### 2AC Case

#### NRC licensing solves

Campagna and Sawruk 2010 (Mark Campagna, Lead Writer for the American Nuclear Society, and Walter Sawruk, Assistant Writer for the American Nuclear Society, July 2010, “Physical Security for Small Modular Reactors,” American Nuclear Society, online)

With large (mostly light water) 1000-MW(electric)+ reactors limited to the two to three dozen heavily industrialized countries, it is evident that distributed power using small modular reactors could be a very feasible solution to addressing the energy needs of the remainder of the world's nations in both the short and long terms provided issues such as physical security can be successfully addressed.¶ Furthermore, to emphasize the importance of maintaining high U.S.-based standards, any Small and Medium Sized Reactor (SMR) Nuclear Power Plant (NPP) manufactured by licensee [e.g., via a U.S. Nuclear Regulatory Commission (NRC)–issued Manufacturing License (ML)] may not be exported unless the ultimate customer meets all U.S. legal and regulatory export requirements, including 10 CFR 110 (Ref. 1) and 10 CFR 810 (Ref. 2). An export license should be complementary to the ML in an integrated fashion and should address all Federal export control requirements, not only those of the NRC but also those of the U.S. Department of Energy (DOE), U.S. Department of Commerce, and U.S. Department of State. [NOTE: The ML topic is the subject of another paper for the American Nuclear Society (ANS) President’s Special Committee on SMR Generic Licensing Issues (SMR Special Committee): “Utilization of NRC Manufacturing License for Small Modular Reactors”]. 3.0 PROBLEM/ISSUE STATEMENT¶ The extent and relevance of this issue is considerable for SMR-NPPs; this since the worldwide deployment of peaceful nuclear technology is predicated on conformance with the NPT. We must consider various U.N. Resolutions (e.g., 1540) and the impact of other international agreements (e.g., Bilateral 123 Nuclear Technology Agreements between the United States and other countries). "123" refers to Section 123 of the U.S. Atomic Energy Act of 1954, which provides the legal framework for peaceful nuclear energy commerce. The United States has more than 30 such agreements in place with key partner nations. It therefore becomes imperative that the issues of nuclear proliferation resistance and physical protection of SMRs be addressed prior to addressing other key concerns such as fuel, waste, and economic/legal/political-stakeholder issues.¶ Since SMRs are generally in the early stages of development, a significant opportunity exists to affect designs in a way that (1) minimizes the future need for either substantial security forces, excess engineered devices, and/or complex procedural methodologies and (2) allows for the design optimization needed for more effective deployment of new applications. Early-stage design input can compensate in part for later possible design vulnerabilities against intentional acts of sabotage or theft. Therefore, IAEA safeguards and physical security of the SMR must be included in the early design phase in order for the SMR to be an economically feasible solution when built. It is imperative that any SMR design demonstrate proof of requisite high levels of safe survivability from all credible threats, including malevolent terrorism, theft, or aircraft impact. An approach such as the proliferation resistance and physical protection evaluation methodology developed for Generation IV (GEN-IV) nuclear energy systems (Ref. 3) offers an attractive framework for application to SMRs. Stakeholders must understand the risks (i.e., financial and functional); the actual level of threat and required protection must be carefully assessed and understood by the appropriate qualified engineers/designers during very early stages of design/engineering.

#### \*\*\*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?

### 2AC Renewables Trade-Off DA

Incentives now sufficient signal to alter investment trends- 450M from the DOE 1AC Biello

#### Only trades off with FF

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)

Pursuing a carbon-free world Realistically speaking, a world without nuclear power is not a world full of increased renewable usage, but rather, of fossil fuels instead. The 2007 Japanese Kashiwazaki-Kariwa nuclear outage is an excellent example of this, as is Germany’s post-Fukushima decision to shutter its nuclear plants, which, despite immense development of renewable options, will result in a heavier reliance on coal-based power as its reactors are retired, leading to a 4% increase in annual carbon emissions. On the global level, without nuclear power, carbon dioxide emissions from electricity generation would rise nearly 20% from nine to eleven billion tons per year. When examined in conjunction with the fact that an estimated 300,000 people per year die as a result of energy-based pollutants, the appeal of nuclear power expansion grows further.¶ As the world copes simultaneously with burgeoning power demand and the need for clean energy, nuclear power remains the one consistently viable option on the table. With this in mind, it becomes even more imperative to make nuclear energy as safe as possible, as quickly as possible—a capacity which SMRs can fill with their high degree of safety and security. Additionally, due to their modular nature, SMRs can be quickly constructed and deployed widely. While this is not to say that small reactors should supplant large ones, the US would benefit from diversification and expansion of the nation’s nuclear energy portfolio.

