### 1AC PRISM

#### Plan: The United States Federal Government should provide substantial market-fixed production cost incentives for the production of energy from Power Reactor Innovative Small Modular reactors that burn plutonium.

#### The *first priority* of US nuclear energy policy is waste- NRC won’t license or renew any plants unless waste is accounted for

Northey 2012 (Hannah Northey, E&E reporter, August 7, 2012, “NRC halts licensing decisions amid storage debate,” E&E Publishing, http://www.eenews.net/public/Greenwire/2012/08/07/1)

The Nuclear Regulatory Commission today voted unanimously to wait before approving licenses for new nuclear plants or renewing the licenses of existing facilities until the dilemma of how to store hot, radioactive waste at sites across the country is resolved.¶ The five-member panel, headed by the newly confirmed Chairwoman Allison Macfarlane, voted to delay issuing licenses until it responds to a federal appeals court ruling in June that the agency did not sufficiently analyze the environmental effects of storing nuclear waste without a permanent solution in sight (E&ENews PM, June 28).¶ While the process for licensing new and existing plants will move forward, no final decisions will be made, NRC said.¶ Today's decision will most directly affect Entergy Corp.'s Indian Point nuclear power plant north of New York City, which is closest to receiving a license renewal from the commission, as well as several other license renewals. Indian Point's two reactors in Buchanan, N.Y., expire in 2013 and 2015.¶ Progress Energy Inc.'s Levy plant in north-central Florida would be next in line to receive a combined operating license from NRC.¶ The U.S. Court of Appeals for the District of Columbia Circuit in June vacated two NRC rules -- the waste-confidence decision and the storage rule -- and said the agency had failed to conduct an environmental impact statement or a "finding of no significant environmental impact" before deeming the storage of waste in wet pools and dry casks safe (Greenwire, June 8).¶ The court's decision was hailed as a major victory for environmental groups and states that had challenged two NRC decisions.¶ The Natural Resources Defense Council had claimed the agency violated the National Environmental Policy Act by not adequately considering the environmental implications of storing spent fuel at nuclear plants -- sometimes for years after operations have ceased -- when it issued its most recent approval of the practice, known as the "waste confidence decision," in December 2010.¶ The court faulted NRC for assuming a national repository would be built within the next 60 years, despite decades of political deadlock over the abandoned repository under Yucca Mountain, Nev., and the current congressional gridlock over how to move forward.¶ The commission said it is now "considering all available options for resolving the waste-confidence issue, which could include generic or site-specific NRC actions, or some combination of both." NRC also vowed to allow the public to comment in advance on any generic waste-confidence document that is issued, whether it is a new rule, a policy statement, an environmental assessment or an environmental-impact statement.¶ "Given the circumstances created by the court's decision, the agency reasonably permitted licensing reviews and adjudications to proceed while it addresses the remand," said Ellen Ginsberg, the Nuclear Energy Institute's general counsel. "The commission appropriately used its inherent supervisory authority to direct licensing boards to hold related contentions in abeyance pending further agency action."¶ Today's decision marks the first major action NRC has made since Macfarlane was sworn in as chairwoman. Macfarlane, a geologist and professor, replaced former Chairman Gregory Jaczko, who stepped down amid infighting at the agency.¶ The meeting was the second for Macfarlane, who has vowed to bring collegiality to NRC.¶ "It's a fantastic place, I'm enjoying it very much," she said today.¶ Fukushima review¶ Concerns surrounding the storage of spent nuclear fuel also weighed heavily on the commission's discussions today about safety upgrades following the March 11, 2011, earthquake and tsunami that crippled three reactors at Japan's Fukushima Daiichi plant.¶ Dave Lochbaum, director of the nuclear safety project at the Union of Concerned Scientists, criticized the commission for not prioritizing the movement of waste from wet pools to dry storage in the wake of the Fukushima accident.¶ Top NRC officials ordered a 50-mile evacuation around the crippled Japanese reactors last year because they feared a wet pool storing waste near the crippled reactors had gone dry. Jaczko ordered the evacuation and said it was partially based on the assumption that the pool -- like American facilities -- was potentially full of nuclear spent fuel rods (Greenwire, Feb. 22).¶ Lochbaum said the event should have been a wake-up call for the United States, but instead "we're doing a pitiful job of managing spent fuel hazards," allowing fuel to be stored in packed pools that could trigger or exacerbate an accident.¶ NRC should have a strong understanding of how waste can be safely stored before moving forward with licensing plants, he added.

#### PRISM SMRs completely resolve the waste issue by burning plutonium to make electricity

Pearce 2012 (Fred Pearce, freelance author and journalist based in the UK. He serves as environmental consultant for New Scientist magazine, July 30, 2012, “Are Fast-Breeder Reactors¶ A Nuclear Power Panacea?,” Yale Environment 360, http://e360.yale.edu/feature/are\_fast-breeder\_reactors\_a\_nuclear\_power\_panacea/2557/)

Plutonium is the nuclear nightmare. A by-product of conventional power-station reactors, it is the key ingredient in nuclear weapons. And even when not made into bombs, it is a million-year radioactive waste legacy that is already costing the world billions of dollars a year to contain.¶ And yet, some scientists say, we have the technology to burn plutonium in a new generation of “fast” reactors. That could dispose of the waste problem, reducing the threat of radiation and nuclear proliferation, and at the same time generate vast amounts of low-carbon energy. It sounds too good to be true. So are the techno-optimists right — or should the conventional environmental revulsion at all things nuclear still hold?¶ Fast-breeder technology is almost as old as nuclear power. But after almost two decades in the wilderness, it could be poised to take off. The U.S. corporation GE Hitachi Nuclear Energy (GEH) is promoting a reactor design called the PRISM (for Power Reactor Innovative Small Modular) that its chief consulting engineer and fast-breeder guru, Eric Loewen, says is a safe and secure way to power the world using yesterday’s nuclear waste.¶ The company wants to try out the idea for the first time on the northwest coast of England, at the notorious nuclear dumping ground at Sellafield, which holds the world’s largest stock of civilian plutonium. At close to 120 tons, it stores more plutonium from reactors than the U.S. and Russia combined.¶ While most of the world’s civilian plutonium waste is still trapped inside highly radioactive spent fuel, much of that British plutonium is in the form of plutonium dioxide powder. It has been extracted from spent fuel with the intention of using it to power an earlier generation of fast reactors that were never built. This makes it much more vulnerable to theft and use in nuclear weapons than plutonium still held inside spent fuel, as most of the U.S. stockpile is.¶ The Royal Society, Britain’s equivalent of the National Academy of Sciences, reported last year that the plutonium powder, which is stored in drums, risk” and “undermines the UK’s credibility in non-proliferation debates.”¶ Spent fuel, while less of an immediate proliferation risk, remains a major radiological hazard for thousands of years. The plutonium — the most ubiquitous and troublesome radioactive material inside spent fuel from nuclear reactors — has a half-life of 24,100 years. A typical 1,000-megawatt reactor produces 27 tons of spent fuel a year.¶ None of it yet has a home. If not used as a fuel, it will need to be kept isolated for thousands of years to protect humans and wildlife. Burial deep underground seems the obvious solution, but nobody has yet built a geological repository. Public opposition is high — as successive U.S. governments have discovered whenever the burial ground at Yucca Mountain in Nevada is discussed — and the cost of construction will be huge. So the idea of building fast reactors to eat up this waste is attractive — especially in Britain, but also elsewhere.¶ Theoretically at least, fast reactors can keep recycling their own fuel until all the plutonium is gone, generating electricity all the while. Britain’s huge plutonium stockpile makes it a vast energy resource. David MacKay, chief scientist at the Department of Energy and Climate Change, recently said British plutonium contains enough energy to run the country’s electricity grid for 500 years.¶ Fast reactors can be run in different ways, either to destroy plutonium, to maximise energy production, or to produce new plutonium. Under the PRISM proposal now being considered at Sellafield, plutonium destruction would be the priority. “We could deal with the plutonium stockpile in Britain in five years,” says Loewen. But equally, he says, it could generate energy, too. The proposed plant has a theoretical generating capacity of 600 megawatts.¶ Fast reactors could do the same for the U.S. Under the presidency of George W. Bush, the U.S. launched a Global Nuclear Energy Partnership aimed at developing technologies to consume plutonium in spent fuel. But President Obama drastically cut the partnership’s funding, while also halting work on the planned Yucca Mountain geological repository. “We are left with a million-year problem,” says Loewen. “Right now there isn’t a policy framework in the U.S. for solving this issue.”¶ He thinks Britain’s unique problem with its stockpile of purified plutonium dioxide could break the logjam. “The UK is our best opportunity,” he told me. “We need someone with the technical confidence to do this.”¶ The PRISM fast reactor is attracting friends among environmentalists formerly opposed to nuclear power. They include leading thinkers such as Stewart Brand and British columnist George Monbiot. And, despite the cold shoulder from the Obama administration, some U.S. government officials seem quietly keen to help the British experiment get under way. They have approved the export of the PRISM technology to Britain and the release of secret technical information from the old research program. And the U.S. Export-Import Bank is reportedly ready to provide financing.

#### The tech is safe proven and fast

Pearce 2012 (Fred Pearce, freelance author and journalist based in the UK. He serves as environmental consultant for New Scientist magazine, July 30, 2012, “Are Fast-Breeder Reactors¶ A Nuclear Power Panacea?,” Yale Environment 360, http://e360.yale.edu/feature/are\_fast-breeder\_reactors\_a\_nuclear\_power\_panacea/2557/)

Only fast reactors can consume the plutonium. Many think that will ultimately be the UK choice. If so, the PRISM plant would take five years to license, five years to build, and could destroy probably the world’s most dangerous stockpile of plutonium by the end of the 2020s. GEH has not publicly put a cost on building the plant, but it says it will foot the bill, with the British government only paying by results, as the plutonium is destroyed.¶ The idea of fast breeders as the ultimate goal of nuclear power engineering goes back to the 1950s, when experts predicted that fast-breeders would generate all Britain’s electricity by the 1970s. But the Clinton administration eventually shut down the U.S.’s research program in 1994. Britain followed soon after, shutting its Dounreay fast-breeder reactor on the north coast of Scotland in 1995. Other countries have continued with fast-breeder research programs, including France, China, Japan, India, South Korea, and Russia, which has been running a plant at Sverdlovsk for 32 years.¶ But now climate change, with its urgency to reduce fossil fuel use, and growing plutonium stockpiles have changed perspectives once again. The researchers’ blueprints are being dusted off. The PRISM design is based on the Experimental Breeder Reactor No 2, which was switched on at the Argonne National Laboratory in Illinois in 1965 and ran for three decades.

