶ **are** also **raised by climate change** — for example, **warmer temperatures in urban areas will have** ¶ **a more severe impact on people who cannot afford air-conditioning**. Indeed, Hurricane **Katrina and the** ¶ **tornadoes in Pratt City**, AL **have** already ¶ vividly **demonstrated that the shifts in** ¶ **weather patterns caused by climate** ¶ **change disproportionately affect** ¶ **African Americans and other** ¶ **communities of color** in the United ¶ States — **which is a particularly bitter** ¶ **irony, given that the average AfricanAmerican household emits 20 percent** ¶ **less CO2 per year than the average** ¶ **white American household**.¶ 49¶ **The six** ¶ **states with the largest proportion of** ¶ **African-Americans are all in the** ¶ **Atlantic hurricane zone, and all are** ¶ **expected to experience more severe storms as a consequence of global warming.** **Adverse weather events will cause more severe impacts for communities of color, due to their more** ¶ **marginal economic situation:** the median wealth of African-American households is one-tenth ¶ that of the white households, leaving African-Americans with fewer resources when disaster ¶ strikes. African-Americans and Latinos are also far less likely than their white counterparts to ¶ own health or homeowners’ insurance, and are consequently more vulnerable to their entire ¶ wealth being drained by a hurricane or other natural disaster.¶ 50¶ **The direct and indirect costs of** ¶ **failure to act are clear. Already communities are suffering the impacts worldwide. Without** ¶ **aggressive mitigation efforts global warming, low agricultural yields, sea level rise, and disaster** ¶ **will** unfortunately **continue to produce disastrous displacement, hunger, illness, and death.**

**Allowing warming to continue perpetuates racist inequalities**

**Hoerner 8—**Former director of Research at the Center for a Sustainable Economy, Director of Tax Policy at the Center for Global Change at the University of Maryland College Park, and editor of Natural Resources Tax Review. He has done research on environmental economics and policy on behalf of the governments of Canada, France, Germany, the Netherlands, Switzerland, and the United States. Andrew received his B.A. in Economics from Cornell University and a J.D. from Case Western Reserve School of Law—AND—Nia Robins—former inaugural Climate Justice Corps Fellow in 2003, director of Environmental Justice and Climate Change Initiative (J. Andrew, “A Climate of Change African Americans, Global Warming, and a Just Climate Policy for the U.S.” July 2008, http://www.ejcc.org/climateofchange.pdf)

Everywhere we turn, the issues and impacts of climate change confront us. One of the most serious environmental threats facing the world today, climate change has moved from the minds of scientists and offices of environmentalists to the mainstream. Though the media is dominated by images of polar bears, melting glaciers, flooded lands, and arid desserts, there is a human face to this story as well. Climate change is not only an issue of the environment; it is also an issue of justice and human rights, one that dangerously intersects **race and class**. All over the world people of color, Indigenous Peoples and low-income communities bear **disproportionate burdens** from climate change itself, from ill-designed policies to prevent it, and from side effects of the energy systems that cause it. A Climate of Change explores the impacts of climate change on African Americans, from health to economics to community, and considers what policies would most harm or benefit African Americans—and the nation as a whole. African Americans are thirteen percent of the U.S. population and on average emit nearly twenty percent less greenhouse gases than non-Hispanic whites per capita. Though far less responsible for climate change, African Americans are significantly more vulnerable to its effects than non- Hispanic whites. Health, housing, economic well-being, culture, and social stability are harmed from such manifestations of climate change as storms, floods, and climate **variability. African** Americans are also more vulnerable to higher energy bills, unemployment, recessions caused by global energy price shocks, and a greater economic burden from military operations designed to protect the flow of oil to the U.S. Climate Justice: The Time Is Now Ultimately, accomplishing climate justice will require that new alliances are forged and traditional movements are transformed. An effective policy to address the challenges of global warming cannot be crafted until race and equity are part of the discussion from the outset and an integral part of the solution. This report finds that: Global **warming amplifies nearly all existing inequalities**. Under global warming, injustices that are already unsustainable become catastrophic. Thus it is essential to recognize that all justice is climate justice and that the struggle for racial and economic justice is an unavoidable part of the fight to halt global warming. Sound global warming policy is also economic and racial justice policy. Successfully adopting a sound global warming policy will do as much to strengthen the economies of low-income **communities and communities of color** as any other currently plausible stride toward economic justice. Climate policies that best serve African Americans also best serve a just and strong United States. This paper shows that policies well-designed to benefit African Americans also provide the most benefit to all people in the U.S. **Climate policies that best serve** African Americans and other **disproportionately affected communities also best serve global economic and environmental justice. D**omestic reductions in global warming pollution and support for such reductions in developing nations financed by polluter-pays principles provide the greatest benefit to African Americans, the peoples of Africa, and people across the Global South. A distinctive African American voice is critical for climate justice. Currently, legislation is being drafted, proposed, and considered without any significant input from the communities most affected. Special interests are represented by powerful lobbies, while traditional environmentalists often fail to engage people of color, Indigenous Peoples, and low-income communities until after the political playing field has been defined and limited to conventional environmental goals. A strong focus on equity is essential to the success of the environmental cause, but equity issues cannot be adequately addressed by isolating the voices of communities that are disproportionately impacted. Engagement in climate change policy must be moved from the White House and the halls of Congress to social circles, classrooms, kitchens, and congregations. The time is now for those disproportionately affected to assume leadership in the climate change debate, to speak truth to power, and to assert rights to social, environmental and economic justice. Taken together, these actions affirm a vital truth that will bring communities together: Climate Justice is Common Justice. African Americans and Vulnerability In this report, it is shown that African Americans are disproportionately affected by climate change. African Americans Are at Greater Risk from Climate Change and Global Warming Co-Pollutants ¶ • The six states with the highest African American population are all in the Atlantic hurricane zone, and are expected to experience more intense storms resembling Katrina and Rita in the future. ¶ • Global warming is expected to increase the frequency and intensity of heat waves or extreme heat events. African Americans suffer heat death at one hundred fifty to two hundred percent of the rate for non-Hispanic whites. ¶ **• Seventy-one percent of African Americans live in counties in violation of federal air pollution standards**, as compared to fifty-eight percent of the white population. Seventy-eight percent of African Americans live **within thirty miles of a coal-fired power plant**, as compared to fifty-six percent of non-Hispanic whites. ¶ • **Asthma has strong associations with air pollution, and African Americans have a thirty-six percent higher rate of incidents of asthma** than whites. Asthma is three times as likely to lead to emergency room visits or deaths for African Americans. ¶ • This study finds that a twenty-five percent reduction in greenhouse gases—similar to what passed in California and is proposed in major federal legislation—would reduce infant mortality by at least two percent, asthma by at least sixteen percent, and mortality from particulates by at least 6,000 to 12,000 deaths per year. Other estimates have run as high as 33,000 fewer deaths per year. **A disproportionate number of the lives saved by these proposed reductions would be African American**. African Americans Are Economically More Vulnerable to Disasters and Illnesses ¶ • In 2006, twenty percent of African Americans had no health insurance, including fourteen percent of African American children—nearly twice the rate of non-Hispanic whites. ¶ • In the absence of insurance, disasters and illness (which will increase with global warming) could be cushioned by income and accumulated wealth. However, the average income of African American households is fifty-seven percent that of non-Hispanic whites, and median wealth is only one-tenth that of non-Hispanic whites. ¶ • Racist stereotypes have been shown to reduce aid donations and impede service delivery to African Americans in the wake of hurricanes, floods, fires and other climate-related disasters as compared to non-Hispanic whites in similar circumstances. African Americans Are at Greater Risk from Energy Price Shocks ¶ • African Americans spend thirty percent more of their income on energy than non-Hispanic whites. • Energy price increases have contributed to seventy to eighty percent of recent recessions. The increase in unemployment of African Americans during energy caused recessions is twice that of non-Hispanic whites, costing the community an average of one percent of income every year. • Reducing economic dependence on energy will alleviate the frequency and severity of recessions and the economic disparities they generate. African Americans Pay a Heavy Price and a Disproportionate Share of the Cost of Wars for Oil • Oil company profits in excess of the normal rate of profit for U.S. industries cost the average household $611 in 2006 alone and are still rising. • The total cost of the war in Iraq borne by African Americans will be $29,000 per household if the resulting deficit is financed by tax increases, and $32,000 if the debt is repaid by spending cuts. This is more than three times the median assets of African American households. A Clean Energy Future Creates Far More Jobs for African Americans • Fossil fuel extraction industries employ a far lower proportion of African Americans on average compared to other industries. Conversely, renewable electricity generation employs three to five times as many people as comparable electricity generation from fossil fuels, a higher proportion of whom are African American. ¶ • Switching just one percent of total electricity generating capacity per year from conventional to renewable sources would result in an additional 61,000 to 84,000 jobs for African Americans by 2030. ¶ • A well-designed comprehensive climate plan achieving emission reductions comparable to the Kyoto Protocol would create over 430,000 jobs for African Americans by 2030, reducing the African American unemployment rate by 1.8 percentage points and raising the average African American income by 3 to 4 percent.

**Addressing the root cause of climate change attacks environmental and institutional racism in the US**

**Cropwatch 01** (“Climate Change and Environmental Racism: Addressing Racism and Labor in the Climate Change Negotiations,” [www.corpwatch.org/article.php?id=920](http://www.corpwatch.org/article.php?id=920))

MARRAKECH -- The lack of transparency and public participation in the climate negotiations will further worsen conditions for Indigenous Peoples, people of color and workers in the US and US-Mexico border. Speakers from Indigenous Environmental Network, Southwest Network for Environmental and Economic Justice, CorpWatch and Redefining Progress held a briefing on Tuesday in Marrakech, bringing issues of racial justice and worker's rights to the center of the climate change negotiations.¶ Climate change is a reality in North America, and those least responsible for creating the problem -- Indigenous Peoples and communities of color, in particular -- will be the hardest hit. They have the least resources to cope with climatic changes -- a direct result of institutional racism in the US. In addition, the legacy of environmental racism in the US and the US-Mexico border has ensured that these communities are also hardest hit by environmental injustices, be they the dumping of nuclear waste, the siting of coal fired power plants and refineries or even the lack of adequate public transporation in communities of color. Various studies have clearly established that race plays a major factor in the siting of polluting industries in the US.¶ The corporate lobby has been very instrumental in derailing the negotiations on climate change and promising false solutions. "The Bush administration has sold out the interests of indigenous communities and communities of color to the fossil fuel industry that supported his election," said Tom Goldtooth of the Indigenous Environmental Network. "We need real solutions that address the root causes of climate change and environmental racism, not corporate solutions like carbon trading that will not do anything to stop greenhouse gases in the US -- a society addicted to fossil fuels," added Goldtooth.¶ Oil and other fossil fuel corporations are pushing the world to the edge of ecological havoc. At the same time, they continue to relentlessly destroy the health and well being of local communities and ecosystems where profits from oil are to be found- be it in the predominantly African American "Cancer Alley", the Gwich'in natives near the Arctic Refuge or Latinos in Austin, Texas. "Clearly, holding corporations accountable for the central role they play in perpetuating these local injustices as well as contributing to climate change is key to any solution to achieve Climate Justice. The US, which accounts for a quarter of CO2 emissions, must also be held accountable to forging genuine solutions," said Amit Srivastava of CorpWatch.¶ "For Indigenous People and people of color, climate change is a matter of life and death," said Ansje Miller of Redefining Progress, "Yet, our government turns its back on Americans most vulnerable to climate change by saying that we can't afford to address the problem. The truth is, we can't afford not to."¶ "Any solution must ensure the need for communities and workers to live in a safe, healthy, and clean environment and requires a just transition to build sustainable jobs and communities. To ensure these rights, we have to build a grassroots movement for Climate Justice that integrally links human rights, environmental justice and labor rights by including communities and workers in articulating the solutions," said Cipriana Jurado of the Southwest Network of Environmental and Economic Justice, who works on the US-Mexico border for the bi-national network.

**Seeking environmental justice key to avert extinction**

**Byrant 95**

(Bunyan, Professor in the school of Natural Resources and Environment, and an adjunt professor in the center for Afro-American and African studies at the University of Michigan, “Environmental Justice: Issues, Policies, and Solutions, p.209-212, MV)

The cooperative relations forged after World War II are now obsolete. **New cooperative relations need to be agreed upon – cooperative relations that show that pollution prevention and species preservation are inseparably linked to economic development and survival of planet earth**. Economic development is linked to pollution prevention even though the market fails to include the true cost of pollution in its pricing of products and services; it fails to place a value on the destruction of plant and animal species. To date, most industrialized nations, the high polluters, have had an incentive to pollute because they did not incur the cost of producing goods and services in a nonpolluting manner. The world will have to pay for the true cost of production and to practice prudent stewardship of our natural resources if we are to sustain ourselves on this planet. We cannot expect Third World countries to participate in debt-for-nature swaps as a means for saving the rainforest or as a means for the reduction of greenhouse gases, while a considerable amount of such gases come from industrial nations and from fossil fuel consumption.¶ Like disease, population growth is politically, economically, and structurally determined. Due to inadequate income maintenance programs and social security, families in developing countries are more apt to have large families not only to ensure the survival of children within the first five years, but to work the fields and care for the elderly. As development increases, so do education, health, and birth control. In his chapter, Buttel states that ecological development and substantial debt forgiveness would be more significant in alleviating Third World environmental degradation (or population problems) than ratification of any UNCED biodiversity or forest conventions. ¶ Because population control programs fail to address the structural characteristics of poverty, such programs for developing countries have been for the most part dismal failures. Growth and development along ecological lines have a better chance of controlling population growth in developing countries than the best population control programs to date. Although population control is important, we often focus a considerable ¶ amount of our attention on population problems of developing countries. Yet there are more people per square mile in Western Europe than in most developing countries. “During his/her lifetime an American child causes 35 times the environmental damage of an Indian child and 280 times that of a Haitian child (Boggs, 1993: 1). The addiction to consumerism of highly industrialized countries has to be seen as a major culprit, and thus must be balanced against the benefits of population control in Third World countries. ¶ **Worldwide environmental protection is only one part of the complex problems we face today. We cannot ignore world poverty**; it is intricately linked to environmental protection. If this is the case, then how do we deal with world poverty? How do we bring about lasting peace in the world? Clearly we can no longer afford a South Africa as it was once organized, or ethnic cleansing by Serbian nationalists. These types of conflicts bankrupt us morally and destroy our connectedness with one another as a world community. Yet, we may be headed on a course where the politically induced famine, poverty, and chaos of Somalia today will become commonplace and world peace more difficult, particularly if the European Common Market, Japan, and the United States trade primarily among themselves, leaving Third World countries to fend for themselves. Growing poverty will lead only to more world disequilibrium to wars and famine – as countries become more aggressive and cross international borders for resources to ward off widespread hunger and rampant unemployment. To tackle these problems requires a quantum leap in global cooperation and commitment of the highest magnitude; it requires development of an international tax, levied through the United nations or some other international body, so that the world community can become more involved in helping to deal with issues of environmental protection, poverty, and peace. ¶ **Since the market system has been bold and flexible enough to meet changing conditions, so too must public institutions**. They must, indeed, be able to respond to the rapid changes that reverberate throughout the world**. If they fail to change, then we will surely meet the fate of the dinosaur**. The Soviet Union gave up a system that was unworkable in exchange for another one. Although it has not been easy, individual countries of the former Soviet Union have the potential of reemerging looking very different and stronger. Or they could emerge looking very different and weaker. They could become societies that are both socially and environmentally destructive or they can become societies where people have decent jobs, places to live, educational opportunities for all citizens, and sustainable social structures that are safe and nurturing. Although North Americans are experiencing economic and social discomforts, we too will have to change, or we may find ourselves engulfed by political and economic forces beyond our control. In 1994, the out-sweeping of Democrats from national offices may be symptomatic of deeper and more fundamental problems. If the mean-spirited behavior that characterized the 1994 election is carried over into the governance of the country, this may only fan the flames of discontent. We may be embarking upon a long struggle over ideology, culture, and the very heart and soul of the country. But despite all the political turmoil, we must take risks and try out new ideas – ideas never dreamed of before and ideas we thought were impossible to implement. To implement these ideas we must overcome institutional inertia in order to enhance intentional change. We need to give up tradition and “business as usual.” To view the future as a challenge and as an opportunity to make the world a better place, we must be willing to take political and economic risks. ¶ The question is not growth, but what kind of growth, and where it will take place. For example, we can maintain current levels of productivity or become even more productive if we farm organically. Because of ideological conflicts, it is hard for us to view the Cuban experience with an unjaundiced eye; but we ask you to place political differences aside and pay attention to the lyrics of organic farming and not to the music of Communism. In other words, we must get beyond political differences and ideological conflicts; we must find success stories of healing the planet no matter where they exist – be they in Communist or non-Communist countries, developed or underdeveloped countries. We must ascertain what lessons can be learned from them, and examine how they would benefit the world community. In most instances, we will have to chart a new course. Continued use of certain technologies and chemicals that are incompatible with the ecosystem will take us down the road of no return. **We are already witnessing the catastrophic destruction of our environment and disproportionate impacts of environmental insults on communities of color and low-income groups. If such destruction continues, it will undoubtedly deal harmful blows to our social, economic, and political institutions**. ¶ As a nation, we find ourselves in a house divided, where **the cleavages between the races are in fact getting worse.** We find ourselves in a house divided where **the gap between the rich and the poor has increased**. We find ourselves in a house divided where the gap between the young and the old has widened. During the 1980s, there were few visions of healing the country. In the 1990s, despite the catastrophic economic and environmental results of the 1980s, and despite the conservative takeover of both houses of Congress, we must look for glimmers of hope. We must stand by what we think is right and defend our position with passion. And at times we need to slow down and reflect and do a lot of soul searching in order to redirect ourselves, if need be. We must chart out a new course of defining who we are as a people, by redefining our relationship with government, with nature, with one another, and where we want to be as a nation. We need to find a way of expressing this definition of ourselves to one another. Undeniably we are a nation of different ethnic groups and races, and of multiple interest groups, and **if we cannot live in peace and in harmony with ourselves and with nature it bodes ominously for future world relations**. ¶ Because economic institutions are based upon the growth paradigm of extracting and processing natural resources, we will surely perish if we use them to foul the global nest. But **it does not have to be this way. Although sound environmental policies can be compatible with good business practices and quality of life, we may have to jettison the moral argument of environmental protection in favor of the self-interest argument**, thereby demonstrating that the survival of business enterprises is intricately tied to good stewardship of natural resources and environmental protection. Too often we forget that short-sightedness can propel us down a narrow path, where we are unable to see the long-term effects of our actions. ¶ The ideas and policies discussed in this book are ways of getting ourselves back on track. The ideas presented here will hopefully provide substantive material for discourse. These policies are not carved in stone, nor are they meant to be for every city, suburb, or rural area. Municipalities or rural areas should have flexibility in dealing with their site-specific problems. Yet we need to extend our concern about local sustainability beyond geopolitical boundaries, because dumping in Third World countries or in the atmosphere today will surely haunt the world tomorrow. Ideas presented here may irritate some and dismay others, but we need to make some drastic changes in our lifestyles and institutions in order to foster environmental justice. ¶ Many of the policy ideas mentioned in this book have been around for some time, but they have not been implemented. **The struggle for environmental justice emerging from the people of color and low-income communities may provide the necessary political impulse to make these policies a reality. Environmental justice provides opportunities for those most affected by environmental degradation and poverty to make policies to save not only themselves from differential impact of environmental hazards, but to save those responsible for the lion’s share of the planet’s destruction. This struggle emerging from the environmental experience of oppressed people brings forth a new consciousness –** a new consciousness shaped by immediate demands for certainty and solution. It is a struggle to make a true connection between humanity and nature. **This struggle to resolve environmental problems may force the nation to alter its priorities; it may force the nation to address issues of environmental justice and, by doing so, it may ultimately result in a cleaner and healthier environment for all of us.** Although we may never eliminate all toxic materials from the production cycle, we should at least have that as a goal.

**We have a moral obligation to advocate nuclear---any alternative results in extinction due to warming**

**Baker 12**—Executive Director of PopAtomic Studios, the Nuclear Literacy Project (7/25/12, Suzy, Climate Change and Nuclear Energy: We Need to Talk, ansnuclearcafe.org/2012/07/25/climate-change-and-nuclear-energy-we-need-to-talk/)

Ocean Acidification¶ While I was making artistic monuments to single celled organisms in the ceramics studio, new research was emerging about ocean acidification affecting these beautiful and integral pieces of our ecosystem. **As the ocean absorbs excess carbon** from humans burning fossil fuels, **the pH of the ocean is rapidly changing**. This means that **our** ancient **oxygen-making pals cannot properly do their job**. As their ocean home becomes inhospitable, **they are dying off in droves**. **This not only impacts the ocean’s ability to naturally sequester** man made **carbon** emissions; **it** also **negatively impacts the entire food chain**, since they are the primary food source for other multi-cellular ocean creatures, some of which we enjoy eating.¶ Oh, and **did I mention that these** little **phytoplankton are** also **responsible for creating the ozone layer that protects all life on the planet from** cosmic **radiation**, **and they churn out** 70-**80% of the oxygen** **we breathe?** These creatures are much more than just a pretty floating form.¶ **Ocean acidification is the issue that brought me to supporting nuclear energy**. Ocean acidification is an often-overlooked aspect of climate change that is potentially more threatening than the heat, the super storms, the fires, the drought, the crop losses, and all of the other trends that we are seeing now, which climate scientists have been warning us about for decades.¶ Climate Change and Nuclear Energy: Like Oil and Water?¶ It didn’t take long for me to find out that in the nuclear industry, climate change is not something we all agree on. Discussing climate change as a concern is often polarizing, and brings up intrinsic conflicts of interest in the larger energy sector (the companies who design/build/run the nuclear plants also happen to design/build/run the fossil fuel plants). I’ve been advised by people who deeply care about me, and the success of my organization, not to bring up climate at all, and to be extremely careful not to base my support of nuclear on climate issues. I’ve also been specifically advised not to make the argument that nuclear energy is the only solution to climate change.¶ When you are the new kid, it is usually best not to make waves if you can help it. So, for the most part, I have heeded that advice and held my tongue, despite myself.¶ However, **as I** watch the news (and my wilting vegetable garden) and **see the magnitude of human suffering** that is **directly related to increasingly severe weather events**, **I cannot keep silent**. **Climate change is why I am here supporting nuclear energy, so what am I doing not talking about it?¶** The CEO of Exxon Mobile recently made clear that despite his company’s acknowledgement of the irrefutable evidence of climate change, and the huge ecological and human cost, he has no intentions of slowing our fossil fuel consumption. In fact, he goes as far to say that getting fossil fuels to developing nations will save millions of lives. While I agree that we need stronger, better energy infrastructure for our world’s poorest nations, I wholly disagree that fossils are the right fit for the job.¶ Fossil fuel usage could be cast as a human rights issue only to the extent that access to reliable and affordable electricity determines what one’s standard of living is. At the same time, **fossil fuel usage is the single largest threat to our planet and every species on it**. **Disregarding the impacts that fossil fuel use poses**, merely to protect and increase financial profits, **is unethical**, and cloaking fossil fuel use as a human rights issue is immoral.¶ Although we are all entitled to our own opinions and beliefs, **the idea that climate** change **and ocean acidification** **are** even **up for debate** **is not reasonable**. Just think: **The CEO of the largest fossil fuel** **company in America freely speaks out about climate change, while nuclear energy advocates are pressured to stay silent** on the subject.¶ **Silence is No Longer an Option**¶ I am someone who avoids conflict, who seeks consensus in my personal and professional lives, and so I have followed the advice of well-meaning mentors and stayed silent in hopes of preserving a false peace within my pro-nuclear circles, including my family and friends. But my keeping silent is now over— starting here and starting now—**because this is too big and too important to stay silent.** I am not alone in believing this, and the nuclear industry does itself no favors by tacitly excluding the growing movement of people who are passionate about the need to use nuclear energy to address climate change.¶ And **nuclear power is the only realistic solution**. **It would be great if there were** also **other viable solutions** that could be easily and quickly embraced; **however, the numbers just don’t work out**. **Renewables** and conservation **may have done more good if we had utilized them on a large scale 40 years ago**, when we were warned that our ecosystem was showing signs of damage from fossils fuels…**but** at this point **it’s really too late** for them. And burning more fossil fuels right now, when we have the technologies and know-how to create a carbon-free energy economy, would be the height of foolishness.¶ **In the meantime, there is real human suffering, and we here in the developed world are directly causing it. Our poorest brothers and sisters cannot escape the heat.** **They cannot import food when their crops fail.** They cannot buy bottled water when there is a drought. **They cannot “engineer a solution”** any more than my childhood friends the phytoplankton can.¶ ¶ Energy Choices as an Ethical Obligation¶ **We have an ethical obligation to stop killing people with our energy consumption**. That statement may sound oversimplified, but let’s be honest—we know that fossil fuels kill approximately 1.3 million people each year through respiratory diseases and cancers, and the death toll for climate change related events rises every day. Yet, we do nothing but dither about climate change politics. Where is the outrage?¶ The fossil fuel industry has been successful at presenting a united front and maintaining consistent strategic communications. In contrast, the safety record and clean energy contributions of nuclear are always overshadowed by politics favoring fossil fuel use. If anything, nuclear advocates should be particularly sensitive that the very same politics are happening with climate science.¶ **We should be championing nuclear energy as a science-based solution, instead of enforcing a meek code of silence**. People from outside the nuclear industry, like Gwyneth Cravens, Barry Brooks and Tom Blees, have pointed out these relationships, yet the nuclear industry has yet to internalize and accept these realities.¶ **How can we expect people to listen to science and not politics when it comes to nuclear energy, but not climate change?¶** Disagreeing with a policy does not change the facts. You can disagree with policy to limit carbon emissions, but that doesn’t change the fact that our fossil fuel consumption is changing the PH of our oceans. **Many people disagree with the use of nuclear energy, but that doesn’t change the fact that nuclear is our largest source of carbon free electricity and the safest source of electricity per kilowatt hour.¶** Nuclear Must Lead by Example¶ **If we want the public to overcome the cognitive dissonance between science and policy when it comes to nuclear energy, we need to lead by example and overcome our own cognitive dissonance when it comes to climate change** — even if it means risking our own interests as members of the larger energy industry. We are not going to run out of fossil fuels any time soon, so the decision to move to carbon-free energy—to move to nuclear energy—must be made willingly, and based on ethical principles, not the limits of our natural resources.¶ As green groups wait endlessly for renewable technologies to have some kind of breakthrough, and nuclear supporters stay mum on climate change, we continue using fossil fuels. Our collective inaction is allowing the destruction of our planet’s ecosystem, the dying of our oceans, and the suffering of the poorest members of our own species. The climate conversation has become so convoluted by politics and greed that many smart, compassionate people have “thrown in the towel.” We should be more concerned than ever at our lack of a comprehensive global response.¶ I strongly believe that **there’s still time to reclaim the dialogue about climate change based on ocean acidification evidence, and to use nuclear technologies to improve the long-term outcome for our planet** and our species. **The first step is acknowledging the complicated** and unique **role of the nuclear industry in this conflict**, **and the conflicts of interest that are impeding open communication.** The second step is to realize that the climate change community is a potential ally, and that openly addressing the subject of climate change in our communications is in the best interest of the nuclear community. The third step is choosing to do the right thing, not just the polite thing, and reclaim our legitimate role in the energy community as the “top dog” of carbon-free electricity, instead of quietly watching natural gas become “the new coal.”¶ Climate change is not going away—it is getting worse—and **each one of us** in the nuclear community **has an ethical obligation to speak up and to do something about it**. I am speaking up for the oceans, for the cyano-bacteria and diatoms and our shared mitochondrial RNA that still fills me with wonder at the beauty of this world. Please join me if you can, to speak up for what you love—and if you cannot, please understand that we all remain nuclear advocates, and that the nuclear community is much stronger with the no-longer-silent climate change harbingers in it.