#### Key to renewables penetration

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)

Limitations of renewables Renewable energy technologies have made great strides forward during the last decade. In an increasingly carbon emissions and greenhouse gas (GHG) aware global commons, the appeal of solar, wind, and other alternative energy sources is strong, and many countries are moving to increase their renewable electricity generation. However, despite massive expansion on this front, renewable sources struggle to keep pace with increasing demand, to say nothing of decreasing the amount of energy obtained from other sources.¶ The continual problem with solar and wind power is that, lacking efficient energy storage mechanisms, it is difficult to contribute to baseload power demands. Due to the intermittent nature of their energy production, which often does not line up with peak demand usage, electricity grids can only handle a limited amount of renewable energy sources—a situation which Germany is now encountering. Simply put, nuclear power provides virtually carbon-free baseload power generation, and renewable options are unable to replicate this, especially not on the scale required by expanding global energy demands.¶ Small nuclear reactors, however, like renewable sources, can provide enhanced, distributed, and localized power generation. As the US moves towards embracing smart grid technologies, power production at this level becomes a critical piece of the puzzle. Especially since renewable sources, due to sprawl, are of limited utility near crowded population centers, small reactors may in fact prove instrumental to enabling the smart grid to become a reality.¶

#### Prevents investment crash

Aflaki 2012 (Sam Aflaki, Assistant Professor Operations Management & Information Technology at HEC Paris, and Serguei Netessine, The Timken Chaired Professor of Global Technology and Innovation, Professor of Technology and Operations Management, Research Director of the INSEAD-Wharton, June 1, 2012, “Strategic Investment in Renewable Energy Sources,” INSEAD Working Paper, http://www.insead.edu/facultyresearch/research/doc.cfm?did=49970)

Overall, our analysis indicates that the intermittency of renewable energy sources is a problematic feature that handicaps investment decisions in these technologies. Although raising carbon taxes is meant to improve the attractiveness of renewables, we show that this is probably not an effective policy. A more effective approach to increasing capacity investment in renewables would be to reduce intermittency. There are various options to achieve this goal. The first option is storage, for which various (relatively new technologies) are available.13 These technologies include pumped- storage hydropower, which stores electricity in the form of potential energy, and pumped heat electricity storage, which uses argon gas to store power in the form of heat. There are many recent papers that consider the problem of optimal storage policies while taking installed generation capacity as fixed (for a comprehensive review, see Faghih et al. 2012). Other options besides storage include the “curtailing” of intermittent generation (as described in Wu and Kapuscinski 2012) and the pooling of multiple generation units (possibly with different technologies) whose supply is not perfectly correlated. This latter approach may be possible only for large generators with enough resources to invest in multiple wind farms in different geographical regions. So even though there are no economies of scale in wind electricity generation, clearly there are statistical economies of scale in terms of reduced intermittency. Our analysis is a first step toward further research on an integrated framework that will combine these solutions with an explanation of how long- run capacity decisions are affected by the cost structure of renewables. Our results suggest the possibility of additional value to these solutions if generation capacity decisions are taken into account.

#### Global investment solves

Cuttino 2012 (Phyllis Cuttino, Director of the Pew Clean Energy Program, May 15, 2012, “The Future of Renewable Energy Is Bright,” National Journal, http://energy.nationaljournal.com/2012/05/boom-and-bust-renewable-energy.php)

Similarly, U.S. policy uncertainty will not deter other markets from flourishing. China, India, Brazil, and other emerging economies have strong and consistent clean energy policies to encourage private investment in and deployment of clean energy. These are the markets where most of the 2 billion people without modern energy services live and where demand growth will be greatest in the next 20 to 30 years. Clean energy offers African countries, for example, the opportunity to provide electricity to households and communities without transmission wires, just as cell phones allowed that continent to leapfrog landline phones. Residential solar already is the cheapest energy option in many parts of the world.