#### Production cost incentive key- Incentivizes fast learning in advanced factory manufacturing which is necessary for commercialization

Rosner and Goldberg 2011 (Robert Rosner, astrophysicist and founding director of the Energy Policy Institute at Chicago, and Stephen Goldberg, Special Assistant to the Director at the Argonne National Laboratory, Energy Policy Institute at Chicago, “Small Modular Reactors – Key to Future Nuclear Power Generation in the U.S.”, Technical Paper, Revision 1, November 2011)

Production Cost Incentive: A production cost incentive is a performance-based incentive. With a production cost incentive, the government incentive would be triggered only when the project successfully operates. The project sponsors would assume full responsibility for the upfront capital cost and would assume the full risk for project construction. The production cost incentive would establish a target price, a so-called “market-based benchmark.” Any savings in energy generation costs over the target price would accrue to the generator. Thus, a production cost incentive would provide a strong motivation for cost control and learning improvements, since any gains greater than target levels would enhance project net cash flow. Initial SMR deployments, without the benefits of learning, will have significantly higher costs than fully commercialized SMR plants and thus would benefit from production cost incentives. Because any production cost differential would decline rapidly due to the combined effect of module manufacturing rates and learning experience, the financial incentive could be set at a declining rate, and the level would be determined on a plant-by-plant basis, based on the achievement of cost reduction targets.43 The key design parameters for the incentive include the following:¶ 1. The magnitude of the deployment incentive should decline with the number of SMR modules and should phase out after the fleet of LEAD and FOAK plants has been deployed.¶ 2. The incentive should be market-based rather than cost-based; the incentive should take into account not only the cost of SMRs but also the cost of competing technologies and be set accordingly.¶ 3. The deployment incentive could take several forms, including a direct payment to offset a portion of production costs or a production tax credit.

#### SMRS are extremely safe

Kessides 2010 (Ioannis N. Kessides, Lead Economist in the World Bank's Development Research Group, June 2012, “The Future of the Nuclear Industry Reconsidered Risks, Uncertainties, and Continued Potential,” The World Bank Development Research Group Environment and Energy Team, http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2012/06/29/000158349\_20120629130837/Rendered/INDEX/WPS6112.txt)

Most SMR concepts envision widespread deployment of a large number of small nuclear plants sited in diverse environments and frequently in close proximity to users. These considerations place very stringent requirements on reliability and safety performance—arguably even more exacting relative to traditional large-scale nuclear plants. The need for enhanced levels of safety has led to design options that maximize the use of inherent and passive safety features and incorporate additional layers of defense in depth (IAEA, 2009).18 These safety features can be more easily and effectively implemented in SMRs because of their larger surface- to-volume ratio, reduced core power density, lower source term, and less frequent (multi-year) refueling. For example, large surface-to-volume ratios facilitate the passive (with no external source of electrical power or stored energy) removal of decay heat.¶ SMRs employ an enveloping design approach that seeks to eliminate or prevent as many accident initiators and accident consequences as possible. Any remaining plausible accident initiators and consequences are dealt with appropriate combinations of active and passive safety systems. In water-cooled SMRs, the integration of steam generators and pressurizers within the reactor vessel eliminates large-diameter pipes and penetrations in the reactor vessel, thereby reducing substantially the risk of LOCAs. Moreover, in some designs the application of in- vessel control rod drives eliminates the risk of inadvertent control rod ejections that lead to reactivity insertion accidents. Loss of coolant accidents may also be prevented with compact loop designs that employ short piping and fewer connections between components (Kuznetsov, 2009).¶ In HTGRs, the fuel particles consist of fissionable fuel kernels with tri-structural isotropic (TRISO) coating.19 The TRISO coating system constitutes a miniature pressure vessel that is capable of containing the readionuclides and gases generated by fission of the nuclear material in the kernel. One of the coating layers consists of silicon carbide (a strong refractory material) which can retain radionuclides at extremely high temperatures under all accident conditions—temperatures can remain at 1600°C for several hundred hours without loss of particle coating integrity. Furthermore, the graphite holding the TRISO-coated particles together can withstand even higher temperatures without structural damage.20 And the massive graphite structures in the core create an extremely large heat capacity. The combination of large thermal margins, low power density of the core, and relatively large length-to-diameter ratio of the core, allow for very slow and stable response to transients caused by initiating events and for passive heat removal (INL, 2011).¶ The effectiveness of passive safety features can be illustrated by comparing outcomes from probabilistic risk analysis (PRA). In 1991, a Level-2 PRA was developed for the EBR-II fast neutron spectrum experimental breeder reactor—a 21 MWe plant—to compare its operational risk to that of commercial LWR‘s for which PRA‘s were available. EBR-II employs an extensive array of passive and inherent safety measures to back up traditional active safety systems. This PRA exercise showed that for EBR-II the risk of simply violating a fuel pin technical specification (with no core damage) is less than the risk of significant core disruption for the LWRs of the time. The point of the PRA comparisons is that application of passive and inherent safety measures as incorporated in SMRs can help to overcome the increase in numbers of SMRs needed to deliver the same societal energy provided by a smaller number of large-sized LWRs. Similarly, preliminary Level-1 PRA results for the NuScale Power Reactor indicate a total single-module mean CDF of 2.8x10-8/reactor-year, well below that of existing nuclear plants. And for the VK-300, the probability of severe core damage has been estimated to be less than 2.0x10-8/reactor-year (Hill et al, 1998; Kuznetsov and Gabaraev, 2007; Modarres, 2010).¶ SMRs have a smaller fuel inventory and thus a reduced source term. So on top of reduced hazard of core damage, the hazard attendant to release of radioactivity is also reduced per deployed SMR. The combination of reduced probability of core damage failure, a reduced source term, and additional fission product release barriers, could offer major advantages for emergency planning and response.

#### \*\*\*SMRs are good to go- Plan quickly resolves any lingering issues

Adams 2010 (Rod Adams, nuclear power expert with experience designing and operating small nuclear reactors and a former Submarine Engineer Officer, March 23, 2010, “Small Modular Reactors Could Be An American Export – But We Need to Move Faster,” Atomic Insights, http://atomicinsights.com/2010/03/small-modular-reactors-could-be-an-american-export-but-we-need-to-move-faster.html)

In the March 23, 2010 issue of the Wall Street Journal, Dr. Steven Chu published an op-ed piece titled America’sNew Nuclear Option that describes the Administration’s growing interest in smaller nuclear energy systems that can be produced in factories and delivered nearly complete to sites around the country and around the world. Here is a quote from that editorial:¶ As this paper recently reported, one of the most promising areas is small modular reactors (SMRs). If we can develop this technology in the U.S. and build these reactors with American workers, we will have a key competitive edge.¶ Small modular reactors would be less than one-third the size of current plants. They have compact designs and could be made in factories and transported to sites by truck or rail. SMRs would be ready to “plug and play” upon arrival.¶ If commercially successful, SMRs would significantly expand the options for nuclear power and its applications. Their small size makes them suitable to small electric grids so they are a good option for locations that cannot accommodate large-scale plants. The modular construction process would make them more affordable by reducing capital costs and construction times.¶ Their size would also increase flexibility for utilities since they could add units as demand changes, or use them for on-site replacement of aging fossil fuel plants.¶ Those are some terrific words, but the message loses some of its impact when the numbers are revealed later down the page. In the 2011 budget, the Administration requested just $39 million for a program aimed specifically at small reactors. That amount of money would not even pay for the Nuclear Regulatory Commission costs of reviewing the license for a single nuclear energy system design certification. In an agency whose total budget request is in excess of $28,000 million ($28 billion), a $39 million line item gets lost in the decimal dust.¶ There is an old saying that is appropriate here – “For where your treasure is, there your heart will be also”. The effort by Dr. Chu to publish a piece favorable to small nuclear energy systems in the Wall Street Journal is commendable, but the tiny slice of resource support indicates that there is still a lot of work to be done to enable the technology to reach the market, especially when compared to the massive number of dollars available for industrial wind deployment as a gift from taxpayers to companies like BP, Chevron, GE, FPL, and Siemens.¶ It is beyond comprehension to me that it will take us “about 10 years” (in Dr. Chu’s words) to license and deploy smaller, light water reactors that use essentially the same technology that we have been using successfully for nearly 60 years. We have the knowledge base and the manufacturing capability now; we should build several plants in controlled locations so we can show the regulators how their safety systems work to keep the public protected.¶ Dr. Chu’s op-ed piece concludes with some additional good words about the future potential of systems using high temperature gas – one of my favorites – and fast neutrons for better fuel economy plus the use of modern modeling and simulation techniquest. Dr. Chu’s head is in the right place, but he could use some encouragement to move more aggressively to take advantage of what is currently an American strong suit.¶ There are some Americans who know more than anyone else about what it takes to build durable, safe, secure, small reactors that use light water as a heat transfer and moderating fluid and steam as the power section working fluid. We can improve the economics through well understood principles of series production. The Department of Energy’s budget request for FY2011 currently includes more than $1,000 million for small, light water reactors whose allowed market is limited to military vessels. It would seem that technologies used in that program could be used as the basis for prototype licenses for systems like the mPowerTM and NuScale in a process that could take far less than 10 years.¶ There are several places in the US (Hawaii, Guam, Puerto Rico and Alaska) where early adoption of such systems could dramatically reduce the cost of electricity, reduce the dependence on a fragile fossil fuel tether, and improve its production cleanliness. Success in those locations could lead to successes in similar markets around the world and perhaps even in system refinements allow competitive costs in more traditional electrical power production markets. What are we waiting for?