**Plan**

**Plan – The United States federal government should reduce its restrictions external to a fast track process for small modular nuclear reactors.**

**Contention Two: Solvency**

**The plan solves the only major roadblock to the creation of a robust domestic SMR industry.**

**Loris 11** (Nicolas D. Loris – Research Associate in the Roe Institute, Jack Spencer – Research Fellow in Nuclear Energy in the Thomas A. Roe Institute for Economic Policy Studies, Currently is The Heritage Foundation’s senior reesrach fellow in nuclear energy policy, Previously worked on commercial, civilian and military components of nuclear energy at the Babcock & Wilcox Companies, Holds a bachelor's degree in international politics from Frostburg State University and a master's degree from the University of Limerick, *A Big Future for Small Nuclear Reactors?*, February 2nd, http://www.heritage.org/research/reports/2011/02/a-big-future-for-small-nuclear-reactors)

Abstract: More and more companies—in the U.S. and abroad—are investing in new commercial nuclear enterprises, chief among them, small modular reactors (SMRs). The SMR industry is growing, with many promising developments in the works—which is precisely why the government should not interfere, as subsidies and government programs have already resulted in an inefficient system for large reactors. Heritage Foundation nuclear policy experts explain how the future for small reactors can remain bright.¶ Small modular reactors (SMRs) have garnered significant attention in recent years, with companies of all sizes investing in these smaller, safer, and **more cost-efficient** nuclear reactors. Utilities are even forming partnerships with reactor designers to prepare for potential future construction. Perhaps most impressive is that most of this development is occurring without government involvement. Private investors and entrepreneurs are **dedicating resources** to these technologies based on their future prospects, not on government set-asides, mandates, or subsidies, and despite the current regulatory bias in favor of large light water reactors (LWRs).¶ The result is a young, robust, innovative, and growing SMR industry. Multiple technologies are being proposed that each have their own set of characteristics based on price, fuel, waste characteristics, size, and any number of other variables. To continue this growth, policymakers should reject the temptation to offer the same sort of subsidies and government programs that have proven ineffective for large LWRs. While Department of Energy cost-sharing programs and capital subsidies seem attractive, they have yet to net any new reactor construction. Instead, policymakers should focus on the systemic issues that have continued to thwart the expansion of nuclear power in recent years. Specifically, the federal government needs to develop an efficient and **predictable regulatory pathway** to new reactor certification and to develop a sustainable nuclear waste management strategy.¶ Why SMRs?¶ Small modular reactors share many of the attractive qualities of large reactors, such as providing abundant emissions-free power, while adding new features that could make them more appropriate for certain applications, such as providing power to rural communities or for dedicated industrial use. SMRs are not yet positioned to take the place of traditional large LWRs, but they represent an important growth area for the commercial nuclear industry.¶ Indeed, should the promise of small modular reactors be realized, the technology could transform the nuclear industry. That is because these attributes would potentially mitigate some of the financial and regulatory problems that nuclear energy has recently faced. SMRs potentially cost less (at least in up-front capital), are more mobile and multifunctional, provide competition, and can largely be produced by existing domestic infrastructure.¶ Lower Costs Up Front. Large reactors are very expensive to license and construct and require massive up-front capital investments to begin a project. Small reactors, while providing far less power than large reactors, can be built in modules and thus be paid for over time. For example, estimates for larger reactors range from $6 billion to $10 billion and must be financed all at once. The Babcock & Wilcox Company’s modular mPower reactors, alternatively, can be purchased in increments of 125 megawatts (MW), which would allow costs to be spread out over time. Though cost estimates are not yet available for the mPower reactor, its designers have stated that they will be competitive. This should not be used as a reason to refrain from building larger, 1,000-plus MW reactors. Each utility will have its own set of variables that it must consider in choosing a reactor technology, but given that one of the primary justifications for government subsidies is that the high costs of large reactors puts unacceptable strain on utility balance sheets, an option that spreads capital outlays over time should be attractive.¶ Safe Installation in Diverse Locations. Some designs are small enough to produce power for as few as 20,000 homes. One such reactor, Hyperion Power’s HPM (Hyperion Power Module) offers 25 MW of electricity for an advertised cost of $50 million per unit. This makes the HPM a potential power solution for isolated communities or small cities.[1] The Alaskan town of Galena, for example, is planning to power its community with a small reactor designed by Toshiba, while Fairbanks is looking into a small plant constructed by Hyperion.[2] In addition, Western Troy Capital Resources has stated that it will form a private corporation to provide electric power from small reactors for remote locations in Canada.[3] Public utility officials in Grays Harbor, Washington, have spoken with the NuScale Power company about powering the community with eight small nuclear plants;[4] and Hyperion Power has reported a high level of interest in small nuclear reactor designs from islands around the world.[5]¶ Using a small nuclear reactor could cut electricity costs in isolated areas since there would be no need for expensive transmission lines to carry power to remote locations.[6] SMRs could also potentially be integrated into existing energy infrastructure. SMRs could be built into old coal plants, for instance. The reactors would replace the coal boilers and be hooked into the existing turbines and distribution lines. According to the Nuclear Regulatory Commission, these modifications could be completed safely since small reactors will likely be easier to control during times of malfunction.[7]¶ Multi-functionality. SMRs can be used in a variety of applications that have substantial power and heat requirements. The chemical and plastics industries and oil refineries all use massive amounts of natural gas to fuel their operations. Similarly, small reactors could produce the heat needed to extract oil from tar sands, which currently requires large amounts of natural gas. While affordable today, natural gas prices vary significantly over time, so the long-term predictable pricing that nuclear provides could be very attractive. SMRs may also provide a practical solution for desalination plants (which require large amounts of electricity) that can bring fresh water to parts of the world where such supplies are depleting.[8] Perhaps most important, is that SMRs have the potential to bring power and electricity to the 1.6 billion people in the world today that have no access to electricity, and to the 2.4 billion that rely on biomass, such as wood, agricultural residue, and dung for cooking and heating.[9]¶ Competition. While competition among large nuclear-reactor technologies currently exists, small reactors will add a new dimension to nuclear-reactor competition. Multiple small technology designs are set to emerge on the market. Not only will competition among small reactors create a robust market, it will also provide an additional incentive for large reactors to improve. If smaller reactors begin to capture a share of the nuclear market and the energy market at large, it will drive innovation and ultimately lower prices for both new and existing technologies.¶ Domestic Production. Although the nuclear industry necessarily shrank to coincide with decreased demand, much of the domestic infrastructure remains in place today and could support the expansion of small-reactor technologies. Although the industrial and intellectual base has declined over the past three decades, forging production, heavy manufacturing, specialized piping, mining, fuel services, and skilled labor could all be found in the United States. Lehigh Heavy Forge Corporation in Bethlehem, Pennsylvania, could build the forges while Babcock & Wilcox could provide the heavy nuclear components, for instance. AREVA/Northrop Grumman Shipbuilding broke ground on a heavy components manufacturing facility last June.[10] Further, a number of companies are expanding manufacturing, engineering, and uranium enrichment capabilities—all in the United States.¶ If SMRs are so great, where is the construction?¶ While some designs are closer to market introduction than others, the fact is that America’s **regulatory** and policy environment is not sufficient to support a robust expansion of existing nuclear technologies, much less new ones. New reactor designs are difficult to license efficiently, and the lack of a sustainable nuclear waste management policy causes significant risk to private investment.¶ Many politicians are attempting to mitigate these market challenges by offering subsidies, such as loan guarantees. While this approach still enjoys broad support in Congress and industry, the reality is that it has not worked. Despite a lavish suite of subsidies offered in the Energy Policy Act of 2005, including loan guarantees, insurance against government delays, and production tax credits, no new reactors have been permitted, much less constructed. These subsidies are in addition to existing technology development cost-sharing programs that have been in place for years and defer significant research and development costs from industry to the taxpayer.¶ The problem with this approach is that it ignores the larger systemic problems that create the unstable marketplace to begin with. These systemic problems generally fall into three categories:¶ Licensing. The Nuclear Regulatory Commission (NRC) is ill prepared to build the regulatory framework for new reactor technologies, and no reactor can be offered commercially without an NRC license. In a September 2009 interview, former NRC chairman Dale E. Klein said that small nuclear reactors pose a dilemma for the NRC because the commission is uneasy with new and unproven technologies and feels more comfortable with large light water reactors, which have been in operation for years and has a long safety record.[11] The result is that enthusiasm for building non-light-water SMRs is generally squashed at the NRC as potential customers realize that there is little chance that the NRC will permit the project within a timeframe that would promote near-term investment. So, regardless of which attributes an SMR might bring to the market, the **regulatory risk** is such that real progress on commercialization is difficult to attain. This then leaves large light water reactors, and to a lesser extent, small ones, as the least risky option, which pushes potential customers toward that technology, which then undermines long-term progress, competition, and innovation.¶ Nuclear Waste Management. The lack of a sustainable nuclear waste management solution is perhaps the greatest obstacle to a broad expansion of U.S. nuclear power. The federal government has failed to meet its obligations under the 1982 Nuclear Waste Policy Act, as amended, to begin collecting nuclear waste for disposal in Yucca Mountain. The Obama Administration’s attempts to shutter the existing program to put waste in Yucca Mountain without having a backup plan has worsened the situation. This outcome was predictable because the current program is based on the flawed premise that the federal government is the appropriate entity to manage nuclear waste. Under the current system, waste producers are able to largely ignore waste management because the federal government is responsible. The key to a sustainable waste management policy is to directly connect financial responsibility for waste management to waste production. This will increase demand for more waste-efficient reactor technologies and drive innovation on waste-management technologies, such as reprocessing. Because SMRs consume fuel and produce waste differently than LWRs, they could contribute greatly to an economically efficient and sustainable **nuclear waste management strategy**.¶ Government Intervention. Too many policymakers believe that Washington is equipped to guide the nuclear industry to success. So, instead of creating a stable regulatory environment where the market value of different nuclear technologies can determine their success and evolution, they choose to create programs to help industry succeed. Two recent Senate bills from the 111th Congress, the Nuclear Energy Research Initiative Improvement Act (S. 2052) and the Nuclear Power 2021 Act (S. 2812), are cases in point. Government intervention distorts the normal market processes that, if allowed to work, would yield the most efficient, cost-effective, and appropriate nuclear technologies. Instead, the federal government picks winners and losers through programs where bureaucrats and well-connected lobbyists decide which technologies are permitted, and provides capital subsidies that allow investors to ignore the systemic problems that drive risk and costs artificially high. This approach is especially detrimental to SMRs because subsidies to LWRs distort the relative benefit of other reactor designs by artificially lowering the cost and risk of a more mature technology that already dominates the marketplace.¶ How to Fix a Broken System¶ At the Global Nuclear Renaissance Summit on July 24, 2008, then-NRC chairman Dale Klein said that a nuclear renaissance with regard to small reactors will take “decades to unfold.”[12] If Members of Congress and government agencies do not reform their current approach to nuclear energy, this will most certainly be the case. However, a new, market-based approach could lead to a different outcome. Instead of relying on the policies of the past, Congress, the Department of Energy, and the NRC should pursue a new, 21st-century model for small and alternative reactor technologies by doing the following:¶ Reject additional loan guarantees. Loan guarantee proponents argue that high up-front costs of new large reactors make them unaffordable without loan guarantees. Presumably, then, a smaller, less expensive modular option would be very attractive to private investors even without government intervention. But loan guarantees undermine this advantage by subsidizing the capital costs and risk associated with large reactors. A small reactor industry without loan guarantees would also provide competition and downward price pressure on large light water reactors. At a minimum, Congress should limit guarantees to no more than two plants of any reactor design and limit to two-thirds the amount of any expanded loan guarantee program that can support a single technology. Such eligibility limits will prevent support from going only to a single basic technology, such as large light water reactors.[13]¶ Avoid subsidies. Subsidies do not work if the objective is a diverse and economically sustainable nuclear industry. Despite continued attempts to subsidize the nuclear industry into success, the evidence demonstrates that such efforts invariably fail. The nuclear industry’s success stories are rooted in the free market. Two examples include the efficiency and low costs of today’s existing plants, and the emergence of a private uranium enrichment industry. Government intervention is the problem, as illustrated by the government’s inability to meet its nuclear waste disposal obligations.¶ Build expertise at the Nuclear Regulatory Commission. The NRC is built to regulate large light water reactors. It simply does not have the regulatory capability and resources to efficiently regulate other technologies, and building that expertise takes time. Helping the NRC to develop that expertise now would help bring new technologies into the marketplace more smoothly. Congress should direct and resource the NRC to develop additional broad expertise for liquid metal-cooled, fast reactors and high-temperature, gas-cooled reactors. With its existing expertise in light water technology, this additional expertise would position the NRC to effectively regulate an emerging SMR industry.¶ Establish a new licensing pathway. The current licensing pathway relies on reactor customers to drive the regulatory process. But absent an efficient and predictable regulatory pathway, few customers will pursue these reactor technologies. The problem is that the legal, regulatory, and policy apparatus is built to support large light water reactors, effectively discriminating against other technologies. Establishing an alternative **licensing pathway** that takes the unique attributes of small reactors into consideration could help build the necessary regulatory support on which commercialization ultimately depends.[14]¶ Resolve staffing, security, construction criteria, and fee-structure issues by December 31, 2011. The similarity of U.S. reactors has meant that the NRC could establish a common fee structure and many general regulatory guidelines for areas, such as staffing levels, security requirements, and construction criteria. But these regulations are inappropriate for many SMR designs that often have smaller staff requirements, unique control room specifications, diverse security requirements, and that employ off-site construction techniques. Subjecting SMRs to regulations built for large light water reactors would add cost and result in less effective regulation. The NRC has acknowledged the need for this to be resolved and has committed to doing so, including developing the budget requirements to achieve it. It has not committed to a specific timeline.[15] Congress should demand that these issues be resolved by the end of 2011.

**Only the plans action can overcome existing obstacles to SMR commercialization.**

**Sullivan et al 10** (Mary Anne Sullivan – Partner in Hogan Lovells' energy practice in Washington, D.C., Daniel F. Stenger – Partner in Hogan Lovells' energy practice in Washington, D.C., Amy C. Roma – Senior associate in Hogan Lovells' energy practice in Washington, D.C., *Are Small Reactors the Next Big Thing in Nuclear?*, November 2010, Electric Light & Power, Nov/Dec2010, Vol. 88 Issue 6, p46)

With development of large-scale reactors in the United States slowed by constrained debt capital markets, the absence of climate legislation, low gas prices and flagging power demand, talk in the nuclear industry has shifted to next-generation reactors that are smaller, less capital-intensive and therefore more flexible. These small and modular reactors (SMRs), generally 300 MW or less, can serve remote locations, small power grids and large process heat needs, such as oil production from the Alberta tar sands.¶ Utilities as diverse as the Tennessee Valley Authority, which already generates 6,600 MW of nuclear power, and Public Service Co. of New Mexico, which previously assumed nuclear power was beyond its economic reach, have expressed interest in SMRs. Like all nuclear generation, SMRs can provide carbon-free baseload power, but SMRs can be constructed in a fraction of the time necessary for large-scale reactors for a fraction of the cost. The creation of a domestic SMR manufacturing industry also would create jobs and could increase U.S. exports.¶ SMR reactor designers, customers and regulators must determine whether a regulatory process that was developed for 1,000-plus-MW projects based on similar technologies can be right-sized to meet much smaller projects' needs based on diverse technologies that must be deliverable in a reasonable time to be economical.¶ There are wide-ranging, proposed SMR designs, including light-water reactors, high-temperature gas-cooled reactors, liquid metal-cooled fast reactors, and molten salt reactors, with the smallest design beginning around 10 MW.¶ The Hyperion Power Module uses a uranium nitride fuel and a lead-bismuth eutectic as the coolant. The 25-MWe reactor is intended to be buried 33 feet underground and fueled only every eight to 10 years. In contrast, the NuScale reactor is a small, light-water reactor, the same reactor type as many of its large-scale cousins but with a modular design that allows a facility to have just one unit or as many as 24 units. If a plant had all 24 units with each reactor operating at its 45-MWe design capacity, the facility could produce more than 1,000 MWe of electricity, which is on par with the electricity production of one large-scale reactor.¶ Several reactor developers have been in contact with the Nuclear Regulatory Commission (NRC) to discuss their designs and licensing: Babcock & Wilcox Co. for its 125-MW mPower reactor; GE-Hitachi for its 311-MW PRISM reactor; Hyperion Power Generation for its 25-MW HPM reactor; NuScale Power Inc. for its 45-MW reactor; Toshiba for its 10-MW 4S reactor; and Westinghouse for its 335-MW IRIS reactor. Other developers are working on other SMR designs but have not yet filed a letter of intent to submit an application with the NRC.¶ NRC Licensing¶ The **biggest challenge** to getting SMRs to market in the United States is NRC licensing. The NRC's licensing requirements are geared toward certifying a design and then conducting a site-specific construction and operating licensing proceeding for large-scale nuclear reactors, a process that can take as much as a decade. Many SMR reactor developers are focused on the design certification. This process allows the NRC to approve a reactor design independent of an application to construct or operate a plant. It has been used by the agency a handful of times during the past decade for large-scale reactors. It seems well-suited to the small-reactor designs, some of which are intended to be factory-built and transported whole for drop-in installation at sites.¶ SMRs must undergo rigorous NRC safety and licensing reviews, but under the regulations as written, an applicant for an SMR design certification would need to determine on its own and on a case-specific basis which of the safety and licensing standards in the regulations–all of which were designed with large reactors in mind–are relevant to its design and which ones should not be applicable. This is a **laborious**, **uncertain process**.¶ The NRC recognizes its regulations must be re-examined to address the new SMR technologies. The agency **has begun** to review the potential policy, technical and licensing issues for SMRs. The NRC has identified issues associated with the licensing process, design requirements, operational matters and financial matters where tailoring to meet SMRs' specific needs might be warranted.¶ NRC commissioners have recognized the need to examine their processes with the risks and requirements of SMRs in mind, and they have taken steps to accelerate the development of a risk-informed licensing framework for SMRs; one that might recognize some SMRs do not present the same level or nature of nuclear safety and security issues that must be addressed for their large-scale counterparts. For example, some SMRs can be built underground. Some use reactor design features or fuel types similar to existing research reactors that have operated safely for decades at universities across the country. Thus, the commissioners directed the NRC staff to report to the commission within six months on how risk-informed insights can be used to improve the licensing process for SMRs. Many hope the commission's initiative will result in the relaxation or **elimination** of unnecessary regulations in the NRC's licensing of SMRs.¶ Risk insights could inform the agency of the appropriate accident source terms to use for SMRs. A source term refers to the types and amounts of radioactive or hazardous material that could be released to the environment following an accident. Given their size, the bounding source term for SMRs is smaller than for large power reactors. Other factors can affect the source term, as well. Installation underground, for example, would provide an additional barrier to release. The NRC has used source terms for the assessment of the containment effectiveness and other safety features, site suitability and emergency planning. By establishing early the appropriate bounding source terms for individual SMR designs, the NRC will be better able to determine how to tailor **many other regulatory provisions** for that specific SMR design.¶ No one in the industry or at the NRC seems to be arguing for a whole new set of SMR licensing regulations. Such a rulemaking would take years and introduce new levels of uncertainty, which either would leave a nascent industry struggling for a foothold in the marketplace or drive it abroad to friendlier regulatory pastures and would leave the U.S. without SMR benefits.¶ Rather, by continuing on the NRC path of customizing its existing regulations to address only what should be different in the SMR design certification and licensing processes, the NRC can **build on** its existing and known licensing regime, which should result in the development of a usable licensing process in the shortest time.¶ With several companies already in pre-application discussions with the NRC and gearing up to submit applications during the next few years, the NRC would be hard-pressed to provide the necessary guidance to potential applicants and conduct timely, efficient reviews of any submitted applications while creating an SMR rule. In addition, by using the existing regulations, the NRC and applicants can benefit from the NRC staff's experience and a proven process. If the NRC's new initiative to develop a risk-informed approach to licensing can help accelerate this process, it would be a great improvement. To assist the NRC in its efforts, SMR vendors should continue supporting the NRC's initiative through industry working groups.¶ Department of Energy (DOE) Assistance¶ The NRC is not the only agency looking to help move SMRs from concept to commercialization. The DOE has developed not just a five-year plan, but a 25-year plan to help move a range of SMR designs to market. The **DOE wants to help fund** over the next five years the development of an appropriately tailored licensing process at the NRC. As a second phase over the next 10 years, the DOE has asked for funding to help the first two SMRs get through the licensing gate. Although not all agree with its priorities, the DOE has concluded that SMRs based on light-water reactor technology, e.g., NuScale's design, because of their similarity to the technology of existing large nuclear plants, offer the nearest-term promise for commercialization. The DOE is likely to limit the initial competition for funding for design certification efforts to light-water reactor designs.¶ Recognizing that there are other SMR designs that incorporate more revolutionary technology, the DOE also sought funding for research and development on more advanced designs. In particular, it sees an important role for its high-speed computing capability to simulate and test the new designs. If private funding can be found, however, it is not clear the proponents of these alternate designs will have the patience to proceed on the DOE's timeline. Many have been working for a decade or more on their designs and already have approached the NRC to discuss licensing schedules.¶ The DOE might also play host at its Savannah River Site to an energy park that could include nonlight-water SMRs. If the vision is realized, the SMRs constructed at the proposed energy park could make Savannah River independent of the local power grid and help meet a 2009 presidential directive to cut significantly greenhouse gas emissions at government facilities.¶ In addition to its research and development role, the DOE will work with the international nuclear community to develop codes and standards that make sense for SMR technologies and in facilitating export approvals when SMR technology is ready for deployment overseas.¶ Another tool in the DOE's toolbox for advancing innovative energy technologies into commercial viability is the loan guarantee program. **It's unclear** whether that program, which many have said is essential for building large new nuclear plants, can be tailored to meet the needs of smaller, lower-cost designs. For the small plug-and-play reactor designs, loan guarantees might make the most sense for SMR manufacturing facilities, rather than individual power plants.¶ But SMRs and the struggling loan guarantee program will have reached milestones if the question of how best to structure loan guarantees to meet the needs of SMR developers and customers for assistance in commercial deployment becomes important for resolution.

**SMRs can reprocess and solve waste**

**Biello 12** David, March 27, "Small Reactors Make a Bid to Revive Nuclear Power", www.scientificamerican.com/article.cfm?id=small-reactors-bid-to-revive-nuclear-power

Alternative fuel?¶ Small modular reactors may help with two of the biggest challenges facing the nuclear industry: the growing stores of waste from existing reactors and residue from the mass production of nuclear weapons as well as the overall safety of nuclear power. GE's PRISM fast reactor, General Atomic's **helium-cooled** fast reactor, **or** Hyperion Power's **liquid lead-bismuth cooled reactor** **could all turn waste into fuel**. Hyperion hopes to demonstrate its reactor, capable of generating 25 megawatts of electricity, at the Savannah River National Laboratory in South Carolina. The site has also signed memorandums of understanding to host prototypes of the NuScale and Holtech reactors.