#### Renewables fail

Forsberg 2011 (Charles Forsberg, executive director of the MIT Nuclear Fuel Cycle Study in the Department of Nuclear Science and Engineering at MIT and former Corporate Fellow at Oak Ridge National Laboratory, October 6, 2011, “What alternatives to nuclear energy?,” Bulletin of Atomic Scientists, http://www.thebulletin.org/web-edition/roundtables/nuclear-energy-different-other-energy-sources#rt8801)

For those opposed to nuclear energy, the belief is that there are alternative energy sources -- a faith in alternatives, ironically, as strong as some of the early advocates for nuclear power in the 1950s. But no such options exist in a world that will soon have 10 billion people (see Forsberg, "Mutually Assured Energy Independence"). That fundamental reality dictates the need for nuclear energy.¶ Climate change, fossil fuels, and famine. We have fossil fuels; however, the burning of fossil fuels releases carbon dioxide into the atmosphere with the potential for large changes in (1) climate and (2) pH (acidity) of water and soil. Both threaten agricultural productivity, because the changing climate moves agriculture to less productive soils. A consistent climate is critical in the formation of fertile soils -- a several-thousand-year process. Climate change also may entail rebuilding much of man’s infrastructure, which is designed for specific climate and sea-level conditions. Betting on fossil fuels is a high-risk strategy for world agriculture and food supplies. While carbon dioxide sequestration will work in a few locations, it's unlikely to be a universal solution.¶ Renewables: latitude counts. We live on a globe circling the sun that creates seasons. That reality means that renewable systems must address how to store energy on a daily, weekly, and seasonal basis. It also drives the design of future energy systems.¶ At MIT, we examined electricity-storage requirements for California assuming three energy futures: (1) all electricity produced by nuclear reactors operating at constant output, (2) all electricity produced by wind assuming California wind conditions and the National Renewable Energy Laboratory (NREL) wind model, and (3) all electricity produced by solar using the NREL solar-trough model that includes limited energy storage. Table 1 shows the fraction of electricity that has to go into storage at times of excess electricity production to provide electricity when demand exceeds supply.¶ The hourly storage requirements were determined by using the hourly demand curves for electricity and the hourly electricity outputs of solar or wind or nuclear in California. The weekly storage requirements assumed that smart grids, pumped storage, and other technologies could result in each week having a uniform electricity demand, but different weeks have different electricity demands. It is thus a measure of the seasonal storage requirements that needs to be identified, assuming different energy sources with seasonal storage requirements measured in 10s to 100s of gigawatts per year depending upon the electricity prod uction technology.¶ Two-thirds of our electricity is base-load electricity; base-load nuclear energy has low electricity storage requirements. The storage requirements for solar and wind, however, are higher. In fact, the situation is even worse than indicated in Table 1, because the calculations assumed perfect storage systems. Real seasonal storage systems have just 50 percent efficiency but may ultimately increase to 70 percent. In other words, serious wind and solar energy initiatives require massive seasonal storage systems.¶ There are seasonal energy storage technologies being developed, such as nuclear-geothermal gigawatts per year and hydrogen systems. In a nuclear-geothermal energy storage system at times of low electricity demand, nuclear energy is used to heat a 500-meter cube of rock a kilometer or more underground to create an artificial geothermal heat source for peak power production. However, there is no way to insulate rock a kilometer underground. The heat losses are only a few percent on a large system but prohibitive in smaller systems -- that is, it is a technology that only couples to large-scale nuclear energy.¶ The potentially viable seasonal electricity storage technologies (including hydrogen) either couple to nuclear plants or involve synergistic combinations of nuclear and renewables -- but viable storage technologies do not couple efficiently to wind and solar. Renewable advocates point to Denmark and Germany -- countries whose wind systems depend upon Scandinavian hydro. However, there is not enough hydro worldwide to make a serious dent in the storage challenge. An all-renewables world will remain unaffordable -- even if the cost of renewables drop because of the larger challenge of energy storage to match production with demand.¶ Conclusions. Our energy challenge requires nuclear and renewables -- technologies that are complementary in many applications. Energy is over 10 percent of the global GNP, so economics matters because mankind needs more than energy to prosper. The risks of nuclear energy are small compared with the alternatives of oil wars, climate change, or unaffordable energy.