### 1AC SMR Tech Advantage

#### Global SMR development is inevitable but the US is behind- Retaking the lead key to capture international markets

Tucker 2011 (William Tucker, nuclear energy researcher and author of Terrestrial Energy: How Nuclear Power Will Lead the Green Revolution and End America's Energy Odyssey, March 2011, “America's Last Nuclear Hope,” American Spectator, http://spectator.org/archives/2011/03/21/americas-last-nuclear-hope/print)

That America is going to miss the revival of nuclear power that is reaching into the remotest corners of the globe is now almost a foregone conclusion. While the rest of the world is discovering what will undoubtedly be the principal source of power by the end of the 21st century, Americans are preoccupied with how many picocuries of tritium are leaking out of Vermont Yankee or whether we'll ever get around to deciding what to do with Yucca Mountain. There are 60 new reactors under construction around the world in countries as diverse as Brazil, Argentina, Lithuania, India, and Sri Lanka. Twenty are being built in China alone. Kenya, Indonesia, Morocco, Bangladesh -- all have entered into agreements with one provider nation or another to begin plans on their own nuclear program.¶ Thirty years ago, the big three American companies -- General Electric, Westinghouse, and Babcock & Wilcox -- dominated the international market, building reactors in Europe and Asia. Today the field is completely dominated by foreign giants. Areva, 80 percent owned by the French government, is building in China, India, and Finland. Westinghouse, bought by Toshiba in 2008, has projects all around the globe. General Electric, still in the field but running in last place, recently partnered with Hitachi in the hope of reviving its fortunes. Russia's Rosatom has deals with Vietnam, India, Egypt, Brazil, and Venezuela. The biggest shock came when the United Arab Emirates put out bids to build four reactors in the oil-rich Persian Gulf. Areva and Westinghouse figured to be the contenders but both were upended by Korea, which only started building its own reactors five years ago. The Koreans won a $20 billion contract in late 2009, the largest international construction job in history. Yet all this will change once again when China enters the international market with its own design (reverse-engineered from Westinghouse) somewhere around 2013. France, which prides itself on being 80 percent nuclear, is already fearful that it will be closed out of the market by the rising Asian competition.¶ So how can America possibly fit into the highly competitive race to provide what is surely going to be the dominant energy source of the 21st century? Believe it or not, we still have a chance -- with small reactors.¶ LAST MARCH, in an op-ed for the Wall Street Journal in which he praised small modular reactors (SMRs) as "America's New Nuclear Option," Secretary of Energy Steven Chu acknowledged that America is in danger of falling behind other countries. "Our choice is clear," he wrote. "Develop these technologies today or import them tomorrow." In fact, America is the only major nuclear country that does not even have the capacity to forge the three-story steel vessel heads at the heart of large reactors and will have to import them as well. But Chu saw an opportunity in the new small designs. "If we can develop this technology in the U.S. and build these reactors with American workers, we will have a key competitive edge."

#### SMR leadership is key to shape SMR diffusion

Loudermilk 2011 (Micah J. Loudermilk is a Research Associate for the Energy & Environmental Security Policy program with the Institute for National Strategic Studies at National Defense University, May 31, 2011, “Small Nuclear Reactors and US Energy Security: Concepts, Capabilities, and Costs,” Journal of Energy Security, http://www.ensec.org/index.php?option=com\_content&view=article&id=314:small-nuclear-reactors-and-us-energy-security-concepts-capabilities-and-costs&catid=116:content0411&Itemid=375)

Reactor safety itself notwithstanding, many argue that the scattering of small reactors around the world would invariably lead to increased proliferation problems as nuclear technology and know-how disseminates around the world. Lost in the argument is the fact that this stance assumes that US decisions on advancing nuclear technology color the world as a whole. In reality, regardless of the US commitment to or abandonment of nuclear energy technology, many countries (notably China) are blazing ahead with research and construction, with 55 plants currently under construction around the world—though Fukushima may cause a temporary lull.¶ Since Three Mile Island, the US share of the global nuclear energy trade has declined precipitously as talent and technology begin to concentrate in countries more committed to nuclear power. On the small reactor front, more than 20 countries are examining the technology and the IAEA estimates that 40-100 small reactors will be in operation by 2030. Without US leadership, new nations seek to acquire nuclear technology turn to countries other than the US who may not share a deep commitment to reactor safety and nonproliferation objectives. Strong US leadership globally on nonproliferation requires a vibrant American nuclear industry. This will enable the US to set and enforce standards on nuclear agreements, spent fuel reprocessing, and developing reactor technologies.¶ As to the small reactors themselves, the designs achieve a degree of proliferation-resistance unmatched by large reactors. Small enough to be fully buried underground in independent silos, the concrete surrounding the reactor vessels can be layered much thicker than the traditional domes that protect conventional reactors without collapsing. Coupled with these two levels of superior physical protection is the traditional security associated with reactors today. Most small reactors also are factory-sealed with a supply of fuel inside. Instead of refueling reactors onsite, SMRs are returned to the factory, intact, for removal of spent fuel and refueling. By closing off the fuel cycle, proliferation risks associated with the nuclear fuel running the reactors are mitigated and concerns over the widespread distribution of nuclear fuel allayed.

#### That’s key to effective SMR diffusion- Otherwise the spread of dangerous SMR technology is inevitable

Ferguson 2010 (Dr. Charles D. Ferguson, President of the Federation of American Scientists, Adjunct Professor in the Security Studies Program at Georgetown University and Adjunct Lecturer in the National Security Studies Program at the Johns Hopkins University, May 19, 2010, Statement before the House Committee on Science and Technology for the hearing on Charting the Course for American Nuclear Technology: Evaluating the Department of Energy’s Nuclear Energy Research and Development Roadmap, http://www.fas.org/press/\_docs/05192010\_Testimony\_HouseScienceCommHearing%20.pdf)

The United States and several other countries have considerable experience in building and operating small and medium power reactors. The U.S. Navy, for example, has used small power reactors since the 1950s to provide propulsion and electrical power for submarines, aircraft carriers, and some other surface warships. China, France, Russia, and the United Kingdom have also developed nuclear powered naval vessels that use small reactors. Notably, Russia has deployed its KLT-40S and similarly designed small power reactors on icebreakers and has in recent years proposed building and selling barges that would carry these types of reactors for use in sea-side communities throughout the world. China has already exported small and medium power reactors. In 1991, China began building a reactor in Pakistan and started constructing a second reactor there in 2005. In the wake of the U.S.-India nuclear deal, Beijing has recently reached agreement with Islamabad to build two additional reactors rated at 650 MWe.2¶ One of the unintended consequences of more than 30 years of sanctions on India’s nuclear program is that India had concentrated its domestic nuclear industry on building small and medium power reactors based on Canadian pressurized heavy water technology, or Candu-type reactors. Pressurized heavy water reactors (PHWRs) pose proliferation concerns because they can be readily operated in a mode optimal for producing weapons-grade plutonium and can be refueled during power operations. Online refueling makes it exceedingly difficult to determine when refueling is occurring based solely on outside observations, for example, through satellite monitoring of the plant’s operations. Thus, the chances for potential diversion of fissile material increase. This scenario for misuse underscores the need for more frequent inspections of these facilities. But the limited resources of the International Atomic Energy Agency have resulted in a rate of inspections that are too infrequent to detect a diversion of a weapon’s worth of material.3 The opening of the international nuclear market to India may lead to further spread of PHWR technologies to more states. For example, last year, the Nuclear Power Corporation of India, Ltd. (NPCIL) expressed interest in selling PHWRs to Malaysia.4 NPCIL is the only global manufacturer of 220 MWe PHWRs. New Delhi favors South-to-South cooperation; consequently developing states in Southeast Asia, sub-Saharan Africa, and South America could become recipients of these technologies in the coming years to next few decades. Many of these countries would opt for small and medium power reactors because their electrical grids do not presently have the capacity to support large power reactors and they would likely not have the financial ability to purchase large reactors.¶ What are the implications for the United States of Chinese and Indian efforts to sell small and medium power reactors? Because China and India already have the manufacturing and marketing capability for these reactors, the United States faces an economically competitive disadvantage. Because the United States has yet to license such reactors for domestic use, it has placed itself at an additional market disadvantage. By the time the United States has licensed such reactors, China and India as well as other competitors may have established a strong hold on this emerging market.¶ The U.S. Nuclear Regulatory Commission cautioned on December 15, 2008 that the “licensing of new, small modular reactors is not just around the corner. The NRC’s attention and resources now are focused on the large-scale reactors being proposed to serve millions of Americans, rather than smaller devices with both limited power production and possible industrial process applications.” The NRC’s statement further underscored that “examining proposals for radically different technology will likely require an exhaustive review” ... before “such time as there is a formal proposal, the NRC will, as directed by Congress, continue to devote the majority of its resources to addressing the current technology base.”6 Earlier this year, the NRC devoted consideration to presentations on small modular reactors from the Nuclear Energy Institute, the Department of Energy, and the Rural Electric Cooperative Association among other stakeholders.7 At least seven vendors have proposed that their designs receive attention from the NRC.8¶ Given the differences in design philosophy among these vendors and the fact that none of these designs have penetrated the commercial market, it is too soon to tell which, if any, will emerge as market champions. Nonetheless, because of the early stage in development, the United States has an opportunity to state clearly the criteria for successful use of SMRs. But because of the head start of China and India, the United States should not procrastinate and should take a leadership role in setting the standards for safe, secure, and proliferation-resistant SMRs that can compete in the market. Several years ago, the United States sponsored assessments to determine these criteria.9 While the Platonic ideal for small modular reactors will likely not be realized, it is worth specifying what such an SMR would be. N. W. Brown and J. A. Hasberger of the Lawrence Livermore National Laboratory assessed that reactors in developing countries must:¶ • “achieve reliably safe operation with a minimum of maintenance and supporting infrastructure;¶ • offer economic competitiveness with alternative energy sources available to the candidate sites;¶ • demonstrate significant improvements in proliferation resistance relative to existing reactor systems.”10¶ Pointing to the available technologies at that time from Argentina, China, and Russia, they determined that “these countries tend to focus on the development of the reactor without integrated considerations of the overall fuel cycle, proliferation, or waste issues.” They emphasized that what is required for successful development of an SMR is “a comprehensive systems approach that considers all aspects of manufacturing, transportation, operation, and ultimate disposal.”¶ Considering proliferation resistance, their preferred approach is to eliminate the need for on-site refueling of the reactor and to provide for waste disposal away from the client country. By eliminating on-site refueling the recipient country would not need to access the reactor core, where plutonium—a weapons-usable material—resides. By removing the reactor core after the end of service life, the recipient country would not have access to fissile material contained in the used fuel. Both of these proposed criteria present technical and political challenges.