**SMRs are feasible, safer and solve other nuclear downsides**

**Ringle 10** John, Professor Emeritus of Nuclear Engineering at Oregon State University, "Reintroduction of reactors in US a major win", November 13, robertmayer.wordpress.com/2010/11/21/reintroduction-of-reactors-in-us-a-major-win/

**Sm**all nuclear reacto**rs will** probably **be the mechanism that ushers in nuclear** power’s renaissance in the U.S.¶ Nuclear plants currently supply about 20 percent of the nation’s electricity and more than 70 percent of our carbon-free energy. But **large nuclear plants cost** $8 billion to **$10 billion and utilities are having second thoughts** about how to finance these plants.¶ **A** small modular reactor (**SMR) has several advantages** over the conventional 1,000-megawatt plant:¶ **1. It ranges in size from 25 to 140 megawatts, hence only costs about a tenth as much** as a large plant.¶ **2. It uses a cookie-cutter standardized design to reduce construction costs and can be built in a factory and shipped to** the **site** by truck, railroad or barge.¶ 3. **The major parts can be built in U.S. factories, unlike** some **parts for the larger reactors that must be fabricated overseas**.¶ **4. Because of the factory-line production, the SMR could be built in three years with one-third of the workforce of a large plant**.¶ **5. More than one SMR could be clustered together to form a larger power plant complex**. This provides versatility in operation, particularly in connection with large wind farms. With the variability of wind, one or more SMRs could be run or shut down to provide a constant base load supply of electricity.¶ **6. A cluster of SMRs should be very reliable**. One unit could be taken out of service for maintenance or repair without affecting the operation of the other units. And since they are all of a common design, replacement parts could satisfy all units. **France has already proved the reliability of standardized plants**.¶ **At least half a dozen companies are developing SMRs**, including NuScale in Oregon. NuScale is American-owned and its 45-megawatt design has some unique features. **It is inherently safe. It could be located** partially or **totally below ground, and with its natural convection cooling system, it does not rely on an elaborate system of pumps and valves to provide safety. There is no scenario in which a** loss-of-coolant **accident could occur.**

**The state is inevitable and an indispensable part of the solution to warming**

**Eckersley 4** Robyn, Reader/Associate Professor in the Department of Political Science at the University of Melbourne, “The Green State: Rethinking Democracy and Sovereignty”, MIT Press, 2004, Google Books, pp. 3-8

While acknowledging the basis for this antipathy toward the nation- state, and the limitations of state-centric analyses of global ecological degradation, **I seek to draw attention to the positive role that states have played, and might increasingly play, in global and domestic politics**. Writing more than twenty years ago, Hedley **Bull** (a proto-constructivist and leading writer in the English school) **outlined the state's positive role in world affairs, and his arguments continue to provide a powerful challenge to those who somehow seek to "get beyond the state," as if such a move would provide a more lasting solution to the threat of armed conflict or nuclear war, social and economic injustice, or environmental degradation**.10 As Bull argued, **given that the state is here to stay whether we like it or not, then the call to get "beyond the state is a counsel of despair, at all events if it means that we have to begin by abolishing or subverting the state, rather than that there is a need to build upon it**.""¶ In any event, **rejecting the "statist frame" of world politics ought not prohibit an inquiry into the emancipatory potential of the state as a crucial "node" in any future network of global ecological governance**. This is especially so, given that **one can expect states to persist as major sites of social and political power for at least the foreseeable future and that any green transformations of the present political order will, short of revolution, necessarily be state-dependent. Thus, like it or not, those concerned about ecological destruction must contend with existing institutions and**, where possible, **seek to "rebuild the ship while still at sea."** And if states are so implicated in ecological destruction, then an inquiry into the potential for their transformation even their modest reform into something that is at least more conducive to ecological sustainability would seem to be compelling.¶ Of course, **it would be unhelpful to become singularly fixated on the redesign of the state at the expense of other institutions of governance**. States are not the only institutions that limit, condition, shape, and direct political power, and **it is necessary to keep in view the broader spectrum of formal and informal institutions of governance (e.g., local, national, regional, and international) that are implicated in global environmental change**. Nonetheless, while the state constitutes only one modality of political power, it is an especially significant one because of its historical claims to exclusive rule over territory and peoples—as expressed in the principle of state sovereignty. As Gianfranco Poggi explains, **the political power concentrated in the state "is a momentous, pervasive, critical phenomenon. Together with other forms of social power, it constitutes an indispensable medium for constructing and shaping larger social realities, for establishing, shaping and maintaining all broader and more durable collectivities**."12 **States play**, in varying degrees, **significant roles in structuring life chances, in distributing wealth, privilege, information, and risks, in upholding civil and political rights, and in securing private property rights and providing the legal/regulatory framework for capitalism. Every one of these dimensions of state activity has, for good or ill, a significant bearing on the global environmental crisis. Given that the green political project is one that demands far-reaching changes to both economies and societies, it is difficult to imagine how such changes might occur on the kind of scale that is needed without the active support of states**. While it is often observed that states are too big to deal with local ecological problems and too small to deal with global ones, **the state** nonetheless **holds**, as Lennart Lundqvist puts it, "**a unique position in the constitutive hierarchy from individuals through villages, regions and nations all the way to global organizations. The state is inclusive of lower political and administrative levels, and exclusive in speaking for its whole territory and population in relation to the outside world**."13 In short, **it seems** to me **inconceivable to advance ecological emancipation without also engaging with** and seeking to transform **state power**.¶ Of course, not all states are democratic states, and the green movement has long been wary of the coercive powers that all states reputedly enjoy. Coercion (and not democracy) is also central to Max Weber's classic sociological understanding of the state as "a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory."14 Weber believed that the state could not be defined sociologically in terms of its ends\* only formally as an organization in terms of the particular means that are peculiar to it.15 Moreover his concept of legitimacy was merely concerned with whether rules were accepted by subjects as valid (for whatever reason); he did not offer a normative theory as to the circumstances when particular rules ought to be accepted or whether beliefs about the validity of rules were justified. Legitimacy was a contingent fact, and in view of his understanding of politics as a struggle for power in the context of an increasingly disenchanted world, likely to become an increasingly unstable achievement.16¶ In contrast to Weber, my approach to the state is explicitly normative and explicitly concerned with the purpose of states, and the democratic basis of their legitimacy. It focuses on the limitations of liberal normative theories of the state (and associated ideals of a just constitutional arrangement), and it proposes instead an alternative green theory that seeks to redress the deficiencies in liberal theory. Nor is my account as bleak as Weber's. The fact that states possess a monopoly of control over the means of coercion is a most serious matter, but it does not necessarily imply that they must have frequent recourse to that power. In any event, whether the use of the state's coercive powers is to be deplored or welcomed turns on the purposes for which that power is exercised, the manner in which it is exercised, and whether it is managed in public, transparent, and accountable ways—a judgment that must be made against a background of changing problems, practices, and under- standings. **The coercive arm of the state can be used to "bust" political demonstrations and invade privacy. It can also be used to prevent human rights abuses, curb the excesses of corporate power, and protect the environment.¶** In short, **although the political autonomy of states is widely believed to be in decline, there are still few social institution that can match the same degree of capacity and potential legitimacy that states have to redirect societies and economies along more ecologically sustainable lines to address ecological problems such as** global **warming** and **pollution, the buildup of toxic and nuclear wastes and the rapid erosion of** the earth's **biodiversity**. **States**—particularly when they act collectively—**have the capacity to curb the socially and ecologically harmful consequences of capitalism.** They are also more amenable to democratization than cor- porations, notwithstanding the ascendancy of the neoliberal state in the increasingly competitive global economy. **There are therefore many good reasons why green political theorists need to think not only critically but also constructively about the state and the state system**. While the state is certainly not "healthy" at the present historical juncture, in this book I nonetheless join Poggi by **offer**ing "a timid **two cheers** for the old beast," at least **as a potentially more significant ally in the green cause**.17

**Academic debate over energy policy in the face of environmental destruction is critical to shape the direction of change and create a public consciousness shift---action now is key**

**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.**

**Scientific knowledge is preferable because it subjects itself to constant refinement based on empirical evidence**

**Hutcheon** **93**—former prof of sociology of education at U Regina and U British Columbia. Former research advisor to the Health Promotion Branch of the Canadian Department of Health and Welfare and as a director of the Vanier Institute of the Family. Phd in sociology, began at Yale and finished at U Queensland. (Pat, A Critique of "Biology as Ideology: The Doctrine of DNA", http://www.humanists.net/pdhutcheon/humanist%20articles/lewontn.htm)

The introductory lecture in this series articulated **the** increasingly **popular "postmodernist" claim that all science is ideology**. Lewontin then proceeded to justify this by stating the obvious: that scientists are human like the rest of us and subject to the same biases and socio-cultural imperatives. Although he did not actually say it, his **comments** seemed to **imply that** the enterprise of **scientific research** and knowledge building **could** therefore **be** no different and **no more reliable** as a guide to action **than any other set of opinions.** The trouble is that, **in order to reach such an conclusion, one would have to ignore all those aspects of the scientific endeavor that do** in fact **distinguish it from other** **types** and sources **of belief formation**.¶ Indeed, **if the integrity of the scientific endeavor depended only on the** wisdom and **objectivity of the individuals engaged in it we would be in trouble**. North American agriculture would today be in the state of that in Russia today. In fact it would be much worse, for the Soviets threw out Lysenko's ideology-masquerading-as-science decades ago. Precisely because an alternative scientific model was available (thanks to the disparaged Darwinian theory) the former Eastern bloc countries have been partially successful in overcoming the destructive chain of consequences which blind faith in ideology had set in motion. This is what Lewontin's old Russian dissident professor meant when he said that the truth must be spoken, even at great personal cost. How sad that Lewontin has apparently failed to understand the fact that while scientific knowledge -- with the power it gives us -- can and does allow humanity to change the world, ideological beliefs have consequences too. By rendering their proponents politically powerful but rationally and instrumentally impotent, they throw up insurmountable barriers to reasoned and value-guided social change.¶ What are the crucial differences between ideology and science that Lewonton has ignored? Both Karl Popper and Thomas Kuhn have spelled these out with great care -- the former throughout a long lifetime of scholarship devoted to that precise objective. Stephen Jay Gould has also done a sound job in this area. How strange that someone with the status of Lewontin, in a series of lectures supposedly covering the same subject, would not at least have dealt with their arguments!¶ **Science has to do with the search for regularities in what humans experience of their physical and social environments**, beginning with the most simple units discernible, and gradually moving towards the more complex. **It has to do with expressing these regularities in the clearest** and most precise **language possible, so that cause-and-effect relations** among the parts of the system under study **can be publicly and rigorously tested**. And **it has to do with devising explanations of those empirical regularities which** have **survived** all **attempts to falsify them**. **These explanations**, once phrased in the form of testable hypotheses, **become predictors of future events**. In other words, **they lead to further** **conjectures** of additional relationships **which**, in their turn, **must survive repeated public attempts to prove them wanting** -- if the set of related explanations (or theory) is to continue to operate as a fruitful guide for subsequent research.¶ This means that **science, unlike** mythology and **ideology, has a self-correcting mechanism at its very heart.** **A conjecture, to be classed as scientific, must be amenable** **to empirical test**. **It must, above all, be open to refutation by experience**. There is a rigorous set of rules according to which hypotheses are formulated and research findings are arrived at, reported and replicated. **It is this process -- not the lack of prejudice of the particular scientist**, or his negotiating ability, or even his political power within the relevant university department -- **that ensures the reliability of scientific knowledge**. **The conditions established by** the community of **science is one of precisely** **defined and regulated "intersubjectivity".** Under these conditions **the theory that wins out**, and subsequently prevails, **does so not because of its agreement with conventional wisdom or because of the political power of its proponents, as is often the case with ideology**. **The survival of a scientific theory** such as Darwin's **is due**, instead, **to its power to explain and predict observable regularities in human experience**, **while withstanding** worldwide **attempts to refute it** -- **and proving itself open to elaboration and expansion in the process**. **In this sense only is scientific knowledge objective and universal. All this has little relationship to the claim of an absolute universality of objective "truth" apart from human strivings** that Lewontin has **attributed to scientists**.¶ **Because ideologies**, on the other hand, **do claim to represent truth, they are incapable of** **generating a means by which they can be corrected** **as circumstances change.** Legitimate **science makes no such claims. Scientific tests are not tests of verisimilitude**. **Science does not aim for "true" theories** **purporting to reflect an accurate picture of the "essence" of reality. It leaves such claims of infallibility to ideology**. **The tests of science**, therefore, **are** in terms of **workability and falsifiability**, **and its propositions are accordingly tentative in nature.** **A successful scientific theory is** one which, while guiding the research in a particular problem area, is **continuously** elaborated, **revised and refined**, until it is eventually superseded by that very hypothesis-making and testing process that it helped to define and sharpen. **An ideology**, on the other hand, **would** be considered to have **fail**ed **under those conditions, for the "truth" must be for all time**. More than anything, **it is this difference that confuses** those **ideological thinkers** who are **compelled to attack** Darwin's theory of evolution precisely because of **its success as a scientific theory**. **For them, and the world of desired** and imagined **certainty in which they live, that very success in contributing to a continuously evolving body of increasingly reliable** **-- albeit inevitably tentative -- knowledge can only mean failure, in that the theory itself has altered in the process.**

**Public advocacy of climate solutions key to change governmental policy---individual change insufficient**

**CAG 10**—Climate Change Communication Advisory Group. Dr Adam Corner School of Psychology, Cardiff University - Dr Tom Crompton Change Strategist, WWF-UK - Scott Davidson Programme Manager, Global Action Plan - Richard Hawkins Senior Researcher, Public Interest Research Centre - Professor Tim Kasser, Psychology department, Knox College, Galesburg, Illinois, USA. - Dr Renee Lertzman, Center for Sustainable Processes & Practices, Portland State University, US. - Peter Lipman, Policy Director, Sustrans. - Dr Irene Lorenzoni, Centre for Environmental Risk, University of East Anglia. - George Marshall, Founding Director, Climate Outreach , Information Network - Dr Ciaran Mundy, Director, Transition Bristol - Dr Saffron O’Neil, Department of Resource Management and Geography, University of Melbourne, Australia. - Professor Nick Pidgeon, Director, Understanding Risk Research Group, School of Psychology, Cardiff University. - Dr Anna Rabinovich, School of Psychology, University of Exeter - Rosemary Randall, Founder and director of Cambridge Carbon Footprint - Dr Lorraine Whitmarsh, School of Psychology, Cardiff University & Visiting Fellow at the, Tyndall Centre for Climate Change Research. (Communicating climate change to mass public audience, http://pirc.info/downloads/communicating\_climate\_mass\_audiences.pdf)

**This** short advisory **paper** collates a set of recommendations about how best to shape mass public communications aimed at increasing concern about climate change and motivating commensurate behavioural changes.¶ Its **focus is not upon motivating small private-sphere behavioural changes on a piece-meal basis**. **Rather, it marshals evidence about how best to motivate the** ambitious and **systemic behavioural** **change** that is **necessary** – **including, crucially**, **greater public engagement with the policy process** (through, for example, lobbying decision-makers and elected representatives, or participating in demonstrations), as well as major lifestyle changes. ¶ **Political leaders** themselves **have drawn attention to the imperative for more vocal public pressure to create the ‘political space’ for them to enact more ambitious policy interventions**. 1 While this paper does not dismiss the value of **individuals making small private-sphere behavioural changes** (for example, adopting simple domestic energy efficiency measures) it is clear that such behaviours **do not,** in themselves, **represent a proportional response to** the challenge of **climate** change. As David MacKay, Chief Scientific Advisor to the UK Department of Energy and Climate change writes: “**Don’t be distracted by the myth that ‘every little helps’. If everyone does a little, we’ll achieve only a little**” (MacKay, 2008).¶ **The task of** campaigners and **communicators** from government, business and non-governmental organisations **must** therefore **be to motivate** both (i) widespread adoption of ambitious private-sphere behavioural changes; and (ii) widespread acceptance of – and indeed **active demand for – ambitious new policy interventions**.¶ Current public communication campaigns, as orchestrated by government, business and non-governmental organisations, are not achieving these changes. This paper asks: how should such communications be designed if they are to have optimal impact in motivating these changes? The response to this question will require fundamental changes in the ways that many climate change communication campaigns are currently devised and implemented. ¶ This advisory paper offers a list of principles that could be used to enhance the quality of communication around climate change communications. The authors are each engaged in continuously sifting the evidence from a range of sub-disciplines within psychology, and reflecting on the implications of this for improving climate change communications. Some of the organisations that we represent have themselves at times adopted approaches which we have both learnt from and critique in this paper – so some of us have first hand experience of the need for on-going improvement in the strategies that we deploy. ¶ The changes we advocate will be challenging to enact – and will require vision and leadership on the part of the organisations adopting them. But without such vision and leadership, we do not believe that public communication campaigns on climate change will create the necessary behavioural changes – indeed, there is a profound risk that many of today’s campaigns will actually prove counter-productive. ¶ Seven Principles¶ 1. Move Beyond Social Marketing¶ We believe that too little attention is paid to the understanding that psychologists bring to strategies for motivating change, whilst undue faith is often placed in the application of marketing strategies to ‘sell’ behavioural changes. Unfortunately, in the context of ambitious pro-environmental behaviour, such strategies seem unlikely to motivate systemic behavioural change.¶ Social marketing is an effective way of achieving a particular behavioural goal – dozens of practical examples in the field of health behaviour attest to this. Social marketing is really more of a framework for designing behaviour change programmes than a behaviour change programme - it offers a method of maximising the success of a specific behavioural goal. Darnton (2008) has described social marketing as ‘explicitly transtheoretical’, while Hastings (2007), in a recent overview of social marketing, claimed that there is no theory of social marketing. Rather, it is a ‘what works’ philosophy, based on previous experience of similar campaigns and programmes. Social marketing is flexible enough to be applied to a range of different social domains, and this is undoubtedly a fundamental part of its appeal.¶ However, social marketing’s 'what works' status also means that it is agnostic about the longer term, theoretical merits of different behaviour change strategies, or the cultural values that specific campaigns serve to strengthen. Social marketing dictates that the most effective strategy should be chosen, where effective means ‘most likely to achieve an immediate behavioural goal’. ¶ This means that elements of a behaviour change strategy designed according to the principles of social marketing may conflict with other, broader goals. What if the most effective way of promoting pro-environmental behaviour ‘A’ was to pursue a strategy that was detrimental to the achievement of long term pro-environmental strategy ‘Z’? The principles of social marketing have no capacity to resolve this conflict – they are limited to maximising the success of the immediate behavioural programme. This is not a flaw of social marketing – it was designed to provide tools to address specific behavioural problems on a piecemeal basis. But it is an important limitation, and one that has significant implications if social marketing techniques are used to promote systemic behavioural change and public engagement on an issue like climate change. ¶ 2. Be honest and forthright about the probable impacts of climate change, and the scale of the challenge we confront in avoiding these. But avoid deliberate attempts to provoke fear or guilt. ¶ There is no merit in ‘dumbing down’ the scientific evidence that the impacts of climate change are likely to be severe, and that some of these impacts are now almost certainly unavoidable. Accepting the impacts of climate change will be an important stage in motivating behavioural responses aimed at mitigating the problem. However, deliberate attempts to instil fear or guilt carry considerable risk. ¶ Studies on fear appeals confirm the potential for fear to change attitudes or verbal expressions of concern, but often not actions or behaviour (Ruiter et al., 2001). The impact of fear appeals is context - and audience - specific; for example, for those who do not yet realise the potentially ‘scary’ aspects of climate change, people need to first experience themselves as vulnerable to the risks in some way in order to feel moved or affected (Das et al, 2003; Hoog et al, 2005). As people move towards contemplating action, fear appeals can help form a behavioural intent, providing an impetus or spark to ‘move’ from; however such appeals must be coupled with constructive information and support to reduce the sense of danger (Moser, 2007). The danger is that fear can also be disempowering – producing feelings of helplessness, remoteness and lack of control (O’Neill and Nicholson-Cole, 2009). Fear is likely to trigger ‘barriers to engagement’, such as denial2 (Stoll-Kleemann et al., 2001; Weber, 2006; Moser and Dilling, 2007; Lorenzoni, Nicholson-Cole & Whitmarsh, 2007). The location of fear in a message is also relevant; it works better when placed first for those who are inclined to follow the advice, but better second for those who aren't (Bier, 2001).¶ Similarly, studies have shown that guilt can play a role in motivating people to take action but can also function to stimulate defensive mechanisms against the perceived threat or challenge to one’s sense of identity (as a good, moral person). In the latter case, behaviours may be left untouched (whether driving a SUV or taking a flight) as one defends against any feelings of guilt or complicity through deployment of a range of justifications for the behaviour (Ferguson & Branscombe, 2010). ¶ Overall, there is a need for emotionally balanced representations of the issues at hand. This will involve acknowledging the ‘affective reality’ of the situation, e.g. “We know this is scary and overwhelming, but many of us feel this way and we are doing something about it”.¶ 3. Be honest and forthright about the impacts of mitigating and adapting to climate change for current lifestyles, and the ‘loss’ - as well as the benefits - that these will entail. Narratives that focus exclusively on the ‘up-side’ of climate solutions are likely to be unconvincing. While narratives about the future impacts of climate change may highlight the loss of much that we currently hold to be dear, narratives about climate solutions frequently ignore the question of loss. If the two are not addressed concurrently, fear of loss may be ‘split off’ and projected into the future, where it is all too easily denied. This can be dangerous, because accepting loss is an important step towards working through the associated emotions, and emerging with the energy and creativity to respond positively to the new situation (Randall, 2009). However, there are plenty of benefits (besides the financial ones) of a low-carbon lifestyle e.g., health, community/social interaction - including the ‘intrinsic' goals mentioned below. It is important to be honest about both the losses and the benefits that may be associated with lifestyle change, and not to seek to separate out one from the other.¶ 3a. Avoid emphasis upon painless, easy steps. ¶ Be honest about the limitations of voluntary private-sphere behavioural change, and the need for ambitious new policy interventions that incentivise such changes, or that regulate for them. People know that the scope they have, as individuals, to help meet the challenge of climate change is extremely limited. For many people, it is perfectly sensible to continue to adopt high-carbon lifestyle choices whilst simultaneously being supportive of government interventions that would make these choices more difficult for everyone. ¶ The adoption of small-scale private sphere behavioural changes is sometimes assumed to lead people to adopt ever more difficult (and potentially significant) behavioural changes. The empirical evidence for this ‘foot-in-thedoor’ effect is highly equivocal. Some studies detect such an effect; others studies have found the reverse effect (whereby people tend to ‘rest on their laurels’ having adopted a few simple behavioural changes - Thogersen and Crompton, 2009). Where attention is drawn to simple and painless privatesphere behavioural changes, these should be urged in pursuit of a set of intrinsic goals (that is, as a response to people’s understanding about the contribution that such behavioural change may make to benefiting their friends and family, their community, the wider world, or in contributing to their growth and development as individuals) rather than as a means to achieve social status or greater financial success. Adopting behaviour in pursuit of intrinsic goals is more likely to lead to ‘spillover’ into other sustainable behaviours (De Young, 2000; Thogersen and Crompton, 2009).¶ People aren’t stupid: they know that if there are wholesale changes in the global climate underway, these will not be reversed merely through checking their tyre pressures or switching their TV off standby. An emphasis upon simple and painless steps suppresses debate about those necessary responses that are less palatable – that will cost people money, or that will infringe on cherished freedoms (such as to fly). Recognising this will be a key step in accepting the reality of loss of aspects of our current lifestyles, and in beginning to work through the powerful emotions that this will engender (Randall, 2009). ¶ 3b. Avoid over-emphasis on the economic opportunities that mitigating, and adapting to, climate change may provide. ¶ There will, undoubtedly, be economic benefits to be accrued through investment in new technologies, but there will also be instances where the economic imperative and the climate change adaptation or mitigation imperative diverge, and periods of economic uncertainty for many people as some sectors contract. It seems inevitable that some interventions will have negative economic impacts (Stern, 2007).¶ Undue emphasis upon economic imperatives serves to reinforce the dominance, in society, of a set of extrinsic goals (focussed, for example, on financial benefit). A large body of empirical research demonstrates that these extrinsic goals are antagonistic to the emergence of pro-social and proenvironmental concern (Crompton and Kasser, 2009).¶ 3c. Avoid emphasis upon the opportunities of ‘green consumerism’ as a response to climate change.¶ As mentioned above (3b), a large body of research points to the antagonism between goals directed towards the acquisition of material objects and the emergence of pro-environmental and pro-social concern (Crompton and Kasser, 2009). Campaigns to ‘buy green’ may be effective in driving up sales of particular products, but in conveying the impression that climate change can be addressed by ‘buying the right things’, they risk undermining more difficult and systemic changes. A recent study found that people in an experiment who purchased ‘green’ products acted less altruistically on subsequent tasks (Mazar & Zhong, 2010) – suggesting that small ethical acts may act as a ‘moral offset’ and licence undesirable behaviours in other domains. This does not mean that private-sphere behaviour changes will always lead to a reduction in subsequent pro-environmental behaviour, but it does suggest that the reasons used to motivate these changes are critically important. Better is to emphasise that ‘every little helps a little’ – but that these changes are only the beginning of a process that must also incorporate more ambitious private-sphere change and significant collective action at a political level.¶ 4. Empathise with the emotional responses that will be engendered by a forthright presentation of the probable impacts of climate change. ¶ Belief in climate change and support for low-carbon policies will remain fragile unless people are emotionally engaged. We should expect people to be sad or angry, to feel guilt or shame, to yearn for that which is lost or to search for more comforting answers (Randall, 2009). Providing support and empathy in working through the painful emotions of 'grief' for a society that must undergo changes is a prerequisite for subsequent adaptation to new circumstances.¶ Without such support and empathy, it is more likely that people will begin to deploy a range of maladaptive ‘coping strategies’, such as denial of personal responsibility, blaming others, or becoming apathetic (Lertzman, 2008). An audience should not be admonished for deploying such strategies – this would in itself be threatening, and could therefore harden resistance to positive behaviour change (Miller and Rolnick, 2002). The key is not to dismiss people who exhibit maladaptive coping strategies, but to understand how they can be made more adaptive. People who feel socially supported will be more likely to adopt adaptive emotional responses - so facilitating social support for proenvironmental behaviour is crucial.¶ 5. Promote pro-environmental social norms and harness the power of social networks¶ One way of bridging the gap between private-sphere behaviour changes and collective action is the promotion of pro-environmental social norms. Pictures and videos of ordinary people (‘like me’) engaging in significant proenvironmental actions are a simple and effective way of generating a sense of social normality around pro-environmental behaviour (Schultz, Nolan, Cialdini, Goldstein and Griskevicius, 2007). There are different reasons that people adopt social norms, and encouraging people to adopt a positive norm simply to ‘conform’, to avoid a feeling of guilt, or for fear of not ‘fitting in’ is likely to produce a relatively shallow level of motivation for behaviour change. Where social norms can be combined with ‘intrinsic’ motivations (e.g. a sense of social belonging), they are likely to be more effective and persistent.¶ Too often, environmental communications are directed to the individual as a single unit in the larger social system of consumption and political engagement. This can make the problems feel too overwhelming, and evoke unmanageable levels of anxiety. Through the enhanced awareness of what other people are doing, a strong sense of collective purpose can be engendered. One factor that is likely to influence whether adaptive or maladaptive coping strategies are selected in response to fear about climate change is whether people feel supported by a social network – that is, whether a sense of ‘sustainable citizenship’ is fostered. The efficacy of groupbased programmes at promoting pro-environmental behaviour change has been demonstrated on numerous occasions – and participants in these projects consistently point to a sense of mutual learning and support as a key reason for making and maintaining changes in behaviour (Nye and Burgess, 2008). There are few influences more powerful than an individual’s social network. Networks are instrumental not just in terms of providing social support, but also by creating specific content of social identity – defining what it means to be “us”. If environmental norms are incorporated at this level (become defining for the group) they can result in significant behavioural change (also reinforced through peer pressure).¶ Of course, for the majority of people, this is unlikely to be a network that has climate change at its core. But social networks – Trade Unions, Rugby Clubs, Mother & Toddler groups – still perform a critical role in spreading change through society. Encouraging and supporting pre-existing social networks to take ownership of climate change (rather than approach it as a problem for ‘green groups’) is a critical task. As well as representing a crucial bridge between individuals and broader society, peer-to-peer learning circumnavigates many of the problems associated with more ‘top down’ models of communication – not least that government representatives are perceived as untrustworthy (Poortinga & Pidgeon, 2003). Peer-to-peer learning is more easily achieved in group-based dialogue than in designing public information films: But public information films can nonetheless help to establish social norms around community-based responses to the challenges of climate change, through clear visual portrayals of people engaging collectively in the pro-environmental behaviour.¶ The discourse should be shifted increasingly from ‘you’ to ‘we’ and from ‘I’ to ‘us’. This is starting to take place in emerging forms of community-based activism, such as the Transition Movement and Cambridge Carbon Footprint’s ‘Carbon Conversations’ model – both of which recognize the power of groups to help support and maintain lifestyle and identity changes. A nationwide climate change engagement project using a group-based behaviour change model with members of Trade Union networks is currently underway, led by the Climate Outreach and Information Network. These projects represent a method of climate change communication and engagement radically different to that typically pursued by the government – and may offer a set of approaches that can go beyond the limited reach of social marketing techniques.¶ One potential risk with appeals based on social norms is that they often contain a hidden message. So, for example, a campaign that focuses on the fact that too many people take internal flights actually contains two messages – that taking internal flights is bad for the environment, and that lots of people are taking internal flights. This second message can give those who do not currently engage in that behaviour a perverse incentive to do so, and campaigns to promote behaviour change should be very careful to avoid this. The key is to ensure that information about what is happening (termed descriptive norms), does not overshadow information about what should be happening (termed injunctive norms). ¶ 6. Think about the language you use, but don’t rely on language alone¶ A number of recent publications have highlighted the results of focus group research and talk-back tests in order to ‘get the language right’ (Topos Partnership, 2009; Western Strategies & Lake Research Partners, 2009), culminating in a series of suggestions for framing climate-change communications. For example, these two studies led to the suggestions that communicators should use the term ‘global warming’ or ‘our deteriorating atmosphere’, respectively, rather than ‘climate change’. Other research has identified systematic differences in the way that people interpret the terms ‘climate change’ and ‘global warming’, with ‘global warming’ perceived as more emotionally engaging than ‘climate change’ (Whitmarsh, 2009).¶ Whilst ‘getting the language right’ is important, it can only play a small part in a communication strategy. More important than the language deployed (i.e. ‘conceptual frames') are what have been referred to by some cognitive linguists as 'deep frames'. Conceptual framing refers to catchy slogans and clever spin (which may or may not be honest). At a deeper level, framing refers to forging the connections between a debate or public policy and a set of deeper values or principles. Conceptual framing (crafting particular messages focussing on particular issues) cannot work unless these messages resonate with a set of long-term deep frames.¶ Policy proposals which may at the surface level seem similar (perhaps they both set out to achieve a reduction in environmental pollution) may differ importantly in terms of their deep framing. For example, putting a financial value on an endangered species, and building an economic case for their conservation ‘commodifies’ them, and makes them equivalent (at the level of deep frames) to other assets of the same value (a hotel chain, perhaps). This is a very different frame to one that attempts to achieve the same conservation goals through the ascription of intrinsic value to such species – as something that should be protected in its own right. Embedding particular deep frames requires concerted effort (Lakoff, 2009), but is the beginning of a process that can build a broad, coherent cross-departmental response to climate change from government.¶ 7. Encourage public demonstrations of frustration at the limited pace of government action¶ **Private-sphere behavioural change is not enough, and may** even at times **become a diversion from the more important process of bringing political pressure to bear on policy-makers. The importance of public demonstrations of frustration at** both **the lack of political progress on climate** change and the barriers presented by vested interests **is widely recognised** – **including by government itself**. **Climate change communications**, including government communication campaigns, **should work to normalise public displays of frustration with the slow pace of political change.** Ockwell et al (2009) argued that **communications can play a role in fostering demand for - as well as acceptance of - policy change**. Climate change communication could (and should) be used to encourage people to demonstrate (for example through public demonstrations) about how they would like structural barriers to behavioural/societal change to be removed.