Their card is from Socialist Worker- Disregard it

#### No impact to CO2

Cunningham 2010 (Walter Cunningham, National Aeronautics and Space Administration - pilot of Apollo 7, graduate degrees from UCLA in physics and the Harvard Graduate School of Business, member of the Advisory Board for the National Renewable Energy Laboratory, 2010 “Global Warming: Facts Versus Faith,” Science and Public Policy Institute, online)

More than 31,000 scientists in the United States have signed a petition saying “there is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gases is causing or will, in the foreseeable future, cause catastrophic heating of the Earth’s atmosphere and disruption of the Earth’s climate.”3 Debating Carbon DioxideThe advocates of AGW say the United States must impose a devastating tax scheme to force industry to emit less carbon dioxide, thereby reversing the warming trend. This policy prescription is based on three assumptions: (1) that CO2 is the cause of changes in the Earth’s temperature; (2) that a warmer Earth would be bad for the planet’s flora and fauna, including humans; and (3) that humans are capable of controlling the temperature of the Earth.In reality, water vapor has more than twice the impact on temperature as atmospheric CO2, aided and abetted by other greenhouse gases, like methane (CH4) and nitrous oxide (N2O). With CO2 representing just 3.6 percent of greenhouse gases, by volume, and human activity responsible for only 3.2 percent of that, we can influence only a tiny portion of the total greenhouse gases. Some studies have found CO2 levels are largely irrelevant to global warming. The true believers in AGW base their case on a broad and weak correlation between CO2 and global temperature in the last half of the twentieth century. They cannot be sure which is cause and which is effect. Looking at much longer periods of the Earth’s history, it becomes clear that temperature increases have preceded high CO2 levels by anywhere from 100 to 800 years, suggesting that higher temperatures cause CO2 levels to rise, rather than vice versa. The only other time in history that temperature and CO2 levels were this low, together, was 300 million years ago. There have been periods when atmospheric CO2 levels were as much as 16 times higher than they are now—periods characterized not by warming but by glaciations. (See Figure 4.) You might have to go back half-a-million years to match our current level of atmospheric CO2, but you have to go back only to the Medieval Warm Period, from the tenth to the fourteenth century, to find an intense global warming episode, followed immediately by the drastic cooling of the Little Ice Age. Neither of those events can be attributed to variations in CO2 levels. Since CO2 is a relatively minor constituent of “greenhouse gases,” and human activity contributes only a tiny portion of atmospheric CO2, why have alarmists made it the whipping boy for global warming? Probably because they know how fruitless it would be to propose controlling other atmospheric drivers of climate—water, methane, and nitrous oxide—notto mention volcanic eruptions, or ocean temperature, or solar activity, etc. So they wage war on man-made CO2, no matter how ridiculous it makes them appear. Without the greenhouse effect to keep our world warm, the planet would have an average temperature of -18 degrees Celsius. Because we do have it, the temperature is a comfortable +15 degrees Celsius. Other inconvenient facts ignored by the activists: Carbon dioxide is a non-polluting gas that is essential for plant photosynthesis. Higher concentrations of CO2 in the atmosphere produce bigger crop harvests and larger and healthier forests— results environmentalists used to like.

### 2AC Gas Tax

#### Perm solves all of their internal net benefits

Conditionality is a voting issue- Skews the 2AC- Most important speech for aff offense- Depth is better than breadth

Links to the DISAD- Empirically drives MPG increases

#### No relationship between nuke and oil

Toth 2006 (Ferenc L. Toth, senior energy economist with the Planning and Economic Studies Section in the Department of Nuclear Energy at IAEA, Hans-Holger Rogner, head of Planning and Economic Studies at IAEA, “Oil and nuclear power: Past, present, and future,” IAEA, http://www.iaea.org/OurWork/ST/NE/Pess/assets/oil+np\_toth+rogner0106.pdf)

The current relationship between nuclear power and oil has become distinctly different than it was a few decades ago. At the onset of the 21st century, nuclear and oil for electricity generation are targeting different electricity market segments with little overlap in the longer run. Oil for electricity generation in most industrialized countries serves, where not barred for environmental reasons, more the function of the disposal of residual oil for which no other applications can be found. However, advanced refineries converting larger portions of the barrel into premium products and stringent environmental regulation constrain the use of residual oil for power generation. Other uses of oil products include peak supply, back-up fuel, and dispersed non-grid generation. These markets have been relative captive for oil but this may change in the future with the advent of fuel cells. Since nuclear power has no role to play in these captive markets, growth prospects for oil are unaffected by a nuclear presence in the electricity generating market.