Projects with small capital outlay are typically more attractive to private investors operating in liberalized markets where indices like the net present value (NPV), the internal rate of return (IRR) and the payback time are of critical importance. Incremental capacity additions would generally lead to a smoother debt stock profile—i.e., lower financial distress of the project. For particular scenarios of SMR deployment interest during construction could be as low as half of a large reactor based project with equivalent total capacity.

#### Successful diffusion key to provide energy access to emerging nations

Kessides and Kuznetsov 2012 (Ioannis N. Kessides, Development Research Group at The World Bank, and Vladimir Kuznetsov, consultant for The World Bank, July 2012, “Small Modular Reactors for Enhancing Energy Security in Developing Countries,” Sustainability, http://www.mdpi.com/2071-1050/4/8/1806/htm)

As Table 5 indicates, there is a significant diversity of SMR designs including land-based as well as barge-mounted (Russian only) plants. Unit power varies from 8.5 to 300 MW(e) with twin-unit or multi-module plant options available in the majority of cases. Thus, SMRs would provide for greater siting flexibility and be a better fit for many developing countries with small electrical grids where they could facilitate incremental growth of the grid.¶ The siting and temporal flexibility of SMR deployment would naturally leave more time for developing and streamlining the requisite human resources and technical expertise. Moreover, the smaller size and greater simplicity of SMR components and plant design might eventually facilitate greater national industry involvement in the recipient developing countries. Regarding financing, SMRs may offer substantial advantages owing to their smaller absolute capital outlay, better scalability and reversibility of SMR projects, shorter construction periods and the resulting minimal financial risks. It should be noted that the absolute capital cost of SMRs is always much smaller compared to that of large reactors. Specifically, for the plants in the range below 300 MW(e) the overnight capital costs are below US$ 1 billion—an important consideration, especially for small developing countries.

#### Energy access is good- Key to health, environmental and quality of life improvements- Millions die every year because they have to have toxin-emitting fires inside to cook and stay warm

Kumar 2012 (Supriya Kumar, Worldwatch Institute, “Electricity Access Still Insufficient in Developing Countries Lack of access to electricity results in health, environmental, and livelihood challenges,” Common Dreams, https://www.commondreams.org/newswire/2012/02/02-0)

Despite massive gains in global access to electricity over the last two decades, governments and development organizations must continue to invest in electrification to achieve critical health, environmental, and livelihood outcomes, according to new research published by the Worldwatch Institute for its Vital Signs Online publication.¶ Between 1990 and 2008, close to 2 billion people worldwide gained access to electricity. But the International Energy Agency (IEA) estimates that more than 1.3 billion people still lack access to electricity, while the United Nations estimates that another 1 billion have unreliable access. The UN General Assembly has designated 2012 as the "International Year of Sustainable Energy for All," providing an opportunity to raise awareness of the extent and impacts of the electrification challenge.¶ "Modern energy sources provide people with lighting, heating, refrigeration, cooking, water pumping, and other services that are essential for reducing poverty, improving health and education, and increasing incomes," write report authors Michael Renner and Matthew Lucky. "It will be difficult to achieve a number of the UN's Millennium Development Goals without improving energy access." Among the UN goals, targeted at 2015, are combating HIV/AIDS, malaria and other diseases and eradicating poverty and hunger.¶ At least 2.7 billion people, and possibly more than 3 billion, lack access to modern fuels for cooking and heating. They rely instead on traditional biomass sources, such as firewood, charcoal, manure, and crop residues, that can emit harmful indoor air pollutants when burned. These pollutants cause nearly 2 million premature deaths worldwide each year, an estimated 44 percent of them in children. Among adult deaths, 60 percent are women. Traditional energy usage also contributes to environmental impacts including forest and woodland degradation, soil erosion, and black carbon emissions that contribute to global climate change.

#### SMR lead also cements tech leadership

O’Connor 2011 (Dan O’Connor, Policy Fellow in AEL’s New Energy Leaders Project, January 4, 2011, “Small Modular Reactors: Miracle, Mirage, or Between?,” Americans for Energy Leadership, http://leadenergy.org/2011/01/small-modular-reactors-miracle-mirage-or-medium/)

From an international leadership perspective, the SMR may be one of the few remaining technologies which the US stands to commercialize more successfully and rapidly than its competitors. Interest among nations like China and India in SMR technology development is weaker than in the US, principally because their rapidly growing energy demand and comparably quick nuclear implementation policies are conducive to constructing large reactors.¶ Thus, the SMR should be considered neither a miracle nor a mirage, but is aptly-viewed as a medium: a stepping-stone for technological innovation and implementation as the nuclear industry adapts to the needs of national and international markets. The design’s reemergence illustrates the long-dormant industry’s newfound vitality and responsiveness. Reacting, in the US, to harsh regulatory standards and high resulting upfront costs, the industry is adjusting to curtail price tags and expand the buyer’s market.¶ In order for the SMR to help initiate the growth of a more robust nuclear future, though, demonstration is absolutely essential. Government support to this end is certainly welcome, but commercial realization is most likely to start in a remote location for which SMRs were originally intended, and spread as experience grows and costs come down.¶ Mr. Gates’ miracles will not be borne out of thin air – they must be cultivated. The SMR seed should be one of many the government aggressively nurtures, with the hope that industry, academia, and policy makers keep a watchful eye on its maturation. We might find that the advent of hype-driven public support, a substantial amount of research funding, and a growing market of environmentally-concerned customers, are just the right nutrients to bear our miracle.

#### Key internal link to heg- Explains last five centuries of global hegemons

Drezner 2001 Daniel Drezner (professor of international politics at The Fletcher School of Law and Diplomacy at Tufts University) 2001 “State structurdae, technological leadership and the maintenance of hegemony” http://www.danieldrezner.com/research/tech.pdf

In this decade, proponents of globalization argue that because information and capital are mobile, the location of innovation has been rendered unimportant.6 While this notion has some popular appeal, the globalization thesis lacks theoretical or empirical support. Theoretically, even in a world of perfect information and perfect capital mobility, economists have shown that the location of technological innovation matters. Empirically, the claims of globalization proponents have been far-fetched. Capital is not perfectly mobile, and increased economic exchange does not lead to a seamless transfer of technology from one country to another.8 The location of innovation still matters. Long-cycle theorists have paid the most attention to the link between technological innovation, economic growth, and the rise and fall of hegemons.9 They argue that the past five hundred years of the global political economy can be explained by the waxing and waning of hegemonic powers. Countries acquire hegemonic status because they are the first to develop a cluster of technologies in leading sectors. These innovations generate spillover effects to the rest of the lead economy, and then to the global economy. Over time, these ‘technological hegemons’ fail to maintain the rate of innovations, leading to a period of strife until a new hegemonic power is found.

#### Otherwise – status based great power conflict is inevitable – relative lead key to prevent global conflict

Wohlforth 2009 William C. Wohlforth (a professor of government at Dartmouth College) 2009 “Unipolarity, Status Competition, and Great Power War” Project Muse