## 2AC

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**Rational choice theory is best for environmental policy issues – their emphasis on theory is reductionist and prevents effective problem solving**

David **Owen. 2002**. Reader of Political Theory at the Univ. of Southampton, Millennium Vol 31 No 3 2002 p. 655-7

Commenting on the ‘philosophical turn’ in IR, Wæver remarks that ‘[a] frenzy for words like “epistemology” and “ontology” often signals this philosophical turn’, although he goes on to comment that these terms are often used loosely.4 However, loosely deployed or not, it is clear that debates concerning ontology and epistemology play a central role in the contemporary IR theory wars. In one respect, this is unsurprising since it is a characteristic feature of the social sciences that periods of disciplinary disorientation involve recourse to reflection on the philosophical commitments of different theoretical approaches, and there is no doubt that such reflection can play a valuable role in making explicit the commitments that characterise (and help individuate) diverse theoretical positions. Yet, such a philosophical turn is not without its dangers and I will briefly mention three before turning to consider a confusion that has, I will suggest, helped to promote the IR theory wars by motivating this philosophical turn. **The first danger with the philosophical turn is that it has an inbuilt tendency to prioritise issues of ontology and epistemology over explanatory and/or interpretive power as if the latter two were merely a simple function of the former.** But while the explanatory and/or interpretive power of a theoretical account is not wholly independent of its ontological and/or epistemological commitments (otherwise criticism of these features would not be a criticism that had any value), **it is by no means clear that it is,** in contrast, **wholly dependent on these philosophical commitments**. Thus, for example, **one need not be sympathetic to rational choice theory to recognise that it can provide powerful accounts of certain kinds of problems, such as the tragedy of the commons in which dilemmas of collective action are foregrounded**. It may, of course, be the case that the advocates of rational choice theory cannot give a good account of why this type of theory is powerful in accounting for this class of problems (i.e., how it is that the relevant actors come to exhibit features in these circumstances that approximate the assumptions of rational choice theory) and, if this is the case, it is a philosophical weakness—but this does not undermine the point that, **for a certain class of problems, rational choice theory may provide the best account available to us.** In other words, while the critical judgement of theoretical accounts in terms of their ontological and/or epistemological sophistication is one kind of critical judgement, it is not the only or even necessarily the most important kind**. The second danger run by the philosophical turn is that because prioritisation of ontology and epistemology promotes theory-construction from philosophical first principles, it cultivates a theory-driven rather than problem-driven approach to IR**. Paraphrasing Ian Shapiro, the point can be put like this: since it is the case that there is always a plurality of possible true descriptions of a given action, event or phenomenon, the challenge is to decide which is the most apt in terms of getting a perspicuous grip on the action, event or phenomenon in question given the purposes of the inquiry; yet, from this standpoint, ‘**theory-driven work is part of a reductionist program’ in that it ‘dictates always opting for the description that calls for the explanation that flows from the preferred model or theory’**.5 The justification offered for this strategy rests on the mistaken belief that it is necessary for social science because general explanations are required to characterise the classes of phenomena studied in similar terms. However, as Shapiro points out, this is to misunderstand the enterprise of science since ‘whether there are general explanations for classes of phenomena is a question for social-scientific inquiry, not to be prejudged before conducting that inquiry’.6 Moreover, this strategy easily slips into the promotion of the pursuit of generality over that of empirical validity. The third danger is that the preceding two combine to encourage the formation of a particular image of disciplinary debate in IR—what might be called (only slightly tongue in cheek) ‘the Highlander view’—namely, an image of warring theoretical approaches with each, despite occasional temporary tactical alliances, dedicated to the strategic achievement of sovereignty over the disciplinary field. It encourages this view because **the turn to, and prioritisation of, ontology and epistemology stimulates the idea that there can only be one theoretical approach which gets things right, namely, the theoretical approach that gets its ontology and epistemology right. This image feeds back into IR exacerbating the first and second dangers, and so a potentially vicious circle arises.**

**Life should be valued as apriori – it precedes the ability to value anything else**

Amien **Kacou. 2008**. WHY EVEN MIND? On The A Priori Value Of “Life”, Cosmos and History: The Journal of Natural and Social Philosophy, Vol 4, No 1-2 (2008) cosmosandhistory.org/index.php/journal/article/view/92/184

Furthermore, that manner of **finding things good** that is in pleasure **can certainly not exist in any world without consciousness (i.e., without “life,”** as we now understand the word)—slight analogies put aside. In fact, we can begin to develop a more sophisticated definition of the concept of “pleasure,” in the broadest possible sense of the word, as follows: it is the common psychological element in all psychological experience of goodness (be it in joy, admiration, or whatever else). In this sense, pleasure can always be pictured to “mediate” all awareness or perception or judgment of goodness: there is pleasure in all consciousness of things good; pleasure is the common element of all conscious satisfaction. In short, it is simply the very experience of liking things, or the liking of experience, in general. In this sense, **pleasure is, not only uniquely characteristic of life but also, the core expression of goodness in life—the most general sign or phenomenon for favorable conscious valuation**, in other words. This does not mean that “good” is absolutely synonymous with “pleasant”—what we value may well go beyond pleasure. (The fact that we value things needs not be reduced to the experience of liking things.) However, what we value beyond pleasure remains a matter of speculation or theory. Moreover, we note that a variety of things that may seem otherwise unrelated are correlated with pleasure—some more strongly than others. In other words, there are many things the experience of which we like. For example: the admiration of others; sex; or rock-paper-scissors. But, again, what they are is irrelevant in an inquiry on a priori value—what gives us pleasure is a matter for empirical investigation. Thus, we can see now that, in general, **something primitively valuable is attainable in living—that is, pleasure itself.** And it seems equally clear that we have a priori logical reason to pay attention to the world in any world where pleasure exists. Moreover, **we can now also articulate a foundation for a security interest in our life: since the good of pleasure can be found in living** (to the extent pleasure remains attainable),[17] **and only in living, therefore, a priori, life ought to be continuously (and indefinitely) pursued at least for the sake of preserving the possibility of finding that good.** However, this platitude about the value that can be found in life turns out to be, at this point, insufficient for our purposes. It seems to amount to very little more than recognizing that our subjective desire for life in and of itself shows that life has some objective value. For what difference is there between saying, “living is unique in benefiting something I value (namely, my pleasure); therefore, I should desire to go on living,” and saying, “I have a unique desire to go on living; therefore I should have a desire to go on living,” whereas the latter proposition immediately seems senseless? In other words, “life gives me pleasure,” says little more than, “I like life.” Thus, we seem to have arrived at the conclusion that **the fact that we already have some (subjective) desire for life shows life to have some (objective) value.** But, if that is the most we can say, then it seems our enterprise of justification was quite superficial, and the subjective/objective distinction was useless—for all we have really done is highlight the correspondence between value and desire. Perhaps, our inquiry should be a bit more complex.

**The anti-coal movement is polycentric and coalitional – it brings together multiples agents of resistance by targeting specific Coal plants like those that poison each breath of air we take in Chicago AND by challenging the larger global system of fossil fuel powered injustice**

**Russell 9** – Grassroots Action Organizer – Joshua Kahn Russell is the grassroots actions organizer at Rainforest Action Network and was an organizer on the Capitol Climate Action, May 2009, Z Magazine, <http://www.zcommunications.org/climate-justice-and-coals-funeral-procession-by-joshua-kahn-russell>

The pace of **direct actions against coal** has sharply increased since 2004. These campaigns **have been organized and carried out by a polycentric global network of radical environmentalists, "frontline" communities** (those most directly affected by injustice), **student organizers, and** traditional **non-profits**. In the United States, communities have been using non-violent direct action to confront coal at all stages of its lifecycle: finance, extraction, "cleaning" and transport, burning, and energy consumption. This trajectory began gaining momentum on November 10, 2004 with a blockade of Maryland's Dickerson Power Plant. It grew to 3 major direct actions in 2005, 2 more in 2006, 6 in 2007, 18 in 2008, and 15 in the first 3 months of 2009.¶ Similar to the anti-nuclear movement of the late 1970s and early 1980s, **the anti-coal movement has targeted specific** mines and **plants while challenging the overall legitimacy of fossil fuel-based economies**. **This struggle has transcended single-issue organizing and the varied efforts to stop coal have brought together diverse stakeholders**. Stemming from the people of color, working class, and women-led environmental justice movement, **climate justice has become a political banner for intersecting racial justice, economic equity, community health, climate, and environmental quality struggles, of which elements of "no coal" struggles are a part. It is useful to think of campaigns against coal as one strand of a robust frontline-led climate justice movement.**

**Anti-nuclear opposition is directly responsible for the spread of coal; their alt attempts to be the arbiter and enforcer of environmental purity which simply re-affirms the structural forces that make “black trash” possible in the form of coal pollution**

**King 9** - Host and Executive Producer of “White House Chronicle” — a news and public affairs program airing on PBS, “After 40 Years, Environmentalists Start To See the Nuclear Light, Llewellyn King”, November 25, 2009 – 8:47 pm

Although very little happened, Nov. 24 was a red letter day for the nation’s nuclear power industry. No new nuclear reactors were purchased, no breakthrough in treating nuclear waste was announced, and the Obama administration did not declare that it would pay for new reactors.¶ Instead, the source of the industry’s happiness was The Washington Post leading Page One with an article that detailed how the environmental movement, after 40 years of bitter opposition, now concedes that nuclear power will play a role in averting further harm from global warming.¶ Mind you, not every environmental group has come around, but the feared and respected Natural Resources Defense Council has allowed that there is a place for nuclear power in the world’s generating mix and Stephen Tindale, a former anti-nuclear activist with Friends of the Earth in the United Kingdom, has said, yes, we need nuclear.¶ For the nuclear industry which has felt itself vilified, constrained and damaged by the ceaseless and sometimes pathological opposition of the environmental movement, this changing attitude is manna from on high.¶ No matter that the **environmentalists, in opposing nuclear since the late 1960s, have critically wounded the U.S. reactor industry and contributed to the construction of scores of coal and gas-fired plants that would not have been built without their opposition to nuclear**.¶ In short, **the environmental movement contributed in no small way to driving electric utilities to the carbon fuels they now are seeking to curtai**l.¶ Nuclear was such a target of the environmental movement that it embraced the “anything but nuclear” policy with abandon. Ergo its enthusiasm for all forms of alternative energy and its spreading of the belief —still popular in left-wing circles — that wind and solar power, with a strong dose of conservation, is all that is needed.¶ **A third generation of environmental activists, who have been preoccupied with global climate change, have come to understand that a substantial amount of new electric generation is needed**. Also some environmentalists are beginning to be concerned about the visual impact of wind turbines, not to mention their lethality to bats and birds.¶ Of all of the deleterious impacts of modern life on the Earth, it is reasonable to ask why the environmentalists went after nuclear power. And why they were opposed to nuclear power even before the 1979 accident at Three Mile Island in Pennsylvania and the catastrophic 1986 Chernobyl reactor failure in Ukraine. Those deserved pause, but the movement had already indicted the entire nuclear enterprise.¶ Having written about nuclear energy since 1969, I have come to believe that the environmental movement seized on nuclear first because it was an available target for legitimate anger that had spawned the movement in the ’60s. The licensing of nuclear power plants gave the protesters of the time one of the only opportunities to affect public policy in energy. They seized it; at first timorously, and then with gusto.¶ The escalation in environmental targets tells the story of how the movement grew in confidence and expertise; and how it added political allies, like Ralph Nader and Rep. Ed Markey, D-Mass.¶ The first target was simply the plants’ cooling water heating up rivers and estuaries. That was followed by wild extrapolations of the consequences of radiation (mutated children). Finally, it settled on the disposition of nuclear waste; that one stuck, and was a lever that turned public opinion easily. Just mention the 240,000-year half-life of plutonium without mentioning how, as an alpha-emitter, it is easily contained.¶ **It is not that we do not need an environmental movement**. We do. It is just that sometimes it gets things wrong.¶ In the days of the Atomic Energy Commission, the environmental groups complained that it was policeman, judge and jury. Indeed.¶ But **environmental groups are guilty of defining environmental virtue and then policing it, even when the result is a grave distortion, as in the nuclear imbroglio**. **Being both the arbiter of environmental purity and the enforcer has cost the environment 40 years when it comes to reducing greenhouse gases**.

**Problem-solution impact is backwards---acting with a flawed epistemology allows us to change that epistemology.**

**Harris 7** (Graham, Adjunct Prf. @ Centre for Environment University of Tasmania, Seeking Sustainability in an age of complexity p. 9-10)

1 am not going to address the global 'litany' at length here. The arguments have been well made by others, especially and most elegantly by E. O. Wilson. What 1 wish to address here is the question: 'Can we grasp the complexity of it all and, if so, what do we do about it?' Given the fundamental nature of the problem the destruction of the biosphere and its ecosystem ser- vices together with the huge changes going on in human societies and cultures driven by globalisation and technological change the precautionary principle would suggest that even if the epistemology is flawed, the data are partial and the evidence is shaky, we should pay attention to the little we know and do whatever is possible to mitigate the situation even if we fundamentally disagree about the means and the ends. The only ethical course of action is, as John Ral- ston Saul writes," based on 'a sense of the other and of inclusive responsibility'. We know enough to act. Ethics is about uncertainty, doubt, system thinking and balancing difficult choices. It is about confronting the evidence**.** Over the past two or three decades, as there has been an increasing appre- ciation of the importance of good environmental management, and as western societies have become more open and the ICT revolution has made informa- tion much more widely available there has been a growing debate between the worlds of science, industry, government and the community around environ- mental ethics and environmental issues and their management. During this period new knowledge has been gained, ideas have changed (sometimes quite fundamentally) and there have been huge changes in government and social institutions and policies. We are all on a recursive journey together: we are lit- erally 'making it up as we go along'. This is not easy and there are no optimal solutions. This is an adaptive process requiring feedback from all parts of the system. Yes, there will be surprises. This is why it is so important that when we act we constantly reflect on what we know and what we are doing about it and where it is all going. As we reach the physical limits of the global biosphere the values we place on things are changing and must change further. A new environmental ethic is required, one that is less instrumental and more embracing. Traditionally there has tended to be a schism between those who take an anthropocentric view (that the world is there for us to use) and those who take the non-anthropocentric view (those who value nature in its own right). Orthodox anthropocentrisni dictates that non-human value is instrumental to human needs and interests. In contrast, non-anthropocentrics take an objectivist view and value nature intrinsically; some may consider the source of value in non-human nature to be independent of human consciousness.45 What is required is a more complex and systems view of ethics which finds a middle ground between the instrumentalist and objectivist views. Norton '46 for example, proposes an alternative and more complex theory of value - a universal Earth ethic - which values processes and dynamics as well as entities and takes an adaptive management view of changing system properties. For sustainable development to occur, choices about values will remain within the human sphere but we should no longer regard human preferences as the only criterion of moral significance. 'Humans and the planet have entwined destinies"' and this will be increasingly true in many and complex ways as we move forward. There are calls for an Earth ethic beyond the land ethic of Aldo Leopold.45 The science of ecology is being drawn into the web .49 Ecologists are becoming more socially and culturally aware and engaged" and the 'very doing' of ecology is becoming more ethical.tm' Some scientists are beginning to see themselves more as agents in relationships with society and less as observers.

**Paradigm wars are useless – combining epistemologies is key to intellectual and political progress. Only the perm solves.**

David A. **Lake. 2011**. Jerri-Ann and Gary E. Jacobs Professor of Social Sciences and Distinguished Professor of Political Science at the University of California, San Diego. Why “isms” are Evil: Theory, Epistemology, and Academic Sects as Impediments to Understanding and Progress. International Studies Quarterly 55, 465-480.

As I began, our task as scholars is to understand better the world in which we live. Our privileged position as scholars in society rests upon this goal, or at least its pursuit. **We do not produce understanding by ﬁghting theological wars between ourselves at either the theoretical or epistemological levels.** Rather, **we achieve understanding by asking questions about important phenomena that we do not now understand well, employing appropriate theories to answer these questions, and then being honest with ourselves and others about the strengths and weaknesses of the evidence we have been able to bring to bear**. Today, **no single theoretical or epistemological approach deserves hegemony. Diversity of theory and method is necessary, at least at this stage of our intellectual development**. Intellectual monocultures are rightfully feared. But the current cacophony is not what we should aspire to. **Rather than useful debate we have turned inward to self-contained research traditions and epistemologies** and, in turn, we focus on ﬁrst principles. **Intellectual progress does not come from proclaiming ever more loudly the superiority of one’s approach to audiences who have stopped listening. Let’s end the theological crusades and seek progress in understanding real problems of world politics**. Perhaps then we will earn the privileges society has accorded us.

Method focus causes scholarly paralysis

**Jackson**, associate professor of IR – School of International Service @ American University, **‘11**

(Patrick Thadeus, The Conduct of Inquiry in International Relations, p. 57-59)

Perhaps the greatest irony of this instrumental, decontextualized importation of “falsification” and its critics into IR is the way that an entire line of thought that privileged disconfirmation and refutation—no matter how complicated that disconfirmation and refutation was in practice—has been transformed into a license to **worry endlessly about foundational assumptions.** At the very beginning of the effort to bring terms such as “paradigm” to bear on the study of politics, Albert O. **Hirschman** (1970b, 338) **noted this very danger**, suggesting that without “a little more ‘reverence for life’ and a little less straightjacketing of the future,” the **focus on** producing internally **consistent** packages of **assumptions instead of** actually examining **complex empirical situations would result in scholarly paralysis.** Here as elsewhere, Hirschman appears to have been quite prescient, inasmuch as the major effect of paradigm and research programme language in IR seems to have been a series of debates and discussions about whether the fundamentals of a given school of thought were sufficiently “scientific” in their construction. Thus **we have debates about how to evaluate scientific progress**, and attempts to propose one or another set of research design principles **as uniquely scientific**, and inventive, “reconstructions” of IR schools, such as Patrick James’ “elaborated structural realism,” supposedly for the purpose of placing them on a **firmer scientific footing** by making sure that they have all of the required elements of a basically Lakatosian19 model of science (James 2002, 67, 98–103).

The bet with all of this scholarly activity seems to be that if we can just get the fundamentals right, then scientific progress will inevitably ensue . . . even though this is the precise opposite of what Popper and Kuhn and Lakatos argued! In fact, all of this obsessive interest in foundations and starting-points is, in form if not in content, a lot closer to logical positivism than it is to the concerns of the falsificationist philosophers, despite the prominence of language about “hypothesis testing” and the concern to formulate testable hypotheses among IR scholars engaged in these endeavors. That, above all, is why I have labeled this methodology of scholarship neopositivist. While it takes much of its self justification as a science from criticisms of logical positivism, in overall sensibility it still operates in a visibly positivist way, attempting to construct knowledge from the ground up by getting its foundations in logical order before concentrating on how claims encounter the world in terms of their theoretical implications. This is by no means to say that neopositivism is not interested in hypothesis testing; on the contrary, neopositivists are extremely concerned with testing hypotheses, but **only after the fundamentals have been** soundly **established.** Certainty, not conjectural provisionality, seems to be the goal—a goal that, ironically, Popper and Kuhn and Lakatos would all reject.