#### No indirect effects

Toth 2006 (Ferenc L. Toth, senior energy economist with the Planning and Economic Studies Section in the Department of Nuclear Energy at IAEA, Hans-Holger Rogner, head of Planning and Economic Studies at IAEA, “Oil and nuclear power: Past, present, and future,” IAEA, http://www.iaea.org/OurWork/ST/NE/Pess/assets/oil+np\_toth+rogner0106.pdf)

The second dimension of the oil–nuclear competition is indirect: nuclear electricity versus oil products at the level of end-use. It involves many factors including economics, productivity, convenience, regulation, availability, product quality, and social preferences. These factors limit the room for competition between electricity and oil products (and vice versa) in the residential, commercial, industrial, feedstock and transportation markets. Here the characteristics of fuels and associated conversion technologies can be an advantage or disadvantage in meeting a particular energy service demand. As we have witnessed over recent decades, transportation services have remained the domain of oil products despite many government policies targeted at the introduction of non-oil based transportation fuels including electric cars. Likewise, many energy services are exclusively a domain of electricity (information/communication, lighting, control, etc.) where oil products are essentially excluded. Electricity is an end-use energy technology without any emissions, highly efficient, versatile, and convenient to use. No wonder then that it has been the fastest growing end-use energy carrier worldwide. Oil use outside the transportation and chemical sectors (feedstock) and non-energy use has declined in the residential, commercial, and industrial sectors of the OECD countries (1973: 707 Mtoe; 2002: 403 Mtoe) in large part as a result of increased use of electricity and natural gas. In developing countries, oil use in these sectors has been increasing from 124 Mtoe to 354 Mtoe over the 1973–2002 period (IEA, 2004). Globally, however, oil use in these sectors has declined from 960 Mtoe to 811 Mtoe over this period.

#### SMRs key to chemical industry

Solan 2010 (David Solan, Director, Energy Policy Institute, Associate Director, Center for Advanced Energy Studies, Assistant Professor of Public Policy and Administration at Boise State University, June 2010, “ECONOMIC AND EMPLOYMENT IMPACTS OF SMALL MODULAR NUCLEAR REACTORS,” Energy Policy Institute, http://www.nuclearcompetitiveness.org/images/EPI\_SMR\_ReportJune2010.pdf)

Process Heat for Industrial Applications and District Heating. SMRs can be used to provide heat over temperature ranges from 100 to 200 degrees centigrade to over 800 degrees centigrade, depending on the design of the SMR and the technology used in it. During the production of electricity, more than half of the heat generated is rejected at low temperature. This residual heat is usable for various industrial applications. Higher temperature process heat can be used for a variety of industrial applications, such as the production of glass, plastics, steel, and ammonia (Office of Nuclear Energy, 2009). In addition concepts for producing carbon-neutral synthetic fuels and chemicals, often propose the coupling of systems, including nuclear, for a source of carbon-free heat and hydrogen needed in their processes (Los Alamos National Laboratory, 2008). Given the modularity of SMRs, these reactors offer advantages in areas or applications where heat is needed but where the large heat output and expense of a large nuclear reactor makes its application impractical.

#### Extinction

CEN 1999 (Chemical and Engineering News, December 6, 1999, “Millennium Special Report,” Vol. 77, No. 49, online)