Second, I question the dominant view that status quo evaluations are relatively independent of the distribution of capabilities. If the status of states depends in some measure on their relative capabilities, and if states derive utility from status, then different distributions of capabilities may affect levels of satisfaction, just as different income distributions may affect levels of status competition in domestic settings. 6 Building on research in psychology and sociology, I argue that even capabilities distributions among major powers foster ambiguous status hierarchies, which generate more dissatisfaction and clashes over the status quo. And the more stratified the distribution of capabilities, the less likely such status competition is. Unipolarity thus generates far fewer incentives than either bipolarity or multipolarity for direct great power positional competition over status. Elites in the other major powers continue to prefer higher status, but in a unipolar system they face comparatively weak incentives to translate that preference into costly action. And the absence of such incentives matters because social status is a positional good—something whose value depends on how much one has in relation to others.7 “If everyone has high status,” Randall Schweller notes, “no one does.”8 While one actor might increase its status, all cannot simultaneously do so. High status is thus inherently scarce, and competitions for status tend to be zero sum.9 I begin by describing the puzzles facing predominant theories that status competition might solve. Building on recent research on social identity and status seeking, I then show that under certain conditions the ways decision makers identify with the states they represent may prompt them to frame issues as positional disputes over status in a social hierarchy. I develop hypotheses that tailor this scholarship to the domain of great power politics, showing how the probability of status competition is likely to be linked to polarity. The rest of the article investigates whether there is sufficient evidence for these hypotheses to warrant further refinement and testing. I pursue this in three ways: by showing that the theory advanced here is consistent with what we know about large-scale patterns of great power conflict through history; by [End Page 30] demonstrating that the causal mechanisms it identifies did drive relatively secure major powers to military conflict in the past (and therefore that they might do so again if the world were bipolar or multipolar); and by showing that observable evidence concerning the major powers’ identity politics and grand strategies under unipolarity are consistent with the theory’s expectations. Puzzles of Power and War Recent research on the connection between the distribution of capabilities and war has concentrated on a hypothesis long central to systemic theories of power transition or hegemonic stability: that major war arises out of a power shift in favor of a rising state dissatisfied with a status quo defended by a declining satisfied state.10 Though they have garnered substantial empirical support, these theories have yet to solve two intertwined empirical and theoretical puzzles—each of which might be explained by positional concerns for status. First, if the material costs and benefits of a given status quo are what matters, why would a state be dissatisfied with the very status quo that had abetted its rise? The rise of China today naturally prompts this question, but it is hardly a novel situation. Most of the best known and most consequential power transitions in history featured rising challengers that were prospering mightily under the status quo. In case after case, historians argue that these revisionist powers sought recognition and standing rather than specific alterations to the existing rules and practices that constituted the order of the day. In each paradigmatic case of hegemonic war, the claims of the rising power are hard to reduce to instrumental adjustment of the status quo. In R. Ned Lebow’s reading, for example, Thucydides’ account tells us that the rise of Athens posed unacceptable threats not to the security or welfare of Sparta but rather to its identity as leader of the Greek world, which was an important cause of the Spartan assembly’s vote for war.11 The issues that inspired Louis XIV’s and Napoleon’s dissatisfaction with the status quo were many and varied, but most accounts accord [End Page 31] independent importance to the drive for a position of unparalleled primacy. In these and other hegemonic struggles among leading states in post-Westphalian Europe, the rising challenger’s dissatisfaction is often difficult to connect to the material costs and benefits of the status quo, and much contemporary evidence revolves around issues of recognition and status.12 Wilhemine Germany is a fateful case in point. As Paul Kennedy has argued, underlying material trends as of 1914 were set to propel Germany’s continued rise indefinitely, so long as Europe remained at peace.13 Yet Germany chafed under the very status quo that abetted this rise and its elite focused resentment on its chief trading partner—the great power that presented the least plausible threat to its security: Great Britain. At fantastic cost, it built a battleship fleet with no plausible strategic purpose other than to stake a claim on global power status.14 Recent historical studies present strong evidence that, far from fearing attacks from Russia and France, German leaders sought to provoke them, knowing that this would lead to a long, expensive, and sanguinary war that Britain was certain to join.15 And of all the motivations swirling round these momentous decisions, no serious historical account fails to register German leaders’ oft-expressed yearning for “a place in the sun.” The second puzzle is bargaining failure. Hegemonic theories tend to model war as a conflict over the status quo without specifying precisely what the status quo is and what flows of benefits it provides to states.16 Scholars generally follow Robert Gilpin in positing that the underlying issue concerns a “desire to redraft the rules by which relations among nations work,” “the nature and governance of the system,” and “the distribution of territory among the states in the system.”17 If these are the [End Page 32] issues at stake, then systemic theories of hegemonic war and power transition confront the puzzle brought to the fore in a seminal article by James Fearon: what prevents states from striking a bargain that avoids the costs of war? 18 Why can’t states renegotiate the international order as underlying capabilities distributions shift their relative bargaining power? Fearon proposed that one answer consistent with strict rational choice assumptions is that such bargains are infeasible when the issue at stake is indivisible and cannot readily be portioned out to each side. Most aspects of a given international order are readily divisible, however, and, as Fearon stressed, “both the intrinsic complexity and richness of most matters over which states negotiate and the availability of linkages and side-payments suggest that intermediate bargains typically will exist.”19 Thus, most scholars have assumed that the indivisibility problem is trivial, focusing on two other rational choice explanations for bargaining failure: uncertainty and the commitment problem.20 In the view of many scholars, it is these problems, rather than indivisibility, that likely explain leaders’ inability to avail themselves of such intermediate bargains. Yet recent research inspired by constructivism shows how issues that are physically divisible can become socially indivisible, depending on how they relate to the identities of decision makers.21 Once issues surrounding the status quo are framed in positional terms as bearing on the disputants’ relative standing, then, to the extent that they value their standing itself, they may be unwilling to pursue intermediate bargaining solutions. Once linked to status, easily divisible issues that theoretically provide opportunities for linkages and side payments of various sorts may themselves be seen as indivisible and thus unavailable as avenues for possible intermediate bargains. The historical record surrounding major wars is rich with evidence suggesting that positional concerns over status frustrate bargaining: expensive, protracted conflict over what appear to be minor issues; a propensity on the part of decision makers to frame issues in terms of relative rank even when doing so makes bargaining harder; decision-makers’ [End Page 33] inability to accept feasible divisions of the matter in dispute even when failing to do so imposes high costs; demands on the part of states for observable evidence to confirm their estimate of an improved position in the hierarchy; the inability of private bargains to resolve issues; a frequently observed compulsion for the public attainment of concessions from a higher ranked state; and stubborn resistance on the part of states to which such demands are addressed even when acquiescence entails limited material cost. The literature on bargaining failure in the context of power shifts remains inconclusive, and it is premature to take any empirical pattern as necessarily probative. Indeed, Robert Powell has recently proposed that indivisibility is not a rationalistic explanation for war after all: fully rational leaders with perfect information should prefer to settle a dispute over an indivisible issue by resorting to a lottery rather than a war certain to destroy some of the goods in dispute. What might prevent such bargaining solutions is not indivisibility itself, he argues, but rather the parties’ inability to commit to abide by any agreement in the future if they expect their relative capabilities to continue to shift.22 This is the credible commitment problem to which many theorists are now turning their attention. But how it relates to the information problem that until recently dominated the formal literature remains to be seen.23 The larger point is that positional concerns for status may help account for the puzzle of bargaining failure. In the rational choice bargaining literature, war is puzzling because it destroys some of the benefits or flows of benefits in dispute between the bargainers, who would be better off dividing the spoils without war. Yet what happens to these models if what matters for states is less the flows of material benefits themselves than their implications for relative status? The salience of this question depends on the relative importance of positional concern for status among states. Do Great Powers Care about Status? Mainstream theories generally posit that states come to blows over an international status quo only when it has implications for their security or material well-being. The guiding assumption is that a state’s satisfaction [End Page 34] with its place in the existing order is a function of the material costs and benefits implied by that status.24 By that assumption, once a state’s status in an international order ceases to affect its material wellbeing, its relative standing will have no bearing on decisions for war or peace. But the assumption is undermined by cumulative research in disciplines ranging from neuroscience and evolutionary biology to economics, anthropology, sociology, and psychology that human beings are powerfully motivated by the desire for favorable social status comparisons. This research suggests that the preference for status is a basic disposition rather than merely a strategy for attaining other goals.25 People often seek tangibles not so much because of the welfare or security they bring but because of the social status they confer. Under certain conditions, the search for status will cause people to behave in ways that directly contradict their material interest in security and/or prosperity.

#### Hegemony is key to prevent the escalation of global hotspots- retrenchment causes bickering internationally over leadership and prevents cooperation

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For if America falters, the world is unlikely to be dominated by a single preeminent successor -- not even China. International uncertainty, increased tension among global competitors, and even outright chaos would be far more likely outcomes. While a sudden, massive crisis of the American system -- for instance, another financial crisis -- would produce a fast-moving chain reaction leading to global political and economic disorder, a steady drift by America into increasingly pervasive decay or endlessly widening warfare with Islam would be unlikely to produce, even by 2025, an effective global successor. No single power will be ready by then to exercise the role that the world, upon the fall of the Soviet Union in 1991, expected the United States to play: the leader of a new, globally cooperative world order. More probable would be a protracted phase of rather inconclusive realignments of both global and regional power, with no grand winners and many more losers, in a setting of international uncertainty and even of potentially fatal risks to global well-being. Rather than a world where dreams of democracy flourish, a Hobbesian world of enhanced national security based on varying fusions of authoritarianism, nationalism, and religion could ensue. RELATED 8 Geopolitically Endangered Species The leaders of the world's second-rank powers, among them India, Japan, Russia, and some European countries, are already assessing the potential impact of U.S. decline on their respective national interests. The Japanese, fearful of an assertive China dominating the Asian mainland, may be thinking of closer links with Europe. Leaders in India and Japan may be considering closer political and even military cooperation in case America falters and China rises. Russia, while perhaps engaging in wishful thinking (even schadenfreude) about America's uncertain prospects, will almost certainly have its eye on the independent states of the former Soviet Union. Europe, not yet cohesive, would likely be pulled in several directions: Germany and Italy toward Russia because of commercial interests, France and insecure Central Europe in favor of a politically tighter European Union, and Britain toward manipulating a balance within the EU while preserving its special relationship with a declining United States. Others may move more rapidly to carve out their own regional spheres: Turkey in the area of the old Ottoman Empire, Brazil in the Southern Hemisphere, and so forth. None of these countries, however, will have the requisite combination of economic, financial, technological, and military power even to consider inheriting America's leading role. China, invariably mentioned as America's prospective successor, has an impressive imperial lineage and a strategic tradition of carefully calibrated patience, both of which have been critical to its overwhelmingly successful, several-thousand-year-long history. China thus prudently accepts the existing international system, even if it does not view the prevailing hierarchy as permanent. It recognizes that success depends not on the system's dramatic collapse but on its evolution toward a gradual redistribution of power. Moreover, the basic reality is that China is not yet ready to assume in full America's role in the world. Beijing's leaders themselves have repeatedly emphasized that on every important measure of development, wealth, and power, China will still be a modernizing and developing state several decades from now, significantly behind not only the United States but also Europe and Japan in the major per capita indices of modernity and national power. Accordingly, Chinese leaders have been restrained in laying any overt claims to global leadership. At some stage, however, a more assertive Chinese nationalism could arise and damage China's international interests. A swaggering, nationalistic Beijing would unintentionally mobilize a powerful regional coalition against itself. None of China's key neighbors -- India, Japan, and Russia -- is ready to acknowledge China's entitlement to America's place on the global totem pole. They might even seek support from a waning America to offset an overly assertive China. The resulting regional scramble could become intense, especially given the similar nationalistic tendencies among China's neighbors. A phase of acute international tension in Asia could ensue. Asia of the 21st century could then begin to resemble Europe of the 20th century -- violent and bloodthirsty. At the same time, the security of a number of weaker states located geographically next to major regional powers also depends on the international status quo reinforced by America's global preeminence -- and would be made significantly more vulnerable in proportion to America's decline. The states in that exposed position -- including Georgia, Taiwan, South Korea, Belarus, Ukraine, Afghanistan, Pakistan, Israel, and the greater Middle East -- are today's geopolitical equivalents of nature's most endangered species. Their fates are closely tied to the nature of the international environment left behind by a waning America, be it ordered and restrained or, much more likely, self-serving and expansionist. A faltering United States could also find its strategic partnership with Mexico in jeopardy. America's economic resilience and political stability have so far mitigated many of the challenges posed by such sensitive neighborhood issues as economic dependence, immigration, and the narcotics trade. A decline in American power, however, would likely undermine the health and good judgment of the U.S. economic and political systems. A waning United States would likely be more nationalistic, more defensive about its national identity, more paranoid about its homeland security, and less willing to sacrifice resources for the sake of others' development. The worsening of relations between a declining America and an internally troubled Mexico could even give rise to a particularly ominous phenomenon: the emergence, as a major issue in nationalistically aroused Mexican politics, of territorial claims justified by history and ignited by cross-border incidents. Another consequence of American decline could be a corrosion of the generally cooperative management of the global commons -- shared interests such as sea lanes, space, cyberspace, and the environment, whose protection is imperative to the long-term growth of the global economy and the continuation of basic geopolitical stability. In almost every case, the potential absence of a constructive and influential U.S. role would fatally undermine the essential communality of the global commons because the superiority and ubiquity of American power creates order where there would normally be conflict. None of this will necessarily come to pass. Nor is the concern that America's decline would generate global insecurity, endanger some vulnerable states, and produce a more troubled North American neighborhood an argument for U.S. global supremacy. In fact, the strategic complexities of the world in the 21st century make such supremacy unattainable. But those dreaming today of America's collapse would probably come to regret it. And as the world after America would be increasingly complicated and chaotic, it is imperative that the United States pursue a new, timely strategic vision for its foreign policy -- or start bracing itself for a dangerous slide into global turmoil.