**Managerialism is necessary to prevent global extinction –processes of environmental destruction are unstoppable without intervention**

Dr Neil **Levy** **1999**. Fellow of the Centre for Applied Philosophy and Public Ethics at Charles Sturt University. “Discourses of the Environment” p. 215

**If the ‘technological fix’ is unlikely to be more successful than strategies of limitation of our uses of resources, we are nevertheless unable to simply leave the environment as it is. There is a real and pressing need for more, and more accurate, technical and scientific information about the non-human world**. For we are faced with a situation in which **the processes we have already set in train will continue to impact upon that world, and therefore us, for centuries. It is therefore necessary**, not only to stop cutting down the rain forests, but **to develop real, concrete proposals for action, to reverse, or at least limit, the effects of our previous interventions**. More over, there is another reason why **our behaviour towards the non-human cannot simply be a matter of leaving it as it is,** at least **in so far as our goals are not only environmental but also involve social justice**. For if we simply preserve what remains to us of wilderness, of the countryside and of park land, we also preserve patterns of very unequal access to their resources and their consolations (Soper 1995: 207). In fact, we risk exacerbating these inequalities. It is no us, but the poor of **Brazil**, who **will bear the brunt of the misery which would result form a strictly enforced policy of leaving the Amazonian rain forest untouched, in the absence of alternative means of providing for their livelihood.** **It is the development of policies to provide such ecologically sustainable alternative which we require, as well as the development of technical means for replacing our current greenhouse gas-emitting sources of energy. Such policies and proposals for concrete action must be formulated by** ecologists, environmentalist, **people with expertise concerning the functioning of ecosystems and the impacts which our actions have upon them. Such proposals are**, therefore, **very much the province for Foucault’s specific intellectual, the one who works ‘within specific sectors, at the precise points where their won conditions of life or work situate them**’ (Foucault 1980g: 126). For who could be more fittingly described as ‘the strategists of life and death’ than these environmentalists? After the end of the Cold War, it is in this sphere, more than any other, that man’s ‘politics places his existence as a living being in question’ (Foucault 1976: 143). For **it is in facing the consequences of our intervention in the non-human world that the fate of our species, and of those with whom we share this planet, will be decided.**

**Consumption and consumerism are inevitable and build ethical democratic solidarity**

**Cohen 2**

(Patricia, Writer for the New York Times, citing James B. Twitchell, Professor of English at the University of Florida, “In Defense Of Our Wicked, Wicked Way”, The New York Times, July 7, <http://www.clas.ufl.edu/users/jtwitche/nytimesarticle.pdf>)

''I CAN stand here and look at this for hours,'' said James B. Twitchell as he parked himself in front of the bottled water section in City Market, just past the jars of $30-per-pound teas and behind the eight-foot display of imported olive oils.¶ Mr. Twitchell, a professor of English at the University of Florida in Gainesville, specializes in the Romantic poets, but his real obsession is shopping. Given the choice of reading literary theorists like Foucault or gazing at shelves stacked with artfully shaped bottles of water piled up like Jay Gatsby's beautifully tailored shirts, he would quickly choose the latter. ''There is more that I can sustain myself with at the water aisle than in all of modern criticism,'' he said.¶ In a series of books, the latest of which is ''Living It Up: Our Love Affair With Luxury'' (Columbia University Press), Mr. **Twitchell has detailed the consumption habits of Americans** with all the scholarly delight of a field anthropologist who has discovered the secret courting rituals of a remote tribe. **He is** exquisitely **attuned to the** subtle **gradations of status conferred by the labels on what people wear, eat, drink, drive and freeze ice cubes in.¶** And he is not alone. **Whether prompted by the 90's spendathon or** the **endless fascination** not only **with shopping,** but with **reading about shopping**, a new title by an academic or journalist on the subject appears practically every week. Burlington, where Mr. Twitchell grew up and where he now spends summers, was singled out by David Brooks in his wickedly funny ''Bobos in Paradise'' as a model Latte Town, a city that has perfectly reconciled the mercenary instincts of the bourgeoisie with the artistic spirit of the bohemians to create an upscale consumer culture.¶ What distinguishes Mr. Twitchell's study of excessive consumerism, though, is that he applauds it. To him, Evian and Pellegrino, Vermont Pure and Dasani are evidence of what could be called his trickledown theory of luxury: that **the defining characteristic of today's society is the average person's embrace of u**nnecessary **consumption**, **superficial indulgence, wretched excess and endless status-seeking**. Oh, earthly paradise!¶ Once defined by exclusiveness, luxury is now available -- **whether in the form of** limited-edition coffee at **Starbucks or Michael Graves tea kettles at Target** -- to all. And that, Mr. Twitchell maintains, **is a good thing**. Sure, he argues in his book, buying essentially useless luxury items ''is one-dimensional, shallow, ahistorical, without memory and expendable. But **it is** also strangely **democratic and unifying. If what you want is peace on earth, a unifying system** that transcends religious, cultural and caste differences, well, whoops!, **here it is. The Global Village** is not the City on the Hill, not quite the Emerald City, and certainly not quite what millennial utopians had in mind, but **it** **is closer to equitable distribution of rank than what other systems have provided.''¶** That is, to say the least, a minority report. For centuries, philosophers, artists and clerics railed against luxury. Ecclesiastical courts forbade most people from eating chocolate, drinking coffee or wearing colors like Prussian blue and royal purple -- ''luxuria'' that signaled living above one's God-ordered place.¶ Thorstein Veblen offered the first modern critique of ''conspicuous consumption'' in his 1899 treatise ''The Theory of the Leisure Class.'' Post-World War II social critics and economists extended Veblen's critique to the expanding middle class. John Kenneth Galbraith warned in ''The Affluent Society'' of the binge afflicting the postwar generation. Unwitting consumers, he said, were essentially suckered by admen and salesmen into spending money on things they didn't need.¶ In his 1970 study ''The Cultural Contradictions of Capitalism'' Daniel Bell argued that ''the culture was no longer concerned with how to work and achieve, but with how to spend and enjoy.'' This trend, he warned, could end up undermining the very work ethic that made capitalism function.¶ That, obviously, did not happen. If anything people worked more so they could spend more. In ''The Overspent American,'' Juliet B. Schor noted that **people no longer compared themselves with** others in the same income bracket, but with **the richer and more famous they saw on television, propelling them to spend more** than they could afford.¶ To Mr. Twitchell, the naysayers are scolds and spoilsports. **Indoor plumbing, sewing machines, dishwashers, college educations, microwaves, coronary bypasses, birth control and air travel all began as luxury items for the wealthy.¶** Nor are buyers mindlessly duped by canny advertisers into buying items they don't really want, he said. Quite the opposite. They enjoy the sensual feel of an Hermès silk tie, the briny delicacy of Petrossian caviar or simply the sensation of indulging themselves. **These things may not bring happiness, but neither does their absence from the lives of people too poor to afford them.¶** It may seem an odd moment to champion luxury. The spectacular boom of the 90's now looks as if it was partly built on spectacular sleight of hand, with Enron, Global Crossing, Adelphia and WorldCom all recently admitting that billions in reported profits were nonexistent. The moment seems ripe for a chastened culture to repent its indulgences. Reassessing the get-and-spend ethic -- not defending consumerism -- might well be the defining current of the next few years.¶ The problem with Mr. Twitchell's view, said Robert H. Frank, author of ''Luxury Fever,'' is that our sense of what we need to live comfortably keeps spiraling upward. It is not that luxury spending isn't good for particular individuals, but that it is bad for society overall. ''It's like when everybody stands up for a better view, you don't see better than before,'' Mr. Frank said from his home in Ithaca. There's a lot of waste in luxury spending. Instead of building safer roads or providing better health care, we are spending that money on bigger diamonds and faster cars.¶ Mr. Twitchell is unpersuaded, however. Walking down Church Street, Burlington's busy pedestrian mall, he pointed out the transformation that the consumer culture has wrought in his hometown. Lean and tanned, with cropped gray hair and rounded tortoise-shell glasses, Mr. Twitchell looks a bit like Dennis the Menace's father after Dennis has grown up, moved across the country and given his old man a few years to recover. ''Church Street once serviced needs, now it services desires,'' Mr. Twitchell said. The optician's shop is gone, and so is Sears and JCPenney. He pointed out the Ann Taylor store, where the Masonic temple used to be. A chic French children's store sits in the old bank.¶ ''The key to modern luxe is that most of us can have a bit of it on the plate,'' Mr. Twitchell said. ''I can't own a Lexus, but I can rent one. I can't go to Bermuda for a winter, but I can have a time share for a weekend. I don't own a yacht but I'm taking a Princess cruise.''¶ The process of democratization is mirrored in Mr. Twitchell's family history. His great-grandfather Andrew A. Buell made his fortune building wooden boxes from Adirondack lumber. Driving up Lodge Road to ''the hill,'' where Mr. Buell built a red stone Romanesque mansion with a copper-topped tower, Mr. Twitchell passed the Burlington Country Club, which his grandfather Marshall Coleman Twitchell helped found. The family's sprawling former home is now a women's dormitory, and the surrounding 66-acre estate serves as the University of Vermont's Redstone campus. A couple of blocks from the hilltop, both in location and status, is the relatively modest white wooden house that Mr. Twitchell, the son of Marshall Coleman Twitchell Jr., an ophthalmologist, and his sisters grew up in.¶ At that time, said Mr. Twitchell, now 59, one's social place was determined by birth, or ''what I call the lucky sperm culture.'' Today, birth-ordained status has been supplanted by store-bought status. Mr. Twitchell has no regrets about this lost world. ''Though I was a beneficiary of it, I'm glad it's over,'' he said. ''There is something refreshing about the material world that downtown Burlington opened up.'' Compared to the traditional ways of marking status -- race, parentage, accent, private schools -- one's purchases are a preferable way of telling who's up and who's down, he said.¶ On that point, Mr. Twitchell is not alone. Gary Cross, a historian at Penn State University, said that consumer culture in one sense is ''democracy's highest achievement, giving meaning and dignity to people when workplace participation, ethnic solidarity and even representative democracy have failed.''¶ Still, as Mr. Cross argued in 2000 in ''An All-Consuming Century: Why Commercialism Won in Modern America,'' ''most of us, no matter our politics, are repulsed by the absolute identity of society with the market and individual choice with shopping.''¶ True enough, Mr. Twitchell readily conceded. But he maintains the critics are missing the essential characteristic of luxury spending. ''Luxury has very little to do with money or things,'' he said. ''Luxury is a story we tell about things,'' and it's ultimately the story we are after. That is, our purchases are imbued with elaborate narratives about the life we want to live.¶ It is advertisers and manufacturers who give objects meaning by constructing the stories about them, Mr. Twitchell said, and that meaning is as much a source of desire as the object itself. Think of the elaborate fantasies spun by marketers like Ralph Lauren and Martha Stewart.¶ It goes for whatever you're buying, whether it's Jimmy Choo, Birkenstock or Payless shoes. When Mr. Twitchell, a dedicated factory outlet shopper, flashes his member's card at Sam's Club, ''the allure is not just that I'm saving money,'' he said, ''but that I'm smarter and savvier, that I'm duping the duper.''¶ Or consider an experiment he performed on his colleagues. He told some English professors that he was going to spend $6,000 to buy an 1850 copy of Wordsworth's ''Prelude.'' Brilliant idea, everyone said. A few days later, Mr. Twitchell told the same colleagues that he had changed his mind and was going to use the $6,000 to buy a used BMW. ''I could have said that I was investing in a collection of Beanie Babies comics or a diamond pinkie ring for the shocked response that I got,'' he wrote.¶ **Critics of consumption will say they are making a moral argument**, Mr. Twitchell said, but ''often **what is condemned as luxury is really just a matter of taste.''**¶ To Mr. Twitchell, **as long as human beings crave sensation, they will desire material goods and luxurious** ones at that, Wall Street scandals notwithstanding. ''If this year it's Enron and WorldCom, then another year it was Long-Term Capital Management,'' he said.¶ **Recessions may come and go, but consumption is eternal.** The ad slogan is right: Diamonds are forever.

**Short-term market mechanisms are the only solution to environmental destruction**

**Bryant 12**—professor of philosophy at Collin College (Levi, We’ll Never Do Better Than a Politician: Climate Change and Purity, 5/11/12, http://larvalsubjects.wordpress.com/2012/05/11/well-never-do-better-than-a-politician-climate-change-and-purity/)

Somewhere or other Latour makes the remark that we’ll never do better than a politician. Here it’s important to remember that for Latour– as for myself –**every entity is a “politician”.** Latour isn’t referring solely to those persons that we call “politicians”, but to all entities that exist. And if Latour claims that we’ll never do better than a politician, then this is **because every entity must navigate a field of relations to other entities that play a role in what is and is not possible in that field**. In the language of my ontology, this would be articulated as the thesis that the local manifestations of which an entity is capable are, in part, a function of the relations the entity entertains to other entities in a regime of attraction. **The world** about entities **perpetually introduces resistances and frictions that play a key role in what comes to be actualized.** ¶ It is this aphorism that occurred to me today after a disturbing discussion with a rather militant Marxist on Facebook. I had posted a very disturbing editorial on climate change by the world renowned climate scientist James Hansen. Not only did this person completely misread the editorial, denouncing Hansen for claiming that Canada is entirely responsible for climate change (clearly he had no familiarity with Hansen or his important work), but he derided Hansen for proposing market-based solutions to climate change on the grounds that “the market is the whole source of the problem!” It’s difficult to know how to respond in this situations.¶ read on! ¶ **It is quite true that it is the system of global capitalism** or the market **that has created our climate problems** **(though**, as Jared Diamond shows in Collapse, **other systems of production have also produced devastating climate problems).** **In its insistence on profit** and expansion in each economic quarter, **markets as currently structured provide no brakes for environmental destructive actions.** The system is itself pathological.¶ **However**, pointing this out and **deriding market based solutions doesn’t get us very far**. In fact, **such a response to proposed market-based solutions is downright dangerous and irresponsible**. **The fact** of the matter **is** that **1) we** currently **live in a market based world, 2) there is not**, in the foreseeable future **an alternative system on the horizon, and 3), above all, we need to do something now.** **We can’t afford to reject interventions simply because they don’t meet our ideal conceptions of how things should be.** **We have to work with the world that is here, not the one that we would like to be here**. And here it’s crucial to note that **pointing this out does not entail that we shouldn’t work for producing that other world.** **It just means that we have to grapple with the world that is actually there before us.**¶ It pains me to write this post because I remember, with great bitterness, the diatribes hardcore Obama supporters leveled against legitimate leftist criticisms on the grounds that these critics were completely unrealistic idealists who, in their demand for “purity”, were asking for “ponies and unicorns”. This rejoinder always seemed to ignore that words have power and that **Obama, through his profound power of rhetoric, had**, at least **the power to shift public debates and frames, opening a path to making new forms of policy and new priorities possible.** **The tragedy was that he didn’t use that power,** though he has gotten better.¶ I do not wish to denounce others and dismiss their claims on these sorts of grounds. As a Marxist anarchists, **I do believe that we should fight for** the creation of **an alternative** hominid **ecology** **or social world.** I think that the call to commit and fight, to put alternatives on the table, has been one of the most powerful contributions of thinkers like Zizek and Badiou. If we don’t commit and fight for alternatives those alternatives will never appear in the world. **Nonetheless, we still have to grapple with the world we find ourselves in**. And **it is here, in my encounters with some Militant Marxists, that I sometimes find it difficult to avoid the conclusion that they are** unintentionally **aiding and abetting the very things they claim to be fighting**. **In their refusal to become impure, to work with situations or assemblages as we find them, to sully their hands, they end up reproducing the very system they wish to topple and change. Narcissistically they get to sit there, smug in their superiority and purity, while everything continues as it did before because they’ve refused to become politicians or engage in the difficult concrete work of assembling** human and nonhuman **actors to render another world possible.** As a consequence, **they** occupy the position of Hegel’s beautiful soul that **denounces the horrors of the world, celebrate the beauty of their soul, while depending on those horrors of the world to sustain their own position. ¶** To engage in politics is to engage in networks or ecologies of relations between humans and nonhumans. To engage in ecologies is to descend into networks of causal relations and feedback loops that you cannot completely master and that will modify your own commitments and actions. But there’s no other way, there’s no way around this, and we do need to act now.

## 1AR

### 1AR Framework

#### Only our framework can motivate legislative fence-sitters – turns the K

Brown 11

[heath, PhD Political Science, Roanoke, Salem, VA, “narrative strategies used by interest groups during the 2008 presidental transition”, 2011 Pat-Net Conference]

Milbrath argues that interest groups must strategically present information so as to ¶ overcome the “perceptual screen” that shields policy makers from absorbing endless amounts ¶ of information. He suggests that groups use facts (scientific information about policy ¶ outcomes), arguments (normative explanations of justness or rightness of action), and power¶ (typically subtle offers of political support or threats of political retribution) to communicate ¶ their interests and make their case for policy action (or inaction). In a more recent approach, ¶ Esterling (2007, p. 79) makes the case that groups can use [using] “instrumental” – “research or ¶ evidence-based causal” arguments -- or “normative” – “intrinsic desirability” arguments. By ¶ emphasizing one of these approaches, a group is tacitly communicating the way it wants to ¶ persuade the target of the information. By emphasizing power or normative arguments, the ¶ group implies that the policy maker should make decisions based primarily on their political ¶ judgment and political future. Conversely, by emphasizing facts-based or instrumental ¶ arguments, the group implies that the policy maker should base decisions primarily on rational ¶ or scientific considerations. In practice, it is difficult to disentangle these two types of ¶ arguments and many groups will likely combine various ways to present information (Wright ¶ 1996; Rochefort and Cobb 1994). The dichotomy though does help clarify the persuasive or ¶ argumentative tone of the information and advice given by groups to policy makers. 6 ¶ While public perceptions of interest groups might suggest crass self-interest, ¶ manipulation, and deception, groups have an incentive to be forthright in the information they ¶ provide and arguments they make. A group that provides shoddy statistics or misleading ¶ arguments will be discounted in future interactions with the policy maker (Kersh 2009; ¶ Easterling 2007). John E. Chubb (1983, p. 145) writes in regard to energy interest groups: ¶ “information and advice that are solely self-serving threaten the bond of trust that facilitates ¶ the informal play of influence.” In fact, rather than targeting political opponents or fence ¶ sitters, much research suggests that groups prefer or are invited to lobby friends and allies over ¶ adversaries (Baumgartner et al. 2009; Hojnacki and Kimball 1998, 1999; Hall and Deardorff ¶ 2006; Bauer et al. 1963; Holyoke 2004; McCool 1990). If this is the case, the cost of ¶ misrepresenting or overstating information may be particularly high for those engaged in what ¶ Hall and Deardorff (2006) and others have called “legislative subsidy” (Hall and Deardorff 2006; ¶ Esterling 2007a). From this subsidy perspective, if a policy maker is sub-contracting information ¶ collection and analysis to an allied interest group, it behooves that group to be conscientious, ¶ thorough, and consistent in the information and advice it gives. And in many cases, as Wright ¶ (1996) contends, it is relatively easy for policy makers to check the authenticity of the ¶ information provided to them, sometimes simply through the contradictory information ¶ provided by other groups, thereby curtailing the inclination to blatantly misrepresent the truth. ¶ Furthermore, experimental research shows that factual or instrumental information is ¶ preferred by legislative staff (LaPira 2008) and neutral expert lobbyists have more legislative ¶ access than non-experts (Esterling 2007b). Facts may be useful on their own terms in ¶ formulating legislative decisions but scientific or statistically based arguments also serve as a 7 ¶ cue for policy makers to determine the credibility or reliability of the advice they are given ¶ (Sabatier 1978). ¶ Rather than convince those already in agreement, the approach taken by proactive ¶ theorists suggests that groups seek to convince legislative fence sitters or opponents to adopt ¶ the group’s position, advocate the group’s interests, or simply vote in the group’s way through ¶ the offer of, or refusal to give, political support (Smith 1984; Austen-Smith and Wright 1994; ¶ Wright 1996). Wright (1990) for one finds that groups which distribute campaign contributions ¶ to a wide group of legislators are then able to access a wider group, rather than just political ¶ allies (Wright 1990). Similarly, Heberling (2005) shows that one group, the AFL-CIO, seeks out ¶ legislators with unknown political preferences rather than targeting political allies (Heberling ¶ 2005). The field of interest group research has not yet resolved whether groups typically lobby ¶ friends, adversaries, or some combination of the two (Leech and Baumgartner 1998). This is ¶ likely due to the wide variation of group types and also policy domains in which groups operate. ¶ These inter-organizational and inter-policy differences affect the strategies employed and ¶ therefore the content of information presented during lobbying.

### Resources

#### Resource scarcity is self-correcting

Haynes 8

(Beth, Professor of Economics at Brigham Young University-Hawaii, “Finite Resources vs. Infinite Resourcefulness”, August 19, <http://wealthisnottheproblem.blogspot.com/2008/08/finite-resources-vs-infinite.html>)

It’s common sense. Save today in order to have some available tomorrow. It’s how our bank accounts work, so it seems logical to apply the same reasoning to resource use. But there is a catch. All of economic history, up to and including today, demonstrates that the more we exploit our natural resources, the more available they become. (3-7) How can this possibly be? If we use our “limited, non-renewable resources” we have to end up with less, right? Actually, no. And here is why. We don’t simply “use up” existing resources; we constantly create them. We continually invent new processes, discover new sources, improve the efficiency of both use and extraction, while at the same time we discover cheaper, better alternatives. The fact that a particular physical substance is finite is irrelevant. What is relevant is the process of finding ways to meet human needs and desires. The solutions, and thus what we consider resources, are constantly changing. Oil was a nuisance, not a resource, until humans discovered a use for it. In order to survive and flourish, human beings must succeed at fulfilling certain needs and desires. This can be accomplished in a multitude of ways using a multitude of materials. The requirements of life set the goals. How these goals are met does not depend on the existence or the availability of any particular material. Limits are placed not by the finiteness of a physical substance, but by the extent of our knowledge, of our wealth, and of our freedom. Knowledge. Wealth. Freedom. These are the factors which are essential to solving the problems we face. “The Stone Age didn’t end because we ran out of stones.” (8) Think for a minute about how we have solved the problem of meeting basic needs throughout history: Transportation: from walking to landing on the moon Communication: from face-to-face conversations to the World Wide Web. Food: from hunting and gathering to intravenous feeding and hydroponics. Shelter: from finding a cave to building skyscrapers Health care: from shamans to MRIs and neurosurgery. How does progress happen? A synopsis of the process is provided by the main theme of Julian Simon’s book, The Ultimate Resource 2: More people, and increased income, cause resources to become more scarce in the short run. Heightened scarcity causes prices to rise. The higher prices present opportunity and prompt inventors and entrepreneurs to search for solutions. Many fail in the search, at cost to themselves. But in a free society, solutions are eventually found. And in the long run, the new developments leave us better off than if the problems had not arisen, that is, prices eventually become lower than before the scarcity occurred. (9) This idea is not just theory. Economists and statisticians have long been analyzing the massive amounts of data collected on resource availability. The conclusion: our ability to solve the problems of human existence is ever-expanding. Resources have become less scarce and the world is a better place to live for more and more people. (3-7) Overall, we create more than we destroy as evidenced by the steady progress in human well being and there is no evidence for concluding that this trend can't and won't continue. Doomsday predictions have been with us since ancient times and they have consistently been proven wrong.

### AT Transition

#### No transition

Barnhizer ‘6

(David R., Emeritus Professor at Cleveland State University’s Cleveland-Marshall College of Law; “Waking from Sustainability's "Impossible Dream": The Decisionmaking Realities of Business and Government.” 2006 Georgetown International Environmental Law Review. 18 Geo. Int'l Envtl. L. Rev. 595 L/N)

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. n59 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 [\*620] 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. The scale of social needs, including the need for expanded productive activity, has grown so large that it cannot be shut off at all, and certainly not abruptly. It cannot even be ratcheted down in any significant fashion without producing serious harms to human societies and hundreds of millions of people. Even if it were possible to shift back to systems of local self-sufficiency, the consequences of the transition process would be catastrophic for many people and even deadly to the point of continual conflict, resource wars, increased poverty, and strife. What are needed are concrete, workable, and pragmatic strategies that produce effective and intelligently designed economic activity in specific contexts and, while seeking efficiency and conservation, place economic and social justice high on a list of priorities. n60 The imperative of economic growth applies not only to the needs and expectations of people in economically developed societies but also to people living in nations that are currently economically underdeveloped. Opportunities must be created, jobs must be generated in huge numbers, and economic resources expanded to address the tragedies of poverty and inequality. Unfortunately, natural systems must be exploited to achieve this; we cannot return to Eden. The question is not how to achieve a static state but how to achieve what is needed to advance social justice while avoiding and mitigating the most destructive consequences of our behavior. Many developing country groups involved in efforts to protect the environment and resist the impacts of free trade on their communities have been concerned with the harmful effects of economic change. Part of the concern is the increased scale of economic activity. Some concerns relate to who benefits and who loses in the changing context imposed by globalization. These concerns are legitimate and understandable. So are the other deep currents running beneath their political positions, including those of resistance to change of any kind and a [\*621] rejection of the market approach to economic activities. In the system described inaccurately as free market capitalism, economic activity not only breaks down existing systems, it creates new systems and--as Joseph Schumpeter observed--continually repeats the process through cycles of "creative destruction." n61 This pattern of creative destruction unfolds as necessarily and relentlessly as does the birth-maturation-death-rebirth cycle of the natural environment. This occurs even in a self-sufficient or autarkic market system capable of managing all variables within its closed dominion. But when the system breaks out of its closed environment, the ability of a single national actor to control the system's dynamics erodes and ultimately disappears in the face of differential conditions, needs, priorities, and agendas. Globalization's ability to produce wealth for a particular group simultaneously produces harms to different people and interests and generates unfair resource redistribution within existing cultures. This is an unavoidable consequence of globalization. n62 The problem is that globalization has altered the rules of operation

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of political, economic, and social activities, and in doing so multiplied greatly our ability to create benefit and harm. n63 While some understandably want the unsettling and often chaotic effects of globalization to go away, it can only be dealt with, not reversed. The system in which we live and work is no longer closed. There are few contexts not connected to the dynamics of some aspect of the extended economic and social systems resulting from globalization. This means the wide ranging and incompatible variables of a global economic, human rights, and social fairness system are resulting in conflicts and unanticipated interpenetrations that no one fully understands, anticipates, or controls. n64 Local [\*622] self-sufficiency is the loser in this process. It can remain a nostalgic dream but rarely a reality. Except for isolated cultures and niche activities, there is very little chance that anyone will be unaffected by this transformational process. Change is the constant, and it will take several generations before we return to a period of relative stasis. Even then it will only be a respite before the pattern once again intensifies.