The pace of change in today's world is truly incomprehensible. Science is advancing on all fronts, particularly chemistry and biology working together as they never have before to understand life in general and human beings in particular at a breathtaking pace. Technology ranging from computers and the Internet to medical devices to genetic engineering to nanotechnology is transforming our world and our existence in it. It is, in fact, a fool's mission to predict where science and technology will take us in the coming decade, let alone the coming century. We can say with finality only this: We don't know. We do know, however, that we face enormous challenges, we 6 billion humans who now inhabit Earth. In its 1998 revision of world population estimates and projections, the United Nations anticipates a world population in 2050 of 7.3 billion to 10.7 billion, with a "medium-fertility projection," considered the most likely, indicating a world population of 8.9 billion people in 2050. According to the UN, fertility now stands at 2.7 births per woman, down from 5 births per woman in the early 1950s. And fertility rates are declining in all regions of the world. That's good news. But people are living a lot longer. That is certainly good news for the individuals who are living longer, but it also poses challenges for health care and social services the world over. The 1998 UN report estimates for the first time the number of octogenarians, nonagenarians, and centenarians living today and projected for 2050. The numbers are startling. In 1998, 66 million people were aged 80 or older, about one of every 100 persons. That number is expected to increase sixfold by 2050 to reach 370 million people, or one in every 24 persons. By 2050, more than 2.2 million people will be 100 years old or older! Here is the fundamental challenge we face: The world's growing and aging population must be fed and clothed and housed and transported in ways that do not perpetuate the environmental devastation wrought by the first waves of industrialization of the 19th and 20th centuries. As we increase our output of goods and services, as we increase our consumption of energy, as we meet the imperative of raising the standard of living for the poorest among us, we must learn to carry out our economic activities sustainably. There are optimists out there, C&EN readers among them, who believe that the history of civilization is a long string of technological triumphs of humans over the limits of nature. In this view, the idea of a "carrying capacity" for Earth—a limit to the number of humans Earth's resources can support—is a fiction because technological advances will continuously obviate previously perceived limits. This view has historical merit. Dire predictions made in the 1960s about the exhaustion of resources ranging from petroleum to chromium to fresh water by the end of the 1980s or 1990s have proven utterly wrong. While I do not count myself as one of the technological pessimists who see technology as a mixed blessing at best and an unmitigated evil at worst, I do not count myself among the technological optimists either. There are environmental challenges of transcendent complexity that I fear may overcome us and our Earth before technological progress can come to our rescue. Global climate change, the accelerating destruction of terrestrial and oceanic habitats, the catastrophic loss of species across the plant and animal kingdoms—these are problems that are not obviously amenable to straightforward technological solutions. But I know this, too: Science and technology have brought us to where we are, and only science and technology, coupled with innovative social and economic thinking, can take us to where we need to be in the coming millennium. Chemists, chemistry, and the chemical industry—what we at C&EN call the chemical enterprise—will play central roles in addressing these challenges. The first section of this Special Report is a series called "Millennial Musings" in which a wide variety of representatives from the chemical enterprise share their thoughts about the future of our science and industry. The five essays that follow explore the contributions the chemical enterprise is making right now to ensure that we will successfully meet the challenges of the 21st century. The essays do not attempt to predict the future. Taken as a whole, they do not pretend to be a comprehensive examination of the efforts of our science and our industry to tackle the challenges I've outlined above. Rather, they paint, in broad brush strokes, a portrait of scientists, engineers, and business managers struggling to make a vital contribution to humanity's future.

### 2AC K

Our role of the ballot is to evaluate the normative effects of the plan- anything else excludes 9 min of 1AC offense – it’s does not prove the 1ac undesirable- the judge should choose the specific set of representations that best test plan desirability - knowledge production is linear - sufficient reasonability filters their epistemology args – prefer specific warrants over vague buzzwords - saving a life is a prerequisite to enhancing its value.

Perm: Do both

Perm: Do the plan and the alt in every other instance- either it’s not intrinsic because the alt rejects more than the plan the alt can’t overcome squo

Perm: Do the plan and all parts of the alt that aren’t “reject the aff”- Alt ev should be permable if it demonstrates the alt text is artificially competitive

#### Perm do the aff and embrace critical border thinking- the alt would not reject the aff but rather reformulate it through the lens of the subaltern

Ramón Grosfoguel Associate professor, Department of Ethnic Studies, University of California, Berkeley Kult 6 - Special Issue Epistemologies of Transformation: The Latin American Decolonial Option and its Ramifications. Fall 2009. Department of Culture and Identity. Roskilde University “A Decolonial Approach to Political-Economy: Transmodernity, Border Thinking and Global Coloniality” http://www.postkolonial.dk/artikler/GROSFOGUEL.pdf

One of many plausible solutions to the Eurocentric versus fundamentalist dilemma is what Walter Mignolo — following Chicana(o) thinkers such as Gloria Anzaldua (1987) and Jose David Saldivar (1997) — calls ‘critical border thinking’ (Mignolo 2000). Critical border thinking is the epistemic response of the subaltern to the Eurocentric project of modernity. Instead of rejecting modernity to retreat into a fundamentalist absolutism, border epistemologies subsume/redefines the emancipatory rhetoric of modernity from the cosmologies and epistemologies of the subaltern, located in the oppressed and exploited side of the colonial difference, towards a decolonial liberation struggle for a world beyond eurocentered modernity. What border thinking produces is a redefinition/subsumption of citizenship, democracy, human rights, humanity, economic relations beyond the narrow definitions imposed by European modernity. Border thinking is not an anti-modern fundamentalism; it is a decolonial transmodern response of the subaltern to Eurocentric modernity. A good example of this is the Zapatista struggle in Mexico. The Zapatistas are not anti-modern fundamentalists; they do not reject democracy and retreat into some form of indigenous fundamentalism. On the contrary, the Zapatistas accept the notion of democracy, but redefine it from a local indigenous practice and cosmology, conceptualizing it as commanding while obeying or we are all equals because we are all different. What seems to be a paradoxical slogan is really a critical decolonial redefinition of democracy from the practices, cosmologies and epistemologies of the subaltern. This leads to the question of how to transcend the imperial monologue established by the European-centric modernity.