#### There are an infinite number of motivations for aggression – only hegemony controls high-risk decision-making that turns aggression into war

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If major interstate war is predominantly a product of a synergy between a potential nondemocratic aggressor and an absence of effective deterrence, what is the role of the many traditional "causes" of war? Past, and many contemporary, theories of war have focused on the role of specific disputes between nations, ethnic and religious differences, arms races, poverty and social injustice, competition for resources, incidents and accidents, greed, fear, perceptions of "honor," and many other factors. Such factors may well play a role in motivating aggression or generating fear and manipulating public opinion. The reality, however, is that while some of these factors may have more potential to contribute to war than others, there may well be an infinite set of motivating factors, or human wants, motivating aggression. It is not the independent existence of such motivating factors for war but rather the circumstances permitting or encouraging high-risk decisions leading to war that is the key to more effectively controlling armed conflict. And the same may also be true of democide. The early focus in the Rwanda slaughter on "ethnic conflict," as though Hutus and Tutsis had begun to slaughter each other through spontaneous combustion, distracted our attention from the reality that a nondemocratic Hutu regime had carefully planned and orchestrated a genocide against Rwandan Tutsis as well as its Hutu opponents. 158 Certainly if we were able to press a button and end poverty, racism, religious intolerance, injustice, and endless disputes, we would want to do so. Indeed, democratic governments must remain committed to policies that will produce a better world by all measures of human progress. The broader achievement of democracy and the rule of law will itself assist in this progress. No one, however, has yet been able to demonstrate the kind of robust correlation with any of these "traditional" causes of war that is reflected in the "democratic peace." Further, given the difficulties in overcoming many of these social problems, an approach to war exclusively dependent on their solution may doom us to war for generations to come. [\*394] A useful framework for thinking about the war puzzle is provided in the Kenneth Waltz classic Man, the State and War, 159 first published in 1954 for the Institute of War and Peace Studies, in which he notes that previous thinkers about the causes of war have tended to assign responsibility at one of the three levels of individual psychology, the nature of the state, or the nature of the international system. This tripartite level of analysis has subsequently been widely copied in the study of international relations. We might summarize my analysis in this classical construct by suggesting that the most critical variables are the second and third levels, or "images," of analysis. Government structures, at the second level, seem to play a central role in levels of aggressiveness in high-risk behavior leading to major war. In this, the "democratic peace" is an essential insight. The third level of analysis, the international system, or totality of external incentives influencing the decision to go to war, is also critical when government structures do not restrain such high-risk behavior on their own. Indeed, nondemocratic systems may not only fail to constrain inappropriate aggressive behavior, they may even massively enable it by placing the resources of the state at the disposal of a ruthless regime elite. It is not that the first level of analysis, the individual, is unimportant - I have already argued that it is important in elite perceptions about the permissibility and feasibility of force and resultant necessary levels of deterrence. It is, instead, that the second level of analysis, government structures, may be a powerful proxy for settings bringing to power those who are disposed to aggressive military adventures and in creating incentive structures predisposed to high-risk behavior. We might also want to keep open the possibility that a war/peace model focused on democracy and deterrence might be further usefully refined by adding psychological profiles of particular leaders as we assess the likelihood of aggression and levels of necessary deterrence. Nondemocracies' leaders can have different perceptions of the necessity or usefulness of force and, as Marcus Aurelius should remind us, not all absolute leaders are Caligulas or Neros. Further, the history of ancient Egypt reminds us that not all Pharaohs were disposed to make war on their neighbors. Despite the importance of individual leaders, however, the key to war avoidance is understanding that major international war is critically an interaction, or synergy, of certain characteristics at levels two and three - specifically an absence of [\*395] democracy and an absence of effective deterrence. Yet another way to conceptualize the importance of democracy and deterrence in war avoidance is to note that each in its own way internalizes the costs to decision elites of engaging in high-risk aggressive behavior. Democracy internalizes these costs in a variety of ways including displeasure of the electorate at having war imposed upon it by its own government. And deterrence either prevents achievement of the objective altogether or imposes punishing costs making the gamble not worth the risk. 160 III. Testing the Hypothesis Hypotheses, or paradigms, are useful if they reflect the real world better than previously held paradigms. In the complex world of foreign affairs and the war puzzle, perfection is unlikely. No general construct will fit all cases even in the restricted category of "major interstate war;" there are simply too many variables. We should insist, however, on testing against the real world and on results that suggest enhanced usefulness over other constructs. In testing the hypothesis, we can test it for consistency with major wars. That is, in looking, for example, at the principal interstate wars in the twentieth century, did they present both a nondemocratic aggressor and an absence of effective deterrence? 161 And although it, by itself, does not prove causation, we might also want to test the hypothesis against settings of potential wars that did not occur. That is, in non-war settings, was there an absence of at least one element of the synergy? We might also ask questions about the effect of changes on the international system in either element of the synergy. That is, what, in general, happens when a totalitarian state makes a transition to stable democracy or vice versa? And what, in general, happens when levels of deterrence are dramatically increased or decreased?

#### Robust statistics validate our impacts – prefer them over their polemics

Owen 11 John M. Owen Professor of Politics at University of Virginia PhD from Harvard "DON’T DISCOUNT HEGEMONY" Feb 11 www.cato-unbound.org/2011/02/11/john-owen/dont-discount-hegemony/

Andrew Mack and his colleagues at the Human Security Report Project are to be congratulated. Not only do they present a study with a striking conclusion, driven by data, free of theoretical or ideological bias, but they also do something quite unfashionable: they bear good news. Social scientists really are not supposed to do that. Our job is, if not to be Malthusians, then at least to point out disturbing trends, looming catastrophes, and the imbecility and mendacity of policy makers. And then it is to say why, if people listen to us, things will get better. We do this as if our careers depended upon it, and perhaps they do; for if all is going to be well, what need then for us? Our colleagues at Simon Fraser University are brave indeed. That may sound like a setup, but it is not. I shall challenge neither the data nor the general conclusion that violent conflict around the world has been decreasing in fits and starts since the Second World War. When it comes to violent conflict among and within countries, things have been getting better. (The trends have not been linear—Figure 1.1 actually shows that the frequency of interstate wars peaked in the 1980s—but the 65-year movement is clear.) Instead I shall accept that Mack et al. are correct on the macro-trends, and focus on their explanations they advance for these remarkable trends. With apologies to any readers of this forum who recoil from academic debates, this might get mildly theoretical and even more mildly methodological. Concerning international wars, one version of the “nuclear-peace” theory is not in fact laid to rest by the data. It is certainly true that nuclear-armed states have been involved in many wars. They have even been attacked (think of Israel), which falsifies the simple claim of “assured destruction”—that any nuclear country A will deter any kind of attack by any country B because B fears a retaliatory nuclear strike from A. But the most important “nuclear-peace” claim has been about mutually assured destruction, which obtains between two robustly nuclear-armed states. The claim is that (1) rational states having second-strike capabilities—enough deliverable nuclear weaponry to survive a nuclear first strike by an enemy—will have an overwhelming incentive not to attack one another; and (2) we can safely assume that nuclear-armed states are rational. It follows that states with a second-strike capability will not fight one another. Their colossal atomic arsenals neither kept the United States at peace with North Vietnam during the Cold War nor the Soviet Union at peace with Afghanistan. But the argument remains strong that those arsenals did help keep the United States and Soviet Union at peace with each other. Why non-nuclear states are not deterred from fighting nuclear states is an important and open question. But in a time when calls to ban the Bomb are being heard from more and more quarters, we must be clear about precisely what the broad trends toward peace can and cannot tell us. They may tell us nothing about why we have had no World War III, and little about the wisdom of banning the Bomb now. Regarding the downward trend in international war, Professor Mack is friendlier to more palatable theories such as the “democratic peace” (democracies do not fight one another, and the proportion of democracies has increased, hence less war); the interdependence or “commercial peace” (states with extensive economic ties find it irrational to fight one another, and interdependence has increased, hence less war); and the notion that people around the world are more anti-war than their forebears were. Concerning the downward trend in civil wars, he favors theories of economic growth (where commerce is enriching enough people, violence is less appealing—a logic similar to that of the “commercial peace” thesis that applies among nations) and the end of the Cold War (which end reduced superpower support for rival rebel factions in so many Third-World countries). These are all plausible mechanisms for peace. What is more, none of them excludes any other; all could be working toward the same end. That would be somewhat puzzling, however. Is the world just lucky these days? How is it that an array of peace-inducing factors happens to be working coincidentally in our time, when such a magical array was absent in the past? The answer may be that one or more of these mechanisms reinforces some of the others, or perhaps some of them are mutually reinforcing. Some scholars, for example, have been focusing on whether economic growth might support democracy and vice versa, and whether both might support international cooperation, including to end civil wars. We would still need to explain how this charmed circle of causes got started, however. And here let me raise another factor, perhaps even less appealing than the “nuclear peace” thesis, at least outside of the United States. That factor is what international relations scholars call hegemony—specifically American hegemony. A theory that many regard as discredited, but that refuses to go away, is called hegemonic stability theory. The theory emerged in the 1970s in the realm of international political economy. It asserts that for the global economy to remain open—for countries to keep barriers to trade and investment low—one powerful country must take the lead. Depending on the theorist we consult, “taking the lead” entails paying for global public goods (keeping the sea lanes open, providing liquidity to the international economy), coercion (threatening to raise trade barriers or withdraw military protection from countries that cheat on the rules), or both. The theory is skeptical that international cooperation in economic matters can emerge or endure absent a hegemon. The distastefulness of such claims is self-evident: they imply that it is good for everyone the world over if one country has more wealth and power than others. More precisely, they imply that it has been good for the world that the United States has been so predominant. There is no obvious reason why hegemonic stability theory could not apply to other areas of international cooperation, including in security affairs, human rights, international law, peacekeeping (UN or otherwise), and so on. What I want to suggest here—suggest, not test—is that American hegemony might just be a deep cause of the steady decline of political deaths in the world. How could that be? After all, the report states that United States is the third most war-prone country since 1945. Many of the deaths depicted in Figure 10.4 were in wars that involved the United States (the Vietnam War being the leading one). Notwithstanding politicians’ claims to the contrary, a candid look at U.S. foreign policy reveals that the country is as ruthlessly self-interested as any other great power in history. The answer is that U.S. hegemony might just be a deeper cause of the proximate causes outlined by Professor Mack. Consider economic growth and openness to foreign trade and investment, which (so say some theories) render violence irrational. American power and policies may be responsible for these in two related ways. First, at least since the 1940s Washington has prodded other countries to embrace the market capitalism that entails economic openness and produces sustainable economic growth. The United States promotes capitalism for selfish reasons, of course: its own domestic system depends upon growth, which in turn depends upon the efficiency gains from economic interaction with foreign countries, and the more the better. During the Cold War most of its allies accepted some degree of market-driven growth. Second, the U.S.-led western victory in the Cold War damaged the credibility of alternative paths to development—communism and import-substituting industrialization being the two leading ones—and left market capitalism the best model. The end of the Cold War also involved an end to the billions of rubles in Soviet material support for regimes that tried to make these alternative models work. (It also, as Professor Mack notes, eliminated the superpowers’ incentives to feed civil violence in the Third World.) What we call globalization is caused in part by the emergence of the United States as the global hegemon. The same case can be made, with somewhat more difficulty, concerning the spread of democracy. Washington has supported democracy only under certain conditions—the chief one being the absence of a popular anti-American movement in the target state—but those conditions have become much more widespread following the collapse of communism. Thus in the 1980s the Reagan administration—the most anti-communist government America ever had—began to dump America’s old dictator friends, starting in the Philippines. Today Islamists tend to be anti-American, and so the Obama administration is skittish about democracy in Egypt and other authoritarian Muslim countries. But general U.S. material and moral support for liberal democracy remains strong.