### AT Eliminate Cars

#### Transition wars

Monbiot, 9

George Monbiot, The Guardian, 2009, Is there any point in fighting to stave off industrial apocalypse?, [www.guardian.co.uk/commentisfree/cif-green/2009/aug/17/environment-climate-change](http://www.guardian.co.uk/commentisfree/cif-green/2009/aug/17/environment-climate-change)

I detect in your writings, and in the conversations we have had, an attraction towards – almost a yearning for – this apocalypse, a sense that you see it as a cleansing fire that will rid the world of a diseased society. If this is your view, I do not share it. I'm sure we can agree that the immediate consequences of collapse would be hideous: the breakdown of the systems that keep most of us alive; mass starvation; war. These alone surely give us sufficient reason to fight on, however faint our chances appear. But even if we were somehow able to put this out of our minds, I believe that what is likely to come out on the other side will be worse than our current settlement.Here are three observations: 1 Our species (unlike most of its members) is tough and resilient; 2 When civilisations collapse, psychopaths take over; 3 We seldom learn from others' mistakes. From the first observation, this follows: even if you are hardened to the fate of humans, you can surely see that our species will not become extinct without causing the extinction of almost all others. However hard we fall, we will recover sufficiently to land another hammer blow on the biosphere. We will continue to do so until there is so little left that even Homo sapiens can no longer survive. This is the ecological destiny of a species possessed of outstanding intelligence, opposable thumbs and an ability to interpret and exploit almost every possible resource – in the absence of political restraint. From the second and third observations, this follows: instead of gathering as free collectives of happy householders, survivors of this collapse will be subject to the will of people seeking to monopolise remaining resources. This will is likely to be imposed through violence. Political accountability will be a distant memory. The chances of conserving any resource in these circumstances are approximately zero. The human and ecological consequences of the first global collapse are likely to persist for many generations, perhaps for our species' remaining time on earth. To imagine that good could come of the involuntary failure of industrial civilisation is also to succumb to denial. The answer to your question – what will we learn from this collapse? – is nothing.

# Octos v UMKC AG

## 1AC

Same as UTD 1AC

## 2AC

**The alt results in more securitization and intervention**

Tara **McCormack, 2010**, 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 states,** 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**.

**Prefer specific scenarios – even if we invoke some security logic, the fact that others will securitize means that we have to make worst-case assessments to avoid escalation**

Ole **Waever**, Senior Research Fellow – Copenhagen Peace Research Inst., **2K**

(I. R. Theory & the Politics of European Integration, ed Kelstrup/Williams p. 282-285)

The other main possibility is to stress responsibility. Particularly **in a field like security one has to make choices and deal with the challenges and risks that one confronts** – and not shy away into long-range or principled transformations. The meta-political line risks (despite the theoretical commitment to the concrete other) implying that politics can be contained within large ‘systemic’ questions. In line with the classical revolutionary tradition, after the change (now no longer the revolution but the meta-physical transformation), there will be no more problems whereas in our situation (until the change) we should not deal with the ‘small questions’ of politics, only with the large one (cf. Rorty 1996). However, the ethical demand in post-structuralism (e.g. Derrida’s ‘justice’) is of a kind that can never be instantiated in any concrete political order – it is an experience of the undecidable that exceeds any concrete solution and re-inserts politics. Therefore, politics can never be reduced to meta-questions; there is no way to erase the small, particular, banal conflicts and controversies. In contrast to the quasi-institutionalist formula of radical democracy which one finds in the ‘opening’ oriented version of deconstruction, we could with Derrida stress the singularity of the event. To take a position, take part, and ‘produce events’ (Derrida 1994: 89) means to get involved in specific struggles. Politics takes place ‘in the singular event of engagement’ (Derrida 1996: 83). Derrida’s politics is focused on the calls that demand response/responsibility in words like justice, Europe and emancipation. Should we treat security in this manner? No, security is not that kind of call. ‘Security’ is not a way to open (or keep open) an ethical horizon. **Security** is a much more situational concept oriented to the handling of specifics. It **belongs to the sphere of how to handle challenges – and avoid ‘the worst’** (Derrida 1991). Here enters again the possible pessimism hich for the security analyst might be occupational or structural. The infinitude of responsibility (Derrida 1996: 86) or the tragic nature of politics (Morgenthau 1946, Chapter 7) means that one can never feel reassured that by some ‘good deed’, ‘I have assumed my responsibilities’ (Derrida 1996: 86). If I conduct myself particularly well with regard to someone, I know that it is to the detriment of an other; of one nation to the detriment of another nation, of one family to the detriment of another family, of my friends to the detriment of other friends or non-friends, etc. This is the infinitude that inscribes itself within responsibility; otherwise there would be no ethical problems or decisions. (ibid.; and parallel argumentation in Morgenthau 1946; Chapters 6 and 7) Because of this there will remain conflicts and risks – and the question of how to handle them. Should developments be securitized (and if so, in what terms)? Often our reply will be to aim for de-securitization and then politics meet meta-politics; but **occasionally** the underlying **pessimism** regarding the prospects for orderliness and compatibility among human aspirations **will point to** **scenarios sufficiently worrisome that** **responsibility will entail securitization in order to block the worst. As a security/securitization analyst, this means accepting the task of trying to manage and avoid spirals and accelerating security concerns, to try to assist in shaping the continent in a way that creates the least insecurity and violence – even if this occasionally means invoking/producing ‘structures’ or even using the dubious instrument of securitization**. In the case of current European configuration, the above analysis suggests the use of securitization at the level of European scenarios with the aim of preempting and avoiding numerous instances of local securitization that could lead to security dilemmas and escalations, violence and mutual vilification.

**Threats are not socially constructed- decision makers use the most objective, rational, and accurate assessments possible- there are no bureaucratic or ideological motivations to invent threats.**

**Ravenal ‘9**

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Quite expectedly, the more doctrinaire of the non-interventionists take pains to deny any straightforward, and therefore legitimate, security motive in American foreign and military policy. In fact, this denial leads to a more sweeping rejection of any recognizably rational basis for American foreign policy, and, even, sometimes (among the more theoretical of the non-interventionists), a preference for non-rational accounts, or “models,” of virtually any nation’s foreign policy-making.4 One could call this tendency among anti-imperialists “motive displacement.” More specifically, in the cases under review here, one notes a receptivity to any reworking of history, and any current analysis of geopolitics, that denigrates “the threat”; and, along with this, a positing of “imperialism” (the almost self-referential and primitive impulse) as a sufficient explanation for the often strenuous and risky actions of great powers such as the United States. Thus, not only is “empire” taken to be a sufficient and, in some cases, a necessary condition in bringing about foreign “threats”; but, by minimizing the extent and seriousness of these threats, the anti-imperialists put themselves into the position of lacking a rational explanation for the derivation of the (pointless at best, counter-productive at worst) policies that they designate as imperialistic. A pungent example of this threat denigration and motive displacement is Eland’s account of American intervention in the Korean and Vietnam wars:¶ After North Korea invaded, the Truman administration intervened merely for the purpose of a demonstration to friends and foes alike. Likewise, according to eminent cold war historians, the United States did not inter- vene in Vietnam because it feared communism, which was fragmented, or the Soviet Union, which wanted détente with the West, or China, which was weak, but because it did not want to appear timid to the world. The behavior of the United States in both Korea and Vietnam is typical of imperial powers, which are always concerned about their reputation, pres- tige, and perceived resolve. (Eland 2004, 64)¶ Of course, the motive of “reputation,” to the extent that it exists in any particular instance, is a part of the complex of motives that characterize a great power that is drawn toward the role of hegemon (not the same thing as “empire”). Reputation is also a component of the power projec- tion that is designed to serve the interest of national security. Rummaging through the concomitants of “imperialism,” Eland (2004, 65) discovers the thesis of “threat inflation” (in this case, virtual threat invention): Obviously, much higher spending for the military, homeland security, and foreign aid are required for a policy of global intervention than for a policy of merely defending the republic. For example, after the cold war, the security bureaucracies began looking for new enemies to justify keeping defense and intelligence budgets high. Similarly, Eland (ibid., 183), in a section entitled “Imperial Wars Spike Corporate Welfare,” attributes a large portion of the U.S. defense budget—particularly the procurement of major weapons systems, such as “Virginia-class submarines . . . aircraft carriers . . . F-22 fighters . . . [and] Osprey tilt-rotor transport aircraft”—not to the systemically derived requirement for certain kinds of military capabilities, but, rather, to the imperatives of corporate pork. He opines that such weapons have no stra- tegic or operational justification; that “the American empire, militarily more dominant than any empire in world history, can fight brushfire wars against terrorists and their ‘rogue’ state sponsors without those gold- plated white elephants.”¶ The underlying notion of “the security bureaucracies . . . looking for new enemies” is a threadbare concept that has somehow taken hold across the political spectrum, from the radical left (viz. Michael Klare [1981], who refers to a “threat bank”), to the liberal center (viz. Robert H. Johnson [1997], who dismisses most alleged “threats” as “improbable dangers”), to libertarians (viz. Ted Galen Carpenter [1992], Vice President for Foreign and Defense Policy of the Cato Institute, who wrote a book entitled A Search for Enemies). What is missing from most analysts’ claims of “threat inflation,” however, is a convincing theory of why, say, the American government significantly (not merely in excusable rhetoric) might magnify and even invent threats (and, more seriously, act on such inflated threat estimates). In a few places, Eland (2004, 185) suggests that such behavior might stem from military or national security bureaucrats’ attempts to enhance their personal status and organizational budgets, or even from the influence and dominance of “the military-industrial complex”; viz.: “Maintaining the empire and retaliating for the blowback from that empire keeps what President Eisenhower called the military-industrial complex fat and happy.” Or, in the same section:¶ In the nation’s capital, vested interests, such as the law enforcement bureaucracies . . . routinely take advantage of “crises”to satisfy parochial desires. Similarly, many corporations use crises to get pet projects— a.k.a. pork—funded by the government. And national security crises, because of people’s fears, are especially ripe opportunities to grab largesse. (Ibid., 182)¶ Thus, “bureaucratic-politics” theory, which once made several reputa- tions (such as those of Richard Neustadt, Morton Halperin, and Graham Allison) in defense-intellectual circles, and spawned an entire sub-industry within the field of international relations,5 is put into the service of dismissing putative security threats as imaginary. So, too, can a surprisingly cognate theory, “public choice,”6 which can be considered the right-wing analog of the “bureaucratic-politics” model, and is a preferred interpretation of governmental decision- making among libertarian observers. As Eland (2004, 203) summarizes:¶ Public-choice theory argues [that] the government itself can develop sepa- rate interests from its citizens. The government reflects the interests of powerful pressure groups and the interests of the bureaucracies and the bureaucrats in them. Although this problem occurs in both foreign and domestic policy, it may be more severe in foreign policy because citizens pay less attention to policies that affect them less directly.¶ There is, in this statement of public-choice theory, a certain ambiguity, and a certain degree of contradiction: Bureaucrats are supposedly, at the same time, subservient to societal interest groups and autonomous from society in general.¶ This journal has pioneered the argument that state autonomy is a likely consequence of the public’s ignorance of most areas of state activity (e.g., Somin 1998; DeCanio 2000a, 2000b, 2006, 2007; Ravenal 2000a). But state autonomy does not necessarily mean that bureaucrats substitute their own interests for those of what could be called the “national society” that they ostensibly serve. I have argued (Ravenal 2000a) that, precisely because of the public-ignorance and elite-expertise factors, and especially because the opportunities—at least for bureaucrats (a few notable post-government lobbyist cases nonwithstanding)—for lucrative self-dealing are stringently fewer in the defense and diplomatic areas of government than they are in some of the contract-dispensing and more under-the-radar-screen agencies of government, the “public-choice” imputation of self-dealing, rather than working toward the national interest (which, however may not be synonymous with the interests, perceived or expressed, of citizens!) is less likely to hold. In short, state autonomy is likely to mean, in the derivation of foreign policy, that “state elites” are using rational judgment, in insulation from self-promoting interest groups—about what strategies, forces, and weapons are required for national defense.¶ Ironically, “public choice”—not even a species of economics, but rather a kind of political interpretation—is not even about “public” choice, since, like the bureaucratic-politics model, it repudiates the very notion that bureaucrats make truly “public” choices; rather, they are held, axiomatically, to exhibit “rent-seeking” behavior, wherein they abuse their public positions in order to amass private gains, or at least to build personal empires within their ostensibly official niches. Such sub- rational models actually explain very little of what they purport to observe. Of course, there is some truth in them, regarding the “behavior” of some people, at some times, in some circumstances, under some conditions of incentive and motivation. But the factors that they posit operate mostly as constraints on the otherwise rational optimization of objectives that, if for no other reason than the playing out of official roles, transcends merely personal or parochial imperatives.¶ My treatment of “role” differs from that of the bureaucratic-politics theorists, whose model of the derivation of foreign policy depends heavily, and acknowledgedly, on a narrow and specific identification of the role- playing of organizationally situated individuals in a partly conflictual “pulling and hauling” process that “results in” some policy outcome. Even here, bureaucratic-politics theorists Graham Allison and Philip Zelikow (1999, 311) allow that “some players are not able to articulate [sic] the governmental politics game because their conception of their job does not legitimate such activity.” This is a crucial admission, and one that points— empirically—to the need for a broader and generic treatment of role.¶ Roles (all theorists state) give rise to “expectations” of performance. My point is that virtually every governmental role, and especially national-security roles, and particularly the roles of the uniformed mili- tary, embody expectations of devotion to the “national interest”; rational- ity in the derivation of policy at every functional level; and objectivity in the treatment of parameters, especially external parameters such as “threats” and the power and capabilities of other nations.¶ Sub-rational models (such as “public choice”) fail to take into account even a partial dedication to the “national” interest (or even the possibility that the national interest may be honestly misconceived in more paro- chial terms). In contrast, an official’s role connects the individual to the (state-level) process, and moderates the (perhaps otherwise) self-seeking impulses of the individual. Role-derived behavior tends to be formalized and codified; relatively transparent and at least peer-reviewed, so as to be consistent with expectations; surviving the particular individual and trans- mitted to successors and ancillaries; measured against a standard and thus corrigible; defined in terms of the performed function and therefore derived from the state function; and uncorrrupt, because personal cheating and even egregious aggrandizement are conspicuously discouraged.¶ My own direct observation suggests that defense decision-makers attempt to “frame” the structure of the problems that they try to solve on the basis of the most accurate intelligence. They make it their business to know where the threats come from. Thus, threats are not “socially constructed” (even though, of course, some values are).¶ A major reason for the rationality, and the objectivity, of the process is that much security planning is done, not in vaguely undefined circum- stances that offer scope for idiosyncratic, subjective behavior, but rather in structured and reviewed organizational frameworks. Non-rationalities (which are bad for understanding and prediction) tend to get filtered out. People are fired for presenting skewed analysis and for making bad predictions. This is because something important is riding on the causal analysis and the contingent prediction. For these reasons, “public choice” does not have the “feel” of reality to many critics who have participated in the structure of defense decision-making. In that structure, obvious, and even not-so-obvious, “rent-seeking” would not only be shameful; it would present a severe risk of career termination. And, as mentioned, the defense bureaucracy is hardly a productive place for truly talented rent-seekers to operate, compared to opportunities for personal profit in the commercial world. A bureaucrat’s very self-placement in these reaches of government testifies either to a sincere commitment to the national interest or to a lack of sufficient imagination to exploit opportunities for personal profit.

**Positivism is the best approach to IR research – the alternative is epistemological anarchy and dangerous relativism**

Vernon **Brown, 2011**. Cardiff U, “The Reflectivist Critique of Positivist IR Theory”, http://www.e-ir.info/?p=7328)

**There is a great deal of support for the positivist approach in IR** **despite** the **critiques** presented above. As the survey by Maliniak et al. showed, seventy percent of American IR scholars still consider themselves as positivists with a number of the rest not yet reflectivist. This is significant as the United States is still considered to be the major force in IR scholarship**. There are many reasons for this continued success of positivism in IR, the majority of which have to do with either the continued reliance on empirical methods or the failure of many reflectivists, especially the post-modernists, to offer any suggestions to fill the epistemological void left by their passing**. David Houghton (2008, p.118) addresses both of these by writing that **despite their critique, reflectivists continue to use empirical, observational methods and that it is not possible to be anything but positivist because**, as he writes, ‘**truth claims about the world have to come from somewhere’**. He also suggests that **reflectivists are essentially engaging in what can only be perceived as a negative exercise since by continually deconstructing theories one will eventually be left with nothing that is considered a legitimate theory.** Another issue raised in response to the reflectivist critique focuses on the pluralism which scholars have called for in the face of epistemological relativism. Lapid (1989, p.249) warns that such **pluralism, ‘If adopted uncritically or taken to its logical conclusion, [can] deteriorate into a condition of epistemological anarchy under which almost any position can legitimately claim equal hearing’, and that in such a state it would become nearly impossible to distinguish theoretical proliferation from theoretical growth. Positivism defends itself by claiming that scholarship is inherently observational, therefore empirical, and that if reflectivism is followed to its logical endpoint there would be no legitimate theories left because they would have been either deconstructed or created without a means of testing their legitimacy**. Conclusion: The critique of positivism by the reflectivists is fundamentally an epistemological one. Each side can and does make compelling arguments showing the strength of their position. While it is important to acknowledge the positivists’ attempts to ground the discipline in a naturalist, scientific area there is still the obvious fact that the assumptions on which their epistemology is based are too easily deconstructed when they attempt to explain phenomena and make predictions in the socially constructed world which IR purports to study. As Milja Kurki (2009, p.442) suggests, positivism fails to acknowledge the possibility that all theories are at some level ‘politically and socially contextualized’. This creates the possibility for positivist theories to create predictions that are fundamentally flawed as they have failed to take into account the context within which their facts are constructed. This in turn allows the reflectivist theorists to deconstruct the predictions due to misunderstandings that arise from the lack of context in the positivists’ predictions**. The question of what positivism has to say in a socially constructed and interpreted world is still an important one, however, since the study of IR is still in many ways observational and therefore empirical. There is also the valid claim that in the face of the possible anarchical pluralism or lack of legitimate theories left by reflectivist critiques there needs to be some sense of scientific and theoretical grounding, and that positivism provides that very thing.** In the end, **reflectivism performs a valuable service in widening the range of legitimate research that is possible by IR scholars and allowing such research to take into account the understanding that the issues studied are birthed by social conventions. There still must be**, however, **some framework within this study to prevent the anarchy that could follow in the wake of reflectivism and while positivism is in no ways perfect, or even close to it, it still provides such a framework that if made to be self-reflective and continually evolving, could provide the stability needed**.

**It is better to overestimate terrorist threats**

Rahim **Kanani** **2011**. founder and editor-in-chief of World Affairs Commentary, Citing Rolf Mowatt-Larssen, Senior Fellow, Belfer Center for Science and International Affairs, John F. Kennedy School of Government, Harvard University, former Director of the Office of Intelligence and Counterintelligence, U.S. Department of Energy, former Chief of the Weapons of Mass Destruction Department, Counter-terrorist Center, Central Intelligence Agency, recipient of the CIA Director’s Award, graduate of the U.S. Military Academy, June 29th, “New al-Qaeda Chief Zawahiri Has Strong Nuclear Intent”, Forbes, http://blogs.forbes.com/rahimkanani/2011/06/29/new-al-qaeda-chief-zawahiri-has-strong-nuclear-intent/)

**We should be especially worried about the threat of nuclear terrorism under Zawahiri’s leadership**. In a recent report titled “Islam and the Bomb: Religious Justification For and Against Nuclear Weapons”, which I researched for and contributed to, lead author Rolf Mowatt-Larssen, former director of intelligence and counterintelligence at the U.S. Department of Energy, argues that al-Qaeda’s WMD ambitions are stronger than ever. And that “this intent no longer feels theoretical, but operational.” “I believe al-Qaeda is laying the groundwork for a large scale attack on the United States, possibly in the next year or two,” continues Mowatt-Larssen in the opening of the report issued earlier this year by the Belfer Center for Science and International Affairs at Harvard Kennedy School. “**The attack may or may not involve the use of WMD, but there are signs that al-Qaeda is working on an event on a larger scale than the 9/11 attack.**” Most will readily dismiss such claims as implausible and unlikely, and we hope they are right, but after spending months with Mowatt-Larssen, who also served as the former head of the Central Intelligence Agency’s WMD and terrorism efforts, scrutinizing and cross-referencing Zawahiri’s 268-page treatise published in 2008 titled “Exoneration”, the analytics steered us towards something far more remarkable than expected. “As I read the text closely, in the broader context of al-Qaeda’s past, my concerns grew that Zawahiri has written this treatise to play a part in the ritualistic process of preparing for an impending attack,” states Mowatt-Larssen. “As Osama bin Laden’s fatwa in 1998 foreshadowed the 9/11 attack, **Ayman Zawahiri’s fatwa in 2008 may have started the clock ticking for al-Qaeda’s next large scale strike on America. If the pattern of al-Qaeda’s modus operandi holds true, we are in the middle of an attack cycle.”** Among several important findings, Zawahiri sophisticatedly weaves identical passages, sources and religious justifications for a nuclear terrorist attack against the United States previously penned by radical Saudi cleric Nasir al Fahd. Indeed, the language used, research cited, and arguments put forth are nothing short of detailed and deliberate. Reading as both a religious duty to kill millions of Americans and a lengthy suicide note together, this piece of literature is something we must take seriously with Zawahiri now at the helm of al-Qaeda. **The time may have come for al-Qaeda’s new CEO to leave a legacy of his own.** Concluding the author’s note, Mowatt-Larssen states, “**Even if this theory proves to be wrong, it is better to overestimate the enemy than to under­estimate him. Conventional wisdom holds that al-Qaeda is spent—that they are incapable of carrying out another 9/11**. Leaving aside whether this view is correct, for which I harbor grave doubts, **we will surely miss the signs of the next attack if we continue to overestimate our own successes, and dismiss what terrorists remain capable of accomplishing when they put their minds to it.”**

**Violence is inevitable but escalation isn’t. Knowing our friends and enemies allows wars to be controlled – attempting to erase dichotomies homogenizes the Other**

**Rasch 3** (Cultural Critique 54 (2003) 137-41, William Rasch is the Henry H. H. Remak Professor of Germanic Studies at Indiana University, Human Rights as Geopolitics  Carl Schmitt and the Legal Form of American Supremacy).NAR

**In the past, we/they, neighbor/foreigner, friend/enemy polarities were** inside/outside **distinctions that produced a plurality of worlds**, **separated by physical and cultural borders**. **When these worlds collided, it was not** always **a pretty picture, but** it was often possible to maintain the integrity of the we/they distinction, even to regulate it by distinguishing between domestic and foreign affairs. **If "they" differed, "we" did not always feel ourselves obliged to make "them" into miniature versions of "us,"** to Christianize them, to civilize them, to make of them good liberals. **Things have changed**. With a single-power global hegemony that is guided by a universalist ideology, **all relations have become,** or threaten to become, **domestic.** The inner/outer distinction has been transformed into a morally and legally determined acceptable/unacceptable one, and the power exists (or is thought to exist), both spiritually and physically, to eliminate the unacceptable once and for all and make believers of everyone. **The new imperative states: the other shall be included**. Delivered as a promise, it can only be received, by some, as an ominous threat. In his The Conquest of America, Tzvetan Todorov approaches our relationship to the "other" by way of three interlocking distinctions, namely, self/other, same/different, and equal/unequal. A simple superposition of all three distinctions makes of the other someone who is different and therefore unequal. The problem we have been discussing, however, comes to light when we make of the other someone who is equal because he is essentially the same. **This form of the universalist ideology is assimilationist. It denies the other by embracing him**. Of the famous sixteenth-century defender of the Indians, Bartolomé de Las Casas, Todorov writes, [his] declaration of the equality of men is made in the name of a specific religion, Christianity.... Hence**, there is a potential danger of seeing** not only the Indians' human nature asserted but also their Christian "nature." "**The natural laws and rules and rights of men**," Las Casas said; but **who decides what is natural** with regard to laws and rights? **Is it not specifically the Christian religion**? **Since Christianity is universalist**, it implies an essential non-difference on the part of all men. We see the danger of the identification in this text of Saint John Chrysostrom, quoted and defended at Valladolid: "Just as there is no natural difference in the creation of man, so there is no difference in the call to salvation of all men, barbarous or wise, since God's grace can correct the minds of barbarians, so that they have a reasonable understanding."12 Once again **we see that the term "human" is not descriptive, but evaluative**. **To be truly human, one needs to be corrected**. Regarding the relationship of difference and equality, Todorov concludes, "If it is [End Page 139] incontestable that the prejudice of superiority is an obstacle in the road to knowledge, we must also admit that the prejudice of equality is a still greater one, for it consists in identifying the other purely and simply with one's own 'ego ideal' (or with oneself)" (1984, 165). **Such identification is** not only the essence of Christianity, but also of **the doctrine of human rights** preached by enthusiasts like Habermas and Rawls. And such identification means that the other is stripped of his otherness and made to conform to the universal ideal of what it means to be human. And yet, despite—indeed, because of—the all-encompassing embrace, the detested other is never allowed to leave the stage altogether. Even as we seem on the verge of actualizing Kant's dream, as Habermas puts it, of "a cosmopolitan order" that unites all peoples and abolishes war under the auspices of "the states of the First World" who "can afford to harmonize their national interests to a certain extent with the norms that define the halfhearted cosmopolitan aspirations of the UN" (1998, 165, 184), it is still fascinating to see how the barbarians make their functionally necessary presence felt. John Rawls, in his The Law of Peoples (1999), conveniently divides the world into well-ordered peoples and those who are not well ordered. Among the former are the "reasonable liberal peoples" and the "decent hierarchical peoples" (4). Opposed to them are the "outlaw states" and other "burdened" peoples who are not worthy of respect. Liberal **peoples, who, by virtue of their history, possess superior institutions, culture, and moral character** (23-25), have not only the right to deny non-well-ordered peoples respect, but the duty to extend what Vitoria called "brotherly correction" and Habermas "gentle compulsion" (Habermas 1997, 133). 13 That is, Rawls believes that **the "refusal to tolerate" those states deemed to be outlaw states "is a consequence of liberalism** and decency." **Why? Because outlaw states violate human rights**. **What are human rights?** "What I call human rights," Rawls states, "are ... a proper subset of the rights possessed by citizens in a liberal constitutional democratic regime, or of the rights of the members of a decent hierarchical society" (Rawls 1999, 81). Because of their violation of these liberal rights, **nonliberal, nondecent societies do not even have the right "to protest their condemnation by the world society**" (38), and decent peoples have the right, if necessary, to wage just wars against them. Thus, **liberal societies** are not merely contingently established and historically conditioned forms of organization; they **become the universal standard against which other societies are judged**. **Those found wanting are banished, as outlaws, from the civilized world.** Ironically, **one of the signs of their outlaw status is their insistence on autonomy, on sovereignty.**

**Economic rationality is ethical and solves war – self-interest motivates individuals to sacrifice some autonomy to produce security and protect the rights of others**

**Aasland ‘9**

(Dag, Prof. of Economics @ U of Agder, Norway, Ethics and Economy: After Levinas, pgs. 65-66)

Business ethics, in the sense of ethics *for* business, illustrates this: its perspective is that of an ‘enlightened self-interest’ where the constraints that are put on the individual, thanks to the ability to see the unfortunate consequences for oneself, postpone the ‘war’, in a direct or metaphoric sense of the word (*ibid.*: 70-71). This enlightened self-interest forms the base not only of the market economy, but also of a social organization and manifestation of human rights, and even of some ethical theories. It is a calculated and voluntary renunciation of one’s own freedom in order to obtain in return security and other common goals (*ibid.*: 72). The fact that economic, political and legal theories appeal to enlightened self-interest does not imply, however, that we should discard them. Nor should we reject proclamations of human rights, legal constraints of individual freedom and, for that matter, business ethics, even if they are based on an enlightened self-interest. It is rather the opposite: such institutions and knowledge are indispensable because the primary quality of the enlightened self-interest is that it restricts egocentricity. Our *practical reason* (which was Kant’s words for the reason that governs our acts, where the moral law is embedded as a principle) includes the knowledge that it can be rational to lay certain restrictions on individual freedom. In this way practical reason may postpone (for an indefinite time) violence and murder among people. This has primarily been the raison-d’être of politics and the state, but it is today taken over more and more by corporate organizations, as expressed in the new term for business ethics, as *corporate social responsibility* and *corporate citizenship* (see chapter 2). Thanks to this ‘postponement of violence’ provided by politics and economic rationality, people may unfold their freedom within the laws and regulations set up by society (Burggraeve, 2003: 77).

**Economic methodology is key to accurate predicitons**

**Beabout 8 –** Gregory R. Beabout 2008 is an adjunct fellow of the Center for Economic Personalism and Associate Professor of Philosophy at Saint Louis University Challenges to Using the Principle of Subsidiarity for Environmental Policy; 5 U. St. Thomas L.J. 210 (2008)

**Economics offers many insights into how the world around us works, much more than would be possible to summarize even in a full-length law review** article with many footnotes.5 From among those many insights, I have selected three "propositions" that demonstrate the fundamental points that economics is necessary, but not sufficient, to address environmental issues and that economics is necessary, but not sufficient, to reconcile the obligations of faith toward the poor and the need to protect the environment.¶ **By "propositions" I mean fundamental truths about human behavior and the natural world that we ignore at our peril, truths as basic as the laws of gravity** or humanity's susceptibility to sin. **We can write statutes or regulations that ignore these-and Congress, legislatures, and regulators** the world over **frequently do-but such measures risk the same fatal results as bridges built without accounting for gravity.** These propositions I will offer are economic "theory," but they are theory in the sense that the laws of gravity are a theory and are founded upon **economic insights span**ning **hundreds of years of careful analyses, testing of hypotheses, and rigorous debates. That does not mean all economists agree on all policy implications or that every prediction by an economist comes true. It does mean that the core principles of the discipline are not mere matters of opinion** and that economics is not a "point of view" to be accorded equal weight with folk tales or political preferences. **All theories of how the world works are not equal -some work better than others and the ones that work deserve greater weight in policy debates** than the ones that do not. **Economics' great strength is that it is a concise and powerful theory that explains the world remarkably well. Those who ignore its insights are doomed to fail.**¶

Science fiction author Robert Heinlein coined the phrase "TANSTAAFL" as a shorthand way of saying "There Ain't No Such Thing As A Free Lunch" in his classic 1966 science fiction novel The Moon is a Harsh Mistress, in which he described a revolution by residents of lunar colonies against oppressive governments on Earth in 2076.6 Heinlein had the revolutionaries emblazon TANSTAAFL on their flag and wove the principle through the free lunar society he imagined-a place where even air cost people money.¶ "No free lunch" means that **everything costs something**. Everything. No exceptions. At a minimum, **if I spend my time doing one activity, I cannot spend that time doing something else. Economists refer to the idea that resources devoted to one activity are unavailable for other activities as "opportunity cost**." If we do X, we cannot use those resources to do Y. **The failure to recognize that there is an opportunity cost to committing resources** to any given use **can have disastrous consequences because when we do not recognize** that **our actions have costs we cannot intelligently consider our alternatives**. And **if we cannot assess the costs and benefits of our alternatives, we cannot make reasoned choices among them**.7 In short, **tradeoffs matter, and we need to pay attention to them**.

**The alt causes backlash and transition wars**

**Anderson 1984.** professor of sociology – UCLA, ’84 (Perry, In the tracks of historical materialism, p. 102-103)

That background also indicates, however, what is essentially missing from his work. How are we to get from where we are today to where he point us to tomorrow? There is no answer to this question in Nove. His halting discussion of “transition” tails away into apprehensive admonitions to moderation to the British Labor Party, and pleas for proper compensation to capitalist owners of major industries, if these are to be nationalized. Nowhere is there any sense of what a titanic political change would have to occur, with what fierceness of social struggle, for the economic model of socialism he advocates ever to materialize. Between the radicalism of the future end-state he envisages, and the conservatism of the present measures he is prepared to countenance, there is an unbridgeable abyss. How could private ownership of the means of production ever be abolished by policies less disrespectful of capital than those of Allende or a Benn, which he reproves? What has disappeared from the pages of The Economics of Feasible Socialism is virtually all attention to the historical dynamics of any serious conflict over the control of the means of production, as **the record of the 20th century demonstrates** them. **If capital could visit such destruction on even so poor and small an outlying province of its empire in Vietnam, to prevent its loss, is it likely that it would suffer its extinction meekly in its own homeland? The lessons of the past sixty-five years or so are in this respect without ambiguity or exception, there is no case, from Russia to China, from Vietnam to Cuba, from Chile to Nicaragua, where the existence of capitalism has been challenged, and the furies of intervention, blockade and civil strife have not descended in response. Any viable transition to socialism in the West must seek to curtail that pattern: but to shrink from or to ignore it is to depart from the world of the possible altogether**. In the same way, **to construct an economic model of socialism in one advanced country is a legitimate exercise: but to extract it from any computable relationship with a surrounding, and necessarily opposing, capitalist environment—as this work does—is to locate it in thin air**.

**That causes extinction**

**Kothari 1982**

Kothari, profrssor of political science – University of Delhi, ‘82

(Rajni, Towards a Just Social Order, Alternatives, p. 571)

**Attempts at global economic reform could also lead to a world racked by increasing turbulence, a greater sense of insecurity among the major centres of power -- and hence to a further tightening of the structures of domination** and domestic repression – **producing** in their wake **an intensification of** the old **arms race and militarization of regimes, encouraging** regional **conflagrations and setting the stage for eventual global holocaust**.

**Environmental harm is best prevented by capitalism—alternative systems cause greater destruction**

**Wilson**, Professor of Government Harvard University, **97**

<James The Fourteenth Annual John Bonython Lecture, “The Morality of Capitalism,” October 15, http://www.cis.org.au/Events/JBL/JBL97.htm>

Third, the environment. Environmental harm does exist, and technology is linked in important ways with producing this harm. But that harm is not disproportionately the result of capitalist activities. We know this, because when we tore down the Berlin wall in the early years of this decade, and peeked over that wall to see what lay behind it in a socialist state, we found a vast environmental toxic waste dump. In Eastern Europe and the former Soviet Union, govern-ments had used their resources mindlessly and deposited the refuse egregiously all about the landscape. Václav Havel explained why: a government that commands the economy will inevitably command the polity; given a commanding position it will distort or destroy the former and corrupt or oppress the latter. And though environmental risks are a problem for capitalist societies, those prob-lems are not nearly as great as they were in state controlled societies.

**Scenario planning solves their impacts**

Tom **Flaherty, et al.** Michael Bagale, Christopher Dann, Owen Ward, Partners at Booz & Co. Global Management Consulting, 8/7/20**12** (http://www.booz.com/media/uploads/BoozCo\_After-Fukushima-Nuclear-Power.pdf)

It is still not fully clear how the new NRC recommendations will affect the U.S. nuclear fleet. One thing is certain, however: The way the industry has historically evaluated risk will have to change. In particular, the assessment of low-probability, high-consequence risks, such as events that trigger worst-case accident conditions, will need to be revisited. Owner resiliency and responsiveness will need to increase. Probabilistic risk assessment, common in the industry since the 1979 accident at Three Mile Island in Pennsylvania, will assume an even greater role in ensuring **nuclear** safety in the future. Operators will have to develop enhanced risk analysis methodologies that can adequately address not only the full range of “traditional” postulated design-basis accident scenarios, but also the much more improbable black swan events. Finally, investment decisions will need to evolve to reflect this new risk environment. The greatest degree of regulatory uncertainty surrounds the interpretation of the first recommendation of the NRC’s Near-Term Task Force, which the commission’s staff will consider over the next year. Its goal is to incorporate “beyond design basis” requirements within the definition of what is required to provide “adequate protection”: balancing considerations of defense and risk, without taking cost into account as a deterrent to action. The task force has pointed out that this move is analogous to regulatory changes enacted following the September 11, 2001, terrorist attacks. But it is potentially more far-reaching, given the wide range of possible black swan scenarios. Indeed, it is likely that the broadening of the underlying principle of adequate protection will markedly reshape the regulatory environment. Traditional risk management approaches rely on estimating the likely consequences of potential events; they are not well suited for dealing with extremely lowprobability, high-consequence risks. Black swan risks challenge the traditional approach because even when the events are anticipated, their impact falls outside the expected range of predictability. In the case of the tragic events in northeast Japan in March 2011, the black swan was not the earthquake and tsunami, which were foreseeable, but their sheer size. Another earthquake, the one that struck the East Coast of the U.S. in August 2011, was significantly stronger than what was thought possible in the region. The terrorist attacks on 9/11 represented another black swan event, not because terrorist attacks had never happened on U.S. soil—they had—but because of their scale, their means, and their enormous impact. The U.S. nuclear industry must enhance its risk management capabilities in two ways. First, it must strengthen existing risk assessment methodologies to address extremely low-probability, high-consequence risks. This will involve improving existing processes and tools to identify potential risks from a much wider range of uncertainties than the industry has used in the past (see Exhibit 2). Traditional thinking about “known unknowns” must be expanded to include “unknown unknowns.” Scenario planning that includes situations that are themselves unimaginable can be a useful tool in expanding leaders’ range of thinking about identifying risks and assessing vulnerabilities. In these exercises, management is challenged to begin with the premise of an unforeseeable situation—like the apocryphal story of a wanderer in a desert who finds a Civil War battleship stuck in the sand there—and then to explore the potential vulnerabilities the situation may create. Often, when managers are required to construct a chain of causal events that could explain a seemingly inexplicable situation, a previously unthinkable scenario becomes plausible, even if still highly improbable. Another methodology used for expanding management’s thinking about the future involves wargaming and other simulations of real-world challenges; the games mimic the complexity of genuine events, in which seemingly rational interactions among players or actions can result in unanticipated outcomes. A deeper examination of the interdependencies and correlations among various risk factors can also help unearth additional exposures and potential systemic effects. Nuclear plant owners should be encouraged to build this risk identification capability in a **collaborative manner**. Utility peer groups, technical experts, and industry support entities should work together to develop analytical risk assessment tools and methodologies that individual plant owners and operators can use to quantify the probability and effect of plant-specific worst-case events. The techniques developed through this approach should be tailored to the culture and practices of the companies involved. They can also provide plant owners with best-in-class, cost-effective solutions to regulatory mandates, potentially streamlining the overall NRC review and concurrence cycle with respect to providing “reasonable assurance” regarding operating safety. The end goal of this next generation of risk management is to develop an industry-wide approach to defining and quantifying Fukushimalevel improbable events that will both satisfy any regulatory safety requirements and assuage public concerns, while being implementable and cost-effective. Since the concepts of reasonable assurance and adequate protection do not contemplate direct cost-benefit trade-offs, anything short of this goal may hurt the future of nuclear power.

**Life should be valued as apriori – it precedes the ability to value anything else**

Amien **Kacou. 2008**. WHY EVEN MIND? On The A Priori Value Of “Life”, Cosmos and History: The Journal of Natural and Social Philosophy, Vol 4, No 1-2 (2008) cosmosandhistory.org/index.php/journal/article/view/92/184

Furthermore, that manner of **finding things good** that is in pleasure **can certainly not exist in any world without consciousness (i.e., without “life,”** as we now understand the word)—slight analogies put aside. In fact, we can begin to develop a more sophisticated definition of the concept of “pleasure,” in the broadest possible sense of the word, as follows: it is the common psychological element in all psychological experience of goodness (be it in joy, admiration, or whatever else). In this sense, pleasure can always be pictured to “mediate” all awareness or perception or judgment of goodness: there is pleasure in all consciousness of things good; pleasure is the common element of all conscious satisfaction. In short, it is simply the very experience of liking things, or the liking of experience, in general. In this sense, **pleasure is, not only uniquely characteristic of life but also, the core expression of goodness in life—the most general sign or phenomenon for favorable conscious valuation**, in other words. This does not mean that “good” is absolutely synonymous with “pleasant”—what we value may well go beyond pleasure. (The fact that we value things needs not be reduced to the experience of liking things.) However, what we value beyond pleasure remains a matter of speculation or theory. Moreover, we note that a variety of things that may seem otherwise unrelated are correlated with pleasure—some more strongly than others. In other words, there are many things the experience of which we like. For example: the admiration of others; sex; or rock-paper-scissors. But, again, what they are is irrelevant in an inquiry on a priori value—what gives us pleasure is a matter for empirical investigation. Thus, we can see now that, in general, **something primitively valuable is attainable in living—that is, pleasure itself.** And it seems equally clear that we have a priori logical reason to pay attention to the world in any world where pleasure exists. Moreover, **we can now also articulate a foundation for a security interest in our life: since the good of pleasure can be found in living** (to the extent pleasure remains attainable),[17] **and only in living, therefore, a priori, life ought to be continuously (and indefinitely) pursued at least for the sake of preserving the possibility of finding that good.** However, this platitude about the value that can be found in life turns out to be, at this point, insufficient for our purposes. It seems to amount to very little more than recognizing that our subjective desire for life in and of itself shows that life has some objective value. For what difference is there between saying, “living is unique in benefiting something I value (namely, my pleasure); therefore, I should desire to go on living,” and saying, “I have a unique desire to go on living; therefore I should have a desire to go on living,” whereas the latter proposition immediately seems senseless? In other words, “life gives me pleasure,” says little more than, “I like life.” Thus, we seem to have arrived at the conclusion that **the fact that we already have some (subjective) desire for life shows life to have some (objective) value.** But, if that is the most we can say, then it seems our enterprise of justification was quite superficial, and the subjective/objective distinction was useless—for all we have really done is highlight the correspondence between value and desire. Perhaps, our inquiry should be a bit more complex.

**War fuels structural violence, not the other way around**

**Goldstein 2001**. IR professor at American University (Joshua, War and Gender, p. 412, Google Books)

First, peace activists face a dilemma in thinking about causes of war and working for peace. **Many peace scholars and activists support the approach, “if you want peace, work for justice.”** Then, if one believes that sexism contributes to war, one can work for gender justice specifically (perhaps. among others) in order to pursue peace. This approach brings strategic allies to the peace movement (women, labor, minorities), but rests on the assumption that injustices cause war. The evidence in this book suggests that **causality runs at least as strongly the other way. War is not a product of capitalism, imperialism, gender, innate aggression, or any other single cause, although all of these influence wars’ outbreaks and outcomes. Rather, war has in part fueled and sustained these and other injustices**.9 So, “if you want peace, work for peace.” Indeed, if you want justice (gender and others), work for peace. **Causality does not run just upward through the levels of analysis, from types of individuals, societies, and governments up to war. It runs downward too**. Enloe suggests that changes in attitudes towards war and the military may be the most important way to “reverse women’s oppression.” The dilemma is that peace work focused on justice brings to the peace movement energy, allies, and moral grounding, yet, in light of this book’s evidence, **the emphasis on injustice as the main cause of war seems to be empirically inadequate**.

**Managerialism is necessary to prevent global extinction –processes of environmental destruction are unstoppable without intervention**

**Levy 99**

Dr Neil Levy 1999. Fellow of the Centre for Applied Philosophy and Public Ethics at Charles Sturt University. “Discourses of the Environment” p. 215

**If the ‘technological fix’ is unlikely to be more successful than strategies of limitation of our uses of resources, we are nevertheless unable to simply leave the environment as it is. There is a real and pressing need for more, and more accurate, technical and scientific information about the non-human world**. For we are faced with a situation in which **the processes we have already set in train will continue to impact upon that world, and therefore us, for centuries. It is therefore necessary**, not only to stop cutting down the rain forests, but **to develop real, concrete proposals for action, to reverse, or at least limit, the effects of our previous interventions**. More over, there is another reason why **our behaviour towards the non-human cannot simply be a matter of leaving it as it is,** at least **in so far as our goals are not only environmental but also involve social justice**. For if we simply preserve what remains to us of wilderness, of the countryside and of park land, we also preserve patterns of very unequal access to their resources and their consolations (Soper 1995: 207). In fact, we risk exacerbating these inequalities. It is no us, but the poor of **Brazil**, who **will bear the brunt of the misery which would result form a strictly enforced policy of leaving the Amazonian rain forest untouched, in the absence of alternative means of providing for their livelihood.** **It is the development of policies to provide such ecologically sustainable alternative which we require, as well as the development of technical means for replacing our current greenhouse gas-emitting sources of energy. Such policies and proposals for concrete action must be formulated by** ecologists, environmentalist, **people with expertise concerning the functioning of ecosystems and the impacts which our actions have upon them. Such proposals are**, therefore, **very much the province for Foucault’s specific intellectual, the one who works ‘within specific sectors, at the precise points where their won conditions of life or work situate them**’ (Foucault 1980g: 126). For who could be more fittingly described as ‘the strategists of life and death’ than these environmentalists? After the end of the Cold War, it is in this sphere, more than any other, that man’s ‘politics places his existence as a living being in question’ (Foucault 1976: 143). For **it is in facing the consequences of our intervention in the non-human world that the fate of our species, and of those with whom we share this planet, will be decided.**

**Psychoanalysis is wrong**

**Studies disprove**

**Fraser**, political theorist at the New School, **1990** p. JStor

(Nancy, “The Uses and Abuses..” boundary 2)

This discussion shows, I think, that **there are many things wrong with Lacan**. I have focused here on conceptual as opposed to empirical issues, and I have not directly addressed the question, is Lacan’s theory true? With respect to *that* question, I will note only that Lacan himself was remarkably unconcerned with empirical confirmation and **that recent research on the development of subjectivity in infants and young children dfoes not support his views. It now appears that even at the earliest stages children are not passive blank slates on which symbolic structures are inscribed but, rather, active participants in the interactions that construct their experience**.

**System entirely non-falsifiable—creates a self-fulfilling prophecy**

**Fraser**, political theorist at the New School, **1990** p. JStor

(Nancy, “The Uses and Abuses..” boundary 2)

However, these apparent advantages vanish upon closer inspection. Instead, it becomes clear that **Lacan's theory is viciously circular**. On the one hand, it purports to describe the process by which individuals acquire gendered subjectivity through their painful conscription as young children into a pre-existing phallocentric symbolic order. Here **the structure of the symbolic order determines the character of individual subjectivity. But on the other hand, and at the same time, the theory purports to show that the symbolic order must necessarily be** phallocentric since the attainment of subjectivity requires submission **to "the Father's Law**." Here, then, the nature of individual subjectivity, as dictated by an autonomous psychology, determines the character of the symbolic order. **One result of this circularity is an ironclad determinism**. As Dorothy Leland has noted, **the theory casts the developments it describes as neces- sary, invariant, and unalterable**.12 Phallocentrism, woman's disadvantaged place in the symbolic order, the encoding of cultural authority as masculine, the impossibility of describing a nonphallic sexuality, in short, any number of trappings of male dominance now appear as invariable features of the human condition. Women's subordination, then, is inscribed as the inevi- table destiny of civilization.

**Psychoanalysis can’t be scaled up to explain society or politics – they can’t explain our impacts and definitely can’t solve**

**Sharpe**, lecturer, philosophy and psychoanalytic studies, and Goucher, senior lecturer, literary and psychoanalytic studies – Deakin University, **‘10**

(Matthew and Geoff, Žižek and Politics: An Introduction, p. 182 – 185, Figure 1.5 included)

Can we bring some order to this host of criticisms? It is remarkable that, for all the criticisms of Žižek’s political Romanticism, no one has argued that the ultra- extremism of **Žižek’s political position might reflect his untenable attempt to shape his model for political action on the curative** final **moment in clinical psychoanalysis.** The differences between these two realms, listed in Figure 5.1, are nearly too many and too great to restate **– which has** perhaps **caused** the theoretical oversight**.** The key thing is this. **Lacan’s** notion of **traversing the fantasy involves** the **radical transformation of people’s subjective structure: a refounding of** their most **elementary beliefs** about themselves, the world, and sexual difference. **This is** undertaken **in the security of the clinic**, on the basis of the analysands’ voluntary desire to overcome their inhibitions, symptoms and anxieties.

As a clinical and existential process, it has its own independent importance and authenticity. **The analysands**, in transforming their subjective world, **change the way they regard the objective**, shared social reality outside the clinic. But they do not transform the world. **The political relevance of the clinic** can only be (a) as a supporting moment in ideology critique or (b) as a fully- fl edged model of politics, provided that the political subject and its social object are ultimately identical. Option (*b*), Žižek’s option, **rests on the idea**, not only **of a subject** who becomes who he is only through his (mis) recognition of the objective sociopolitical order, but **whose ‘traversal** of the fantasy’ **is immediately identical with** his **transformation of the socio- political system** or Other. Hence, according to Žižek, we can analyse the institutional embodiments of this Other using psychoanalytic categories. In Chapter 4, we saw Žižek’s resulting elision of the distinction between the (subjective) Ego Ideal and the (objective) Symbolic Order. **This leads him to analyse our entire culture as a single subject–object,** whose perverse (or perhaps even psychotic) structure is expressed in every manifestation of contemporary life. Žižek’s decisive political- theoretic errors, one substantive and the other methodological, are different (see Figure 5.1)

The *substantive problem* is to equate any political change worth the name with the total change of the subject–object that is, today, global capitalism. This is a type of change that can only mean equating politics with violent regime change, and ultimately embracing dictatorial government, as Žižek now frankly avows (*IDLC* 412–19). We have seen that the ultra- political form of Žižek’s criticism of everyone else, **the theoretical Left and** the **wider politics**, is that **no one is sufficiently radical for him** – even, we will discover, Chairman Mao. We now see that **this is because Žižek’s model of politics** proper **is modelled on** a pre- critical analogy with the total transformation of a subject’s entire subjective structure, at the end of the talking cure. For what could the concrete consequences of this governing analogy be?

We have seen that **Žižek equates the individual** fantasy **with** the **collective identity of an entire people.** The social fantasy, he says, structures the regime’s ‘inherent transgressions’: at once subjects’ habitual ways of living the letter of the law, and the regime’s myths of origin and of identity. **If political action is modelled on the Lacanian cure, it must involve the complete ‘traversal’** – in Hegel’s terms, the abstract versus the determinate negation – **of** all these **lived myths**, practices and habits. Politics must involve the periodic founding of entire new subject–objects. Providing the model for this set of ideas, the fi rst Žižekian political subject was Schelling’s divided God, who gave birth to the entire Symbolic Order before the beginning of time (*IDLC* 153; *OB* 144–8).

But **can the political theorist reasonably** hope or **expect** that **subjects will simply give up on all their inherited ways**, myths and beliefs, all in one world- creating moment? And can they be legitimately asked or expected to, on the basis of a set of ideals whose legitimacy they will only retrospectively see, after they have acceded to the Great Leap Forward? And **if they do not** – for Žižek laments that today subjects are politically disengaged in unprecedented ways – **what means can the theorist and his allies use to move them to do so?**

**Problem-solution impact is backwards---acting with a flawed epistemology allows us to change that epistemology.**

**Harris 7** (Graham, Adjunct Prf. @ Centre for Environment University of Tasmania, Seeking Sustainability in an age of complexity p. 9-10)

1 am not going to address the global 'litany' at length here. The arguments have been well made by others, especially and most elegantly by E. O. Wilson. What 1 wish to address here is the question: 'Can we grasp the complexity of it all and, if so, what do we do about it?' Given the fundamental nature of the problem the destruction of the biosphere and its ecosystem ser- vices together with the huge changes going on in human societies and cultures driven by globalisation and technological change the precautionary principle would suggest that even if the epistemology is flawed, the data are partial and the evidence is shaky, we should pay attention to the little we know and do whatever is possible to mitigate the situation even if we fundamentally disagree about the means and the ends. The only ethical course of action is, as John Ral- ston Saul writes," based on 'a sense of the other and of inclusive responsibility'. We know enough to act. Ethics is about uncertainty, doubt, system thinking and balancing difficult choices. It is about confronting the evidence**.** Over the past two or three decades, as there has been an increasing appre- ciation of the importance of good environmental management, and as western societies have become more open and the ICT revolution has made informa- tion much more widely available there has been a growing debate between the worlds of science, industry, government and the community around environ- mental ethics and environmental issues and their management. During this period new knowledge has been gained, ideas have changed (sometimes quite fundamentally) and there have been huge changes in government and social institutions and policies. We are all on a recursive journey together: we are lit- erally 'making it up as we go along'. This is not easy and there are no optimal solutions. This is an adaptive process requiring feedback from all parts of the system. Yes, there will be surprises. This is why it is so important that when we act we constantly reflect on what we know and what we are doing about it and where it is all going. As we reach the physical limits of the global biosphere the values we place on things are changing and must change further. A new environmental ethic is required, one that is less instrumental and more embracing. Traditionally there has tended to be a schism between those who take an anthropocentric view (that the world is there for us to use) and those who take the non-anthropocentric view (those who value nature in its own right). Orthodox anthropocentrisni dictates that non-human value is instrumental to human needs and interests. In contrast, non-anthropocentrics take an objectivist view and value nature intrinsically; some may consider the source of value in non-human nature to be independent of human consciousness.45 What is required is a more complex and systems view of ethics which finds a middle ground between the instrumentalist and objectivist views. Norton '46 for example, proposes an alternative and more complex theory of value - a universal Earth ethic - which values processes and dynamics as well as entities and takes an adaptive management view of changing system properties. For sustainable development to occur, choices about values will remain within the human sphere but we should no longer regard human preferences as the only criterion of moral significance. 'Humans and the planet have entwined destinies"' and this will be increasingly true in many and complex ways as we move forward. There are calls for an Earth ethic beyond the land ethic of Aldo Leopold.45 The science of ecology is being drawn into the web .49 Ecologists are becoming more socially and culturally aware and engaged" and the 'very doing' of ecology is becoming more ethical.tm' Some scientists are beginning to see themselves more as agents in relationships with society and less as observers.