#### Otherwise global nuclear war and extinction are inevitable

Robert Kagan (Senior Associate at the Carnegie Endowment for International Peace and Senior Transatlantic Fellow at the German Marshall Fund) 2007 “End of Dreams, Return of History,” Hoover Institution, No. 144, August/September, http://www.hoover.org/publications/policy-review/article/6136

 The jostling for status and influence among these ambitious nations and would-be nations is a second defining feature of the new post-Cold War international system. Nationalism in all its forms is back, if it ever went away, and so is international competition for power, influence, honor, and status. American predominance prevents these rivalries from intensifying — its regional as well as its global predominance. Were the United States to diminish its influence in the regions where it is currently the strongest power, the other nations would settle disputes as great and lesser powers have done in the past: sometimes through diplomacy and accommodation but often through confrontation and wars of varying scope, intensity, and destructiveness. One novel aspect of such a multipolar world is that most of these powers would possess nuclear weapons. That could make wars between them less likely, or it could simply make them more catastrophic.It is easy but also dangerous to underestimate the role the United States plays in providing a measure of stability in the world even as it also disrupts stability. For instance, the United States is the dominant naval power everywhere, such that other nations cannot compete with it even in their home waters. They either happily or grudgingly allow the United States Navy to be the guarantor of international waterways and trade routes, of international access to markets and raw materials such as oil. Even when the United States engages in a war, it is able to play its role as guardian of the waterways. In a more genuinely multipolar world, however, it would not. Nations would compete for naval dominance at least in their own regions and possibly beyond. Conflict between nations would involve struggles on the oceans as well as on land. Armed embargos, of the kind used in World War i and other major conflicts, would disrupt trade flows in a way that is now impossible. Such order as exists in the world rests not merely on the goodwill of peoples but on a foundation provided by American power. Even the European Union, that great geopolitical miracle, owes its founding to American power, for without it the European nations after World War ii would never have felt secure enough to reintegrate Germany. Most Europeans recoil at the thought, but even today Europe ’s stability depends on the guarantee, however distant and one hopes unnecessary, that the United States could step in to check any dangerous development on the continent. In a genuinely multipolar world, that would not be possible without renewing the danger of world war. People who believe greater equality among nations would be preferable to the present American predominance often succumb to a basic logical fallacy. They believe the order the world enjoys today exists independently of American power. They imagine that in a world where American power was diminished, the aspects of international order that they like would remain in place. But that ’s not the way it works. International order does not rest on ideas and institutions. It is shaped by configurations of power. The international order we know today reflects the distribution of power in the world since World War ii, and especially since the end of the Cold War. A different configuration of power, a multipolar world in which the poles were Russia, China, the United States, India, and Europe, would produce its own kind of order, with different rules and norms reflecting the interests of the powerful states that would have a hand in shaping it. Would that international order be an improvement? Perhaps for Beijing and Moscow it would. But it is doubtful that it would suit the tastes of enlightenment liberals in the United States and Europe. The current order, of course, is not only far from perfect but also offers no guarantee against major conflict among the world ’s great powers. Even under the umbrella of unipolarity, regional conflicts involving the large powers may erupt. War could erupt between China and Taiwan and draw in both the United States and Japan. War could erupt between Russia and Georgia, forcing the United States and its European allies to decide whether to intervene or suffer the consequences of a Russian victory. Conflict between India and Pakistan remains possible, as does conflict between Iran and Israel or other Middle Eastern states. These, too, could draw in other great powers, including the United States. Such conflicts may be unavoidable no matter what policies the United States pursues. But they are more likely to erupt if the United States weakens or withdraws from its positions of regional dominance. This is especially true in East Asia, where most nations agree that a reliable American power has a stabilizing and pacific effect on the region. That is certainly the view of most of China ’s neighbors. But even China, which seeks gradually to supplant the United States as the dominant power in the region, faces the dilemma that an American withdrawal could unleash an ambitious, independent, nationalist Japan. In Europe, too, the departure of the United States from the scene — even if it remained the world’s most powerful nation — could be destabilizing. It could tempt Russia to an even more overbearing and potentially forceful approach to unruly nations on its periphery. Although some realist theorists seem to imagine that the disappearance of the Soviet Union put an end to the possibility of confrontation between Russia and the West, and therefore to the need for a permanent American role in Europe, history suggests that conflicts in Europe involving Russia are possible even without Soviet communism. If the United States withdrew from Europe — if it adopted what some call a strategy of “offshore balancing” — this could in time increase the likelihood of conflict involving Russia and its near neighbors, which could in turn draw the United States back in under unfavorable circumstances. It is also optimistic to imagine that a retrenchment of the American position in the Middle East and the assumption of a more passive, “offshore” role would lead to greater stability there. The vital interest the United States has in access to oil and the role it plays in keeping access open to other nations in Europe and Asia make it unlikely that American leaders could or would stand back and hope for the best while the powers in the region battle it out. Nor would a more “even-handed” policy toward Israel, which some see as the magic key to unlocking peace, stability, and comity in the Middle East, obviate the need to come to Israel ’s aid if its security became threatened. That commitment, paired with the American commitment to protect strategic oil supplies for most of the world, practically ensures a heavy American military presence in the region, both on the seas and on the ground. The subtraction of American power from any region would not end conflict but would simply change the equation. In the Middle East, competition for influence among powers both inside and outside the region has raged for at least two centuries. The rise of Islamic fundamentalism doesn ’t change this. It only adds a new and more threatening dimension to the competition, which neither a sudden end to the conflict between Israel and the Palestinians nor an immediate American withdrawal from Iraq would change. The alternative to American predominance in the region is not balance and peace. It is further competition. The region and the states within it remain relatively weak. A diminution of American influence would not be followed by a diminution of other external influences. One could expect deeper involvement by both China and Russia, if only to secure their interests. 18 And one could also expect the more powerful states of the region, particularly Iran, to expand and fill the vacuum. It is doubtful that any American administration would voluntarily take actions that could shift the balance of power in the Middle East further toward Russia, China, or Iran. The world hasn ’t changed that much. An American withdrawal from Iraq will not return things to “normal” or to a new kind of stability in the region. It will produce a new instability, one likely to draw the United States back in again.

#### Claims of anti-Americanism and blowback are epistemologically flawed

Charles Krauthammer all around badass April 28, 2011 Washington Post “The Obama doctrine: Leading from behind” http://www.washingtonpost.com/opinions/the-obama-doctrine-leading-from-behind/2011/04/28/AFBCy18E\_story.html

It is the fate of any assertive superpower to be envied, denounced and blamed for everything under the sun. Nothing has changed. Moreover, for a country so deeply reviled, why during the massive unrest in Tunisia, Egypt, Bahrain, Yemen, Jordan and Syria have anti-American demonstrations been such a rarity? Who truly reviles America the hegemon? The world that Obama lived in and shaped him intellectually: the elite universities; his Hyde Park milieu (including his not-to-be-mentioned friends, William Ayers and Bernardine Dohrn); the church he attended for two decades, ringing with sermons more virulently anti-American than anything heard in today’s full-throated uprising of the Arab Street. It is the liberal elites who revile the American colossus and devoutly wish to see it cut down to size. Leading from behind — diminishing America’s global standing and assertiveness — is a reaction to their view of America, not the world’s.