**Ontology first is bogus – no warrant**

**Jackson 10**

Patrick Thaddeus Jackson, 2010. Associate Professor of International Relations in the School of International Service at the American University in Washington, DC. “The Conduct of Inquiry in International Relations: Philosophy of Science and its Implications for the Study of World Politics,” p 27-8.

However, I do not think that putting ontology first in the panacea that many seem to think it is. For one thing**, if one puts ontology first then one is, at least provisionally, committed to a particular** (if revisable) **account of what the world is made up of**: co-constituted agents and structures, states interacting under conditions of anarchy, global class relations, or what have you. **This is a rather large leap to make on anyone’s authority**, let alone that of a philosopher of science. Along these lines**, it is unclear what if any *warrant* we could provide for most ontological claims if ontology in this sense were to always “come first.”** **If someone makes an ontological claim about something existing in the world, then we are faced with an intriguing epistemological problem of how possibly to know whether that claim is true, and the equally intriguing problem of selecting the proper methods to use in evaluating that claim** (Chernoff 2009b, 391). **But if epistemology and method are supposed to be fitted to ontology, then we are stuck with techniques and standards designed to respond to the specificity of the object under investigation**. This problem is roughly akin to using state-centric measurements of cross-border transactions to determine whether globalization is eroding state borders, because the very object under investigation—“state borders”—is presupposed by the procedures of data collection, meaning that the answer will always, and necessarily, assert the persistence of the state.

## 1AR

**Cap**

**Their capitalism makes war inevitable arguments are backwards**

**Bernstein 05**

[Andrew, Ph.D., Philosophy, Graduate School of the City University of New York, lecturer. The Capitalist Manifesto The Historic, Economic and Philosophic case for laissez-faire. 2005. p. 231-236]

The cause of **the Persian Gulf War** of the early 1990s was similar: the armies of the brutal dictator, Saddam Hussein of Iraq (armed, unfortunately, to some degree by the United States, but principally by the Soviet Union) invaded and conquered freer Kuwait. **The freer countries of the West, led by the United States, did not initiate that conflict; they went to war** — rightly or wrongly — **to prevent Kuwait** (and, eventually, Saudi Arabia and the entire Middle East) **from being conquered** by Saddam Hussein .**3 The current “war on terror” was initiated by the brutal Islamist tyrannies of the Middle East,** pre—eminently Iran, who sponsored terrorist organizations whose specific purpose was to attack the freer West, especially America. It is a proxy war in which murderous dictatorships, too weak to assault America and the other free nations directly, fund, train and support terrorists to do their dirty work. **America did not initiate the conflict; it fought only after decades of repeated terrorist attacks culminated in the atrocities of September 11**, 2001; and even then, unfortunately, used only a miniscule fraction of its military might to defend itself and only against a part, not the totality; of the despotic alliance assaulting it.4 Observe that **every** prominent **dictatorship of the 20th century** — the Fascists, the Communists, the Islamists — **hated their antipode, the world’s freest nation, America**, **and initiated war against her in some form**. Hitler’s ally attacked the United States at Pearl Harbor. **The Soviets** enslaved Eastern Europe and then **threatened** America’s allies — the free nations of Western Europe — with conquest, and **America** herself **with nuclear annihilation**. It was with Stalin’s approval that North Korea launched its murderous invasion of America’s ally, freer South Korea. Today, and in recent decades, the world’s blood-drenched Islamic dictatorships — Iran, Iraq, Syria, Afghanistan — sponsor(ed) terrorist attacks against Americans and America.5 **That statism, not freedom, is responsible for war should be clear**. The question is: why? So far, only the external relations of a dictatorship have been examined — but the answer lies in its internal nature. Again, it is good to examine the facts. The Nazis enslaved their own citizens, forcing all to serve the state. They murdered a whole segment of their own population — the Jews — and terrorized the rest by means of their secret police, the Gestapo. The Communists have done the same. In Soviet Russia, **Stalin murdered untold millions of Soviet peasants in the attempt to force the rest onto the collective farms**. In China, among other atrocities**, Mao turned loose the Red Guards to intimidate and murder all “enemies of the revolution,” the overwhelming majority of whom were native Chinese**. In Cambodia, Pol Pot and the Khmer Rouge slaughtered virtually twenty-five per cent of the country’s population in less than four years.6 Nor does a dictator have to be a Nazi or Communist to murder his own citizens. Saddam Hussein murdered any number of Kurds within Iraq, and silenced (often fatally) any Iraqi citizen who questioned his regime. In Uganda, Idi Amin murdered an estimated 300,000 people in his eight year reign of terror — one in every forty of the country’s population. “Bodies floated down the Nile and turned up by the hundreds in Mabira and Namanve forests. The prisons filled up and prisoners were forced to stand in line and beat each other to death with ten-pound sledgehammers; the last man was shot.” **In Afghanistan**, **the recent Islamic dictators, the Taliban, brutally oppressed the country’s entire female population**.7 The principle is: statist regimes are at chronic war with their own cit izens. Statism — in fact and in principle — is nothing more than gang rule. A dictatorship is a gang devoted to looting the productive citizens of its own country. ‘**When a statist ruler exhausts his own country’s economy, he attacks his neighbors**. **It is his only means of postponing internal collapse and prolonging his rule.** A county that violates the rights of its own citizens, will not respect the rights of its neighbors. **Those who do not recognize individual rights, will not recognize the rights of nations: a nation is only a number of individuals**. Statism needs war; a free country does not. **Statism survives by looting; a free country survives by production**.8 The cause of war is that men still accept the primitive notion that they can properly achieve their goals by initiating the use of force against their fellow men. To abolish war it is first necessary to outlaw the initiation of force. **Any so-called “peace” movement which endorses socialism is bound to fail.** To the extent that it succeeds in promoting socialism, to that same extent it will cause war. This is so, because a socialist regime, by its very nature, stands for the initiation of force against its own citizens, and therefore, **no moral principle constrains it from following an aggressive policy toward the citizens of neighboring countries**. The central point must be reiterated until mankind finally learns the lesson: No government which violates the rights of its own citizens can be expected to respect the rights of foreigners. Statism is the system of war.9 **The principle that a government exists to protect the rights of its citizens is the direct application to politics of the broader Enlightenment** creed of the Rights of Man, the conviction that every individual — domestic or foreign — has inalienable rights that include those to life, liberty, property and the pursuit of personal happiness. It follows that a government based on the principle of individual rights must both protect the rights of its own citizens and refuse to violate those of foreigners. There is a fundamental similarity in regard to its treatment of both domestic and foreign residents: it must refrain from the initiation of force or fraud against any and all of them. **Capitalism, as the only system based on the preservation of individual rights and the consequent banning of the initiation of force, must be understood as the system of peace.** “Laissez-faire capitalism is the only social system based on the recognition of individual rights and, therefore, the only system that bans force from social relationships. By the nature of its basic principles and interests, **it is the only system fundamentally opposed to war**.”10 **World peace, therefore, requires the establishment of global capitalism**. If there is ever to exist an enduring peace among men, then statism — the root cause of war — must be finally and fully extirpated from their political systems. The essence of capitalist foreign relations is international free trade. Free trade simply means that individuals and companies in one country can trade with individuals and companies in other countries without bar riers and taxes imposed by their respective governments. The moral right of peaceful, non-criminal individuals to trade and interact across national boundaries is protected. International free trade is simply the principle of individual rights applied to economic and cultural relationships across national borders. Practically, such a policy of abolishing tariffs and trade barriers opens nations to various forms of peaceful intercourse, including mutually-beneficial commerce, emigration and immigration, and cultural exchange. Free trade removes the economic incentive to war, by making it possible for citizens of one country to gain by trade the goods produced by citizens of other countries. **Capitalism renders unnecessary the murderous practice of plunder, and replaces it with the cordial and mutually-beneficial relation of trade.** The institution of such a policy is a major step toward the diminishment of suspicion and hostility between nations that have often developed over centuries. It is no accident “that capitalism gave mankind the longest period of peace in history — a period during which there were no wars involving the entire civilized world — from the end of the Napoleonic Wars in 1815 to the outbreak of World War I in 1914.” It is also no accident that, with the 20th century emergence of the most virulent form of statism in history — the socialist regimes of Germany and Russia — the world was plunged into its most destructive war ever.11 **Even Marx and Engels introduced a semi-admiring note into their pervasive hostility toward capitalism when they described the universal benefits of free trade.** In place of the old wants, satisfied by the productions of the country we find new wants, requiring for their satisfaction the products of distant lands and climates. In place of the old local and national seclusion and self-sufficiency, we have intercourse in every direction, universal inter-dependence of nations. And as in material, so also in intellectual production. The intellectual creations of individual nations become common property. National one-sidedness and narrow-mindedness become more and more impossible, and from the numerous national and local literatures, there emerges a world literature.’2 Insofar as national policy makers are concerned with the rational self- interest of their countries, they would do well to realize that individual rights and free trade — not war, conquest, plunder and imperialism — will promote wealth and power; the only rational, life-giving power: that to produce.

**It also solves their environment impacts**

**Atkisson 2k**

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At the dawn of the third milennium human civilization finds itself in a seeming paradox of gargantuan proportions. On the one hand, industrial and technological growth is destroying much of nature, endangering ourselves, and threatening our descendants. On the other hand, we must accelerate our industrial and technological development, **or the forces we have already unleashed** will wreak even greater havoc on the world for generations to come. We cannot go on, and we cannot stop. We must transform. Facing a Great Paradox At precisely the moment when humanity’s science, technology, and economy has grown to the point that we can monitor and evaluate all the major systems that support life, all over the Earth, we have discovered that most of these systems are being systematically degraded and destroyed . . . by our science, technology, and economy. The evidence that we are beyond the limits to growth is by now overwhelming: the alarms include climatic change, disappearing biodiversity, falling human sperm counts, troubling slow-downs in food production after decades of rapid expansion, the beginning of serious international tensions over basic needs like water. Wild storms and floods and eerie changes in weather patterns are but a first visible harbinger of more serious trouble to come, trouble for which we are not adequately prepared. Indeed, change of all kinds—in the Biosphere (nature as a whole), the Technosphere (the entirety of human manipulation of nature), and the Noösphere (the collective field of human consciousness)—is happening so rapidly that it exceeds our capacity to understand it, control it, or respond to it adequately in corrective ways. Humanity is simultaneously entranced by its own power, overwhelmed by the problems created by progress, and continuing to steer itself over a cliff. Our economies and technologies are changing certain basic structures of planetary life, such as the balance of carbon in the atmosphere, genetic codes, the amount of forest cover, species variety and distribution, and the foundations of cultural identity. Unless we make technological advances of the highest order, **many of the destructive changes we are causing to nature are irreversible**. Extinct species cannot (yet) be brought back to life. No credible strategy for controlling or reducing carbon dioxide levels in the atmosphere has been put forward. We do not know how to fix what we’re breaking. At the same time, some of the very products of our technology— creations. In the case of certain creations, like nuclear materials and some artificially constructed or genetically modified organisms, our secure custodianship must be maintained for thousands of years. We are, in effect, committed to a high-technology future. **Any slip in our mastery over the forces now under our command could doom our descendants**—including not just human descendants, but also those wild species still remaining in the oceans and wilderness areas—to unspeakable suffering. We must continue down an intensely scientific and technological path, and we can never stop. Sustaining such high levels of complex civilization and continuous development has never before happened in the history of humanity, so far as we know. From the evidence in hand, ancient civilizations have generally done no better than a few hundred years of highly variable progress and regress, at comparatively low levels of technology, with relatively minor risks to the greater whole associated with their inevitable collapse. The only institutions that have demonstrated continuity over millennia are religions and spiritual traditions and institutions. So, while we must be intensely scientific, our future is also in need of a renewed sense of spirituality and the sacred. Given our diversity and historic circumstances, no one religion is likely to be able, now or in the future, to sustain us or unite us.We need a new sense of spirituality that is inclusive of believers, nonbelievers, and those for whom belief itself is not the core of spiritual experience.We need a sense of the sacred that is inclusive of the scientific quest and the technological imperative. We need a common sense of high purpose that connects, bridges, and uplifts all of our religious traditions to their highest levels of wisdom and compassion, while sustaining and honoring their unique historical gifts. We need, especially, all the inspiration and solace they can offer, because the task ahead of us is enormous beyond compare. Our generation is charged with an unprecedented responsibility: to lay secure foundations for a global civilization that can last for thousands of years. To accomplish this task, we must, in the coming decades, maintain and greatly enhance our technical capacities and cultural stability, while simultaneously changing almost every technological system on which we now depend so that it causes no harm to people or the natural world, now or in the future. Our situation is not only without precedent; it is virtually impossible to comprehend. Those who, in the waning decades of the Second Millennium, have been able to comprehend this Great Paradox to some degree often feel themselves emotionally overwhelmed and powerless to effect change—the situation I have elsewhere called “Cassandra’s Dilemma,” after the mythical Trojan prophet whose accurate foresight went unheeded. Those in power, on the other hand, face stiff barriers to comprehension and action, including financial, political, and psychological disincentives. Denial and avoidance have been civilization’s predominant responses to the warnings coming from science and the signals coming from nature during the 1970s, 80s, and 90s. But the feedback from nature, as well as the growing global distress signals from those left behind in either relative or absolute poverty, are both becoming so strong that they can no longer be denied, even by those with the greatest vested interest in denial. These early decades of the Third Millennium—and especially this first decade, which philosopher Michael Zimmerman has said should be declared “the Oughts” to signify the urgency for addressing what ought to be done—are the decades of reckoning, the time for decisively changing course. Modest Changes are Not Enough Change is clearly possible. Modest changes in the direction of greater sustainability are now underway, and modest, incremental changes in both technology and habitual practice can ameliorate—indeed, have ameliorated—some dangerous trends in the short run. But overall, incremental change of this sort has proven exceedingly slow and difficult to effect, and most incremental change efforts fall far short of what is needed. Carbon emissions, which are now causing visible climate change, provide a good example: current global agreements for modest reductions are hard to reach, impossible to enforce, and virtually without effect; and even if they were successful, they would have a negligible impact on the critical trend. Far more dramatic changes are required. Dramatic, rapid change, in the form of extremely accelerated innovation in the Noösphere (conscious awareness and understanding) and the Technosphere (physical practice) is necessary both to prevent continuing and ever more catastrophic damage to the Biosphere, and to adapt to those irreversible changes to which the planet is already committed, such as some amount of climatic instability. The rapid evolution of many social, economic, and political institutions, which mediate between the Noösphere and the Technosphere, is obviously necessary as well. Without extraordinary and dramatic change, the most probable outcome of industrial civilization's current trajectory is convulsion and collapse. “Collapse” refers not to a sudden or apocalyptic ending, but to a process of accelerating social, economic, and ecological decay over the course of a generation or two, punctuated by ever-worsening episodes of crisis. The results would likely be devastating, in both human and ecological terms. The onset of collapse is probably not ahead of us in time, but behind us: in some places, such as storm-ravaged Orissa, Honduras, Bangladesh, Venezuela, even England and France, collapse-related entropy may already be apparent. Trend, of course, is probability, not destiny. It is still theoretically possible, albeit very unlikely, that civilization could continue straight ahead, without any conscious effort to direct technological development and the actions of markets in more environmentally benign and culturally constructive ways, and escape collapse through an unexpected (though currently unimaginable) technological breakthrough or improbable set of events. Some have called this the “Miracle Scenario.” But hoping for a miracle is by far the riskiest choice. The future may be fundamentally unknowable, but certain physical processes are predictable, given adequate knowledge about current trends, causal linkages, and systemic effects. Prediction based on extrapolation is not just the province of physics: much of our economy is focused on efforts to accurately predict the future based on past trends. The Internet economy, for example, relies upon Moore’s Law (that the speed and capacity of semiconductor chips doubles roughly every 18 months). Insurance companies base their entire portfolio of investments and fees on statistical assessments of past disasters and projected trends into the future. When it comes to the prospects for sustaining our civilization, we have to trust our species’ best judgment, which comes from the interpretations and extrapolations of our best experts. These experts—such as the respected Intergovernmental Panel on Climate Change—are reporting a disturbingly high degree of consensus about the level of threat to our future well-being. We are in trouble. We must transform our civilization. Transformation is Possible Dramatic civilizational change—transformation, in a word—is not so difficult to imagine. History is full of examples. Global history since the Renaissance, with all our remarkable transformations in technology, economics, and culture, is largely a product of humanity learning to take seriously the evidence of its senses, to reflect on that evidence carefully, and to make provisional conclusions that can be tested. This is the cornerstone of science. If we are to take seriously the evidence of our senses and our science, we must provisionally conclude that we are now largely responsible for living conditions on this planet. We have the power to fundamentally shape climate, manage ecosystems, design life-forms, and much more. The fact that we are currently doing these things very badly obscures the fact that we are doing them, and can therefore learn to do them better. Designing and managing the world is now our responsibility. That is the hypothesis that must now be tested by humanity as a whole, if we are to prevent collapse and succeed in restoration. To succeed, we must take our responsibility as world-shapers far more seriously than we currently do. History demonstrates that we, as a species, have the power to create the future we envision. If, therefore, we give in to despair, collapse will follow. If we cultivate a vision of ourselves as powerful and wise stewards of our planetary home, transformation becomes possible. Examples of cultural transformation occurring in a generation or less abound. The Meiji Restoration transformed Japan from a closed, agricultural society to an industrial one in just a few decades. The wholesale redirection of the North American and European economies during World War II took just a few years. The Apollo Program’s success in putting humans on the moon transpired, on schedule, within a decade. The fall of the Berlin Wall . . . the end of Apartheid . . . the change in China from a state-planned to a market economy . . . much of recent history suggests that transformation is not only possible, but a frequent occurrence in civilizational evolution. None of these events, however, remotely approaches the scale of global transformation we must now effect in technology, energy, transportation, agriculture, infrastructure, and economics, based on a new cultural understanding of our role as nature’s managers, the world's architects, the planet’s artists and engineers. But this testimony from history illustrates something profoundly important about transformation, in addition to its raw and indisputable possibility: no transformative change truly happens suddenly. Nor does transformation involve the magical or instantaneous creation of a new culture. “Transformation” is the name we give to the extremely accelerated adoption of existing innovations, together with the acceleration of innovation itself. Understanding transformation in these terms gives, to those who seek to create one, a reason for hope. An enormous amount of design work, preliminary to a transformation of the kind envisioned here, has already been done. Inventions, policies, models, scenarios, alternatives . . . innovations of all kinds have been developed by thoughtful and committed people over a generation, and the speed of innovation is increasing. Intense and focused commitment by a critical mass of talented, dedicated, and influential people—in business, government, religion, the arts, the civil sector, every walk of life—could accelerate the process by which innovation enters the mainstream of technical and social practice, and thereby turns humanity on a more hopeful course. By framing ambitious and visionary goals, and by highlighting the dangers and risks of inaction, this corps of skilled and forward-looking individuals in groups, organizations, corporations and governments could inspire others. The numbers involved could grow exponentially, and as institutions became thoroughly oriented toward achieving transformation, enormous resources could be mobilized, accelerating the transformation process still further. One generation of intensely focused investment, research, and redevelopment— redesigning our energy systems, overhauling our chemical industries, rebuilding our cities, finding substitutes for wood and replanting lost forests, and so much more—could transform the world as we know it into something far more beautiful, satisfying, and sustainable. This I believe: Sustainability is possible. Sustainability is desirable. Sustainability is a goal worthy of one’s life’s work. Sustainability is the great task of the next century. Sustainability is the next challenge on the road to our destiny. (1-8)

**And structural violence**

**Norberg, 03**

< Fellow, Timbro institute, Johan, In Defense of Global Capitalism pg 54>

This progress is all very well, many **critics of globalization will argue**, but even if the majority are better off, gaps have widened and wealthy people and countries have improved their lot more rapidly than others. So **inequality has grown**. The critics point to the fact that the combined per capita GDP of the 20 richest countries was 15 times greater than that of the 20 poorest countries 40 years ago and is now about 30 times greater. There are two reasons why this objection to globalization does not hold up. First, **even if this were true it would not matter very much. If everyone is coming to be better off, what does it matter that the improvement comes faster for some than for others?** Surely the important thing is for everyone to be as well off as possible, not whether one group is better off than another. Only those who consider wealth a greater problem than poverty can find a problem in some becoming millionaires while others grow wealthier from their own starting points. **It is better to be poor in the** inegalitarian **U**nited **S**tates, where the poverty line for individuals in 2001 was about $9,039 per year, **than to be equal in countries like Rwanda**, where in 2001 GDP per capita (adjusted for purchasing power) was $1,000, or Bangladesh ($1,750), or Uzbekistan ($2,500).`° Often **the reason why gaps have widened in certain reforming countries**, such as China, **is that the towns and cities have grown faster than the countryside**. But **given the unprecedented poverty reduction this has entailed** in both town and country, **can anyone wish that this development had never happened? Second, the allegation of increased inequality is just wrong**. **The notion** that global **inequality has increased** **is** largely **based on the figures from the UN Development Program**, in particular its *Human Development report* from 1999. **But the problem with these figures is that they are not adjusted for purchasing power.** That is, the UNDP numbers don’t take into account what people can actually buy with their money. Without that adjustment the figures mainly show the level of a country’s official exchange rate and what its currency is worth on the international, market, which is a poor yardstick of poverty. Poor people’s actual living standard, needless to say, hinges far more on the cost of their food, clothing, and housing than on what they would get for their money when vacationing in Europe. The odd thing is that the UNDP itself uses purchasing power—adjusted figures in its Human Development Index (HDI), which is its universal yardstick of living standards. It only resorts to the unadjusted figures in order to prove a thesis of inequality. **A report from the Norwegian Institute for Foreign Affairs investigated global inequality by means of figures adjusted for purchasing power. Their data show that, contrary to the conventional wisdom, inequality between countries has been continuously declining** ever since the end of the 1970s. This decline was especially rapid between 1993 and 1998, when globalization really gathered speed.22 More recently, **similar research by Columbia University development economist** Xavier Sala-i-Martin **has confirmed those findings**. When the UNDP’s own numbers are adjusted for purchasing power, Sala-i-Martin found that world inequality declined sharply by any of the common ways of measuring it.23 Bhalla and Sala-i-Martin also independently found that if we focus on inequality between persons, rather than inequality between countries, global inequality at the end of 2000 was at its lowest point since the end of World War II. **Estimates that compare countries rather than individuals**, as both authors note, **grossly overestimate real inequality** because they allow gains for huge numbers of people to be outweighed by comparable losses for far fewer. Country aggregates treat China and Grenada as data points of equal weight, even though China’s population is 12,000 times Grenada’s. **Once we shift our focus to people rather than nations, the evidence is overwhelming that the past 30 years have witnessed a global equalization**.24 Comparing just the richest and poorest tenths, inequality has increased, suggesting that a small group has lagged behind (we shall be returning to see which countries and why), but a study of all countries clearly points to a general growth of equality. If, for example, we compare the richest and poorest fifth or the richest and poorest third, we find the differences diminishing.

### Psychoanalysis

#### Their neuroscience evidence is over 20 years old and doesn’t assume new studies

Carel 6

Havi Carel 6, Senior Lecturer in Philosophy at the University of the West of England, “Life and Death in Freud and Heidegger”, googlebooks

Secondly, the constancy principle on which these ideas are based is incompatible with observational data. Once the passive model of the nervous system has been discarded, there was no need for external excitation in order for discharge to take place, and more generally, "the behavioural picture seemed to negate the notion of drive, as a separate energizer of behaviour" {Hcbb. 1982. p.35). According to Holt, the nervous system is not passive; it does not take in and conduct out energy from the environment, and it shows no tendency to discharge its impulses. 'The principle of constancy is quite without any biological basis" (1965, p. 109). He goes on to present the difficulties that arise from the pleasure principle as linked to a tension-reduction theory. The notion of tension is "conveniently ambiguous": it has phenomenological, physiological and abstract meaning. But empirical evidence against the theory of tension reduction has been "mounting steadily" and any further attempts to link pleasure with a reduction of physiological tension are "decisively refuted" (1965, pp. 1102). Additionally, the organism and the mental system are no longer considered closed systems. So the main arguments for the economic view collapse, as does the entropic argument for the death drive (1965, p. 114). A final, more general criticism of Freud's economic theory is sounded by Compton, who argues, "Freud fills in psychological discontinuities with neurological hypotheses" (1981, p. 195). The Nirvana principle is part and parcel of the economic view and the incomplete and erroneous assumptions about the nervous system (Hobson, 1988, p.277). It is an extension ad extremis of the pleasure principle, and as such is vulnerable to all the above criticisms. The overall contemporary view provides strong support for discarding the Nirvana principle and reconstructing the death drive as aggression.