#### You should adopt an ontology of pragmatism- we must work with the system that we are handed and cannot simply wish it away

HNSG (Harvard Nuclear Study Group – Albert Carnesale, UCLA Chancellor Emeritus and holds professorial appointments in UCLA’s School of Public Affairs and Henry Samueli School of Engineering and Applied Science, twenty-three year tenure at Harvard University , Pauly Doty, Founder and Director Emeritus of the Center for Science and International Affairs and Mallinckrodt Professor of Biochemistry, and an emeritus member of the BCSIA Board of Directors, Stanley Hoffmann, the Paul and Catherine Buttenweiser University Professor at Harvard University, Samuel Huntington, was an associate professor of government at Columbia University where he was also Deputy Director of The Institute for War and Peace Studies, Joseph Nye, University Distinguished Service Professor, and former Dean of the Kennedy School at Harvard, and Scott Sagan, Caroline S.G. Munro Professor of Political Science at Stanford, co-director of Stanford's Center for International Security and Cooperation, and a Senior Fellow at the Freeman Spogli Institute) 1983 “Living With Nuclear Weapons” p. 18-9

In the nuclear age, the dangers the United States faces are both numerous and enormous. It would be best if all these dangers could be eliminated, but in international relations as in politics, the goal is to relate the desirable to the possible. The impossibility of achieving perfect solutions should not, however, breed discouragement. It should only strengthen determination to persevere. When facing enormous problems, there is a special attraction to the assumption that only radical answers can suffice. Hence, the strong pull of utopian visions of both the extreme left and the extreme right: the ideas that only a world government can solve all our problems or that sheer military muscle is all that America needs. Both prescribe all-purpose solutions, but each ignores the real world. In the real world, packed with huge nuclear arsenals, mere military muscle, unless built and exercised with restraint and skill, will not ensure American security. In the real world of sovereign states, a world government is a dream for the distant future, not a practical goal for current policymakers. The danger of focusing on utopian objectives is that they can take attention away from practical and positive steps that can be taken now. Such actions may only produce incremental progress to war the goal of national security. But incremental steps matter. It would be a tragedy if opportunities for practical progress toward nuclear peace were missed because our goals were set too high, beyond the reach of what is possible. In his book The Fate of the Earth, Jonathan Schell has reminded people about the dangers of nuclear war, but his “solution” is precisely such an impossible goal. “The task,” he wrote, “is nothing less than to reinvent politics: to reinvent the world.” In reality, however, neither politics nor the world were invented by men, nor can either politics or the world be reinvented. Rather, these arrangements evolved through trial and error, through sacrifice and occasional gifted leadership, to an organization of life on earth that has reached unprecedented attainments. The nature of humanity, the complex mosaic of civilizations, the web of relations that unites so many nations cannot be taken apart and reinvented in the future. They can, we hope, continue to evolve. We are left, therefore, with our imperfect selves, imperfect nations, and imperfect realtions among them. And it is upon this imperfect structure that the capability of waging infinitely destructive nuclear war has descended. Humanity has no alternative but to hold this threat at bay and to learn to live with politics, to live in a world we know: a world of nuclear weapons, international rivalries, recurring conflicts, and at least some risk of nuclear crisis. The challenge we face is not to escape to a fictional utopia where such problems do not exist. It is to learn how to live with nuclear weapons in ways that are successively safer and in which the freedoms won by men and women are kept secure and can grow.

#### The process of debating the details of policies informed by theoretical issues produces better policymaking prepared for the contingency that we are wrong

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How? Imagine a group of experts and statesman meeting off the record, temporarily suspending their desire to predict, blog, or be on television, and spending a day or two intensely debating alternative scenarios that might emerge from a U.S. decision to bomb or not bomb Iran. We are talking about something more than the "war-gaming" that occasionally takes place; this would be a deeper, broader endeavor that looked beyond the immediate consequences of a policy choice in order to reflect upon and wrestle with the longer-term, unknown futures that U.S. actions might bring. A somewhat similar effort was tried before: President Dwight Eisenhower's well-known and successful "Solarium" exercise. Imagine a comparable effort, including both outside experts and government decision-makers, incorporating many of the innovations that have emerged since 1953, such as game theory, scenario planning, and detailed historical case studies Not only might novel policy ideas emerge, but a rigorous vetting of contrasting futures could act as de facto contingency planning should a particular policy choice turn out to be wrong. Such an exercise could also sensitize outside experts to the inherent difficulties, tradeoffs, and unintended consequences of making U.S. foreign policy, which might reduce the shrillness and polarization that often characterize policy debates and make expert knowledge more useful and accessible. The benefits of exercises where pundits and policymakers acknowledge that perfect intelligence is unattainable and where the advantages of both admitting and forgiving honest mistakes about an unknowable, uncertain future are recognized, would be enormous. If nothing else, the humility and flexibility that ensued could lead to more-effective long-range policies. Although such a process may not tell us whether bombing Iran or not is "right," it will better prepare us for the unexpected, unintended, and challenging consequences that will surely result, regardless of which policy is chosen. Given the enormous long-term stakes of the choices before the U.S. president, it is the least that policymakers and experts can do.

#### Extinction outweighs – as long as there is some life there’s only a risk they retain ontological capacity

Hans Jonas (Former Alvin Johnson Prof. Phil. – New School for Social Research and Former Eric Voegelin Visiting Prof. – U. Munich) 1996 “Morality and Mortality: A Search for the Good After Auschwitz”, p. 111-112)

With this look ahead at an ethics for the future, we are touching at the same time upon the question of the future of freedom. The unavoidable discussion of this question seems to give rise to misunderstandings. My dire prognosis that not only our material standard of living but also our democratic freedoms would fall victim to the growing pressure of a worldwide ecological crisis, until finally there would remain only some form of tyranny that would try to save the situation, has led to the accusation that I am defending dictatorship as a solution to our problems. I shall ignore here what is a confusion between warning and recommendation. But I have indeed said that such a tyranny would still be better than total ruin; thus, I have ethically accepted it as an alternative. I must now defend this standpoint, which I continue to support, before the court that I myself have created with the main argument of this essay. For are we not contradicting ourselves in prizing physical survival at the price of freedom? Did we not say that freedom was the condition of our capacity for responsibility—and that this capacity was a reason for the survival of humankind?; By tolerating tyranny as an alternative to physical annihilation are we not violating the principle we established: that the How of existence must not take precedence over its Why? Yet we can make a terrible concession to the primacy of physical survival in the conviction that the ontological capacity for freedom, inseparable as it is from man's being, cannot really be extinguished, only temporarily banished from the public realm. This conviction can be supported by experience we are all familiar with. We have seen that even in the most totalitarian societies the urge for freedom on the part of some individuals cannot be extinguished, and this renews our faith in human beings. Given this faith, we have reason to hope that, as long as there are human beings who survive, the image of God will continue to exist along with them and will wait in concealment for its new hour. With that hope—which in this particular case takes precedence over fear—it is permissible, for the sake of physical survival, to accept if need be a temporary absence of freedom in the external affairs of humanity. This is, I want to emphasize, a worst-case scenario, and it is the foremost task of responsibility at this particular moment in world history to prevent it from happening. This is in fact one of the noblest of duties (and at the same time one concerning self-preservation), on the part of the imperative of responsibility to avert future coercion that would lead to lack of freedom by acting freely in the present, thus preserving as much as possible the ability of future generations to assume responsibility. But more than that is involved. At stake is the preservation of Earth's entire miracle of creation, of which our human existence is a part and before which man reverently bows, even without philosophical "grounding." Here too faith may precede and reason follow; it is faith that longs for this preservation of the Earth (fides quaerens intellectum), and reason comes as best it can to faith's aid with arguments, not knowing or even asking how much depends on its success or failure in determining what action to take. With this confession of faith we come to the end of our essay on ontology.

#### Death is the ultimate form of ontological destruction – its destroys all human possibility – reject it regardless of their value to life arguments

Craig Paterson (Department of Philosophy, Providence College, Rhode Island) 2003 “A Life Not Worth Living?”,Studies in Christian Ethics, http://sce.sagepub.com

Contrary to those accounts, I would argue that it is death per se that is really the objective evil for us, not because it deprives us of a prospective future of overall good judged better than the alternative of non-being. It cannot be about harm to a former person who has ceased to exist, for no person actually suffers from the sub-sequent non-participation. Rather, death in itself is an evil to us because it ontologically destroys the current existent subject — it is the ultimate in metaphysical lightening strikes. 80 The evil of death is truly an ontological evil borne by the person who already exists, independently of calculations about better or worse possible lives. Such an evil need not be consciously experienced in order to be an evil for the kind of being a human person is. Death is an evil because of the change in kind it brings about, a change that is destructive of the type of entity that we essentially are. Anything, whether caused naturally or caused by human intervention (intentional or unintentional) that drastically interferes in the process of maintaining the person in existence is an objective evil for the person. What is crucially at stake here, and is dialectically supportive of the self-evidency of the basic good of human life, is that death is a radical interference with the current life process of the kind of being that we are. In consequence, death itself can be credibly thought of as a ‘primitive evil’ for all persons, regardless of the extent to which they are currently or prospectively capable of participating in a full array of the goods of life.

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81 In conclusion, concerning willed human actions, it is justifiable to state that any intentional rejection of human life itself cannot therefore be warranted since it is an expression of an ultimate disvalue for the subject, namely, the destruction of the present person; a radical ontological good that we cannot begin to weigh objectively against the travails of life in a rational manner. To deal with the sources of disvalue (pain, suffering, etc.) we should not seek to irrationally destroy the person, the very source and condition of all human possibility

#### Vote aff to preserve the capacity of individuals to choose

Craig Paterson (Department of Philosophy, Providence College, Rhode Island) 2003 “A Life Not Worth Living?”,Studies in Christian Ethics, http://sce.sagepub.com

In determining whether a life is worth living or not, attention should be focused upon an array of ‘interests’ of the person, and these, for the competent patient at least, are going to vary considerably, since they will be informed by the patient’s underlying dispositions, and, for the incompetent, by a minimal quality threshold. It follows that for competent patients, a broad-ranging assessment of quality of life concerns is the trump card as to whether or not life continues to be worthwhile. Different patients may well decide differently. That is the prerogative of the patient, for the only unpalatable alternative is to force a patient to stay alive. For Harris, life can be judged valuable or not when the person assessing his or her own life determines it to be so. If a person values his or her own life, then that life is valuable, precisely to the extent that he or she values it. Without any real capacity to value, there can be no value. As Harris states, ‘. . . the value of our lives is the value we give to our lives’. It follows that the primary injustice done to a person is to deprive the person of a life he or she may think valuable. Objectivity in the value of human life, for Harris, essentially becomes one of negative classification (ruling certain people out of consideration for value), allied positively to a broad range of ‘critical interests’; interests worthy of pursuing — friendships, family, life goals, etc. — which are subjected to de facto self-assessment for the further determination of meaningful value. Suicide, assisted suicide, and voluntary euthanasia, can therefore be justified, on the grounds that once the competent nature of the person making the decision has been established, the thoroughgoing commensuration between different values, in the form of interests or preferences, is essentially left up to the individual to determine for himself or herself.