#### Violence is objectively decreasing due to western reason and liberal democracy- spreading those ideals is key to solve conflict

Pinker 11 Steven Pinker is Professor of psychology at Harvard University "Violence Vanquished" Sept 24 online.wsj.com/article/SB10001424053111904106704576583203589408180.html

 With all its wars, murder and genocide, history might suggest that the taste for blood is human nature. Not so, argues Harvard Prof. Steven Pinker. He talks to WSJ's Gary Rosen about the decline in violence in recent decades and his new book, "The Better Angels of Our Nature." But a better question may be, "How bad was the world in the past?" Believe it or not, the world of the past was much worse. Violence has been in decline for thousands of years, and today we may be living in the most peaceable era in the existence of our species. The decline, to be sure, has not been smooth. It has not brought violence down to zero, and it is not guaranteed to continue. But it is a persistent historical development, visible on scales from millennia to years, from the waging of wars to the spanking of children. This claim, I know, invites skepticism, incredulity, and sometimes anger. We tend to estimate the probability of an event from the ease with which we can recall examples, and scenes of carnage are more likely to be beamed into our homes and burned into our memories than footage of people dying of old age. There will always be enough violent deaths to fill the evening news, so people's impressions of violence will be disconnected from its actual likelihood. Evidence of our bloody history is not hard to find. Consider the genocides in the Old Testament and the crucifixions in the New, the gory mutilations in Shakespeare's tragedies and Grimm's fairy tales, the British monarchs who beheaded their relatives and the American founders who dueled with their rivals. Today the decline in these brutal practices can be quantified. A look at the numbers shows that over the course of our history, humankind has been blessed with six major declines of violence. The first was a process of pacification: the transition from the anarchy of the hunting, gathering and horticultural societies in which our species spent most of its evolutionary history to the first agricultural civilizations, with cities and governments, starting about 5,000 years ago. For centuries, social theorists like Hobbes and Rousseau speculated from their armchairs about what life was like in a "state of nature." Nowadays we can do better. Forensic archeology—a kind of "CSI: Paleolithic"—can estimate rates of violence from the proportion of skeletons in ancient sites with bashed-in skulls, decapitations or arrowheads embedded in bones. And ethnographers can tally the causes of death in tribal peoples that have recently lived outside of state control. These investigations show that, on average, about 15% of people in prestate eras died violently, compared to about 3% of the citizens of the earliest states. Tribal violence commonly subsides when a state or empire imposes control over a territory, leading to the various "paxes" (Romana, Islamica, Brittanica and so on) that are familiar to readers of history. It's not that the first kings had a benevolent interest in the welfare of their citizens. Just as a farmer tries to prevent his livestock from killing one another, so a ruler will try to keep his subjects from cycles of raiding and feuding. From his point of view, such squabbling is a dead loss—forgone opportunities to extract taxes, tributes, soldiers and slaves. The second decline of violence was a civilizing process that is best documented in Europe. Historical records show that between the late Middle Ages and the 20th century, European countries saw a 10- to 50-fold decline in their rates of homicide. The numbers are consistent with narrative histories of the brutality of life in the Middle Ages, when highwaymen made travel a risk to life and limb and dinners were commonly enlivened by dagger attacks. So many people had their noses cut off that medieval medical textbooks speculated about techniques for growing them back. Historians attribute this decline to the consolidation of a patchwork of feudal territories into large kingdoms with centralized authority and an infrastructure of commerce. Criminal justice was nationalized, and zero-sum plunder gave way to positive-sum trade. People increasingly controlled their impulses and sought to cooperate with their neighbors. The third transition, sometimes called the Humanitarian Revolution, took off with the Enlightenment. Governments and churches had long maintained order by punishing nonconformists with mutilation, torture and gruesome forms of execution, such as burning, breaking, disembowelment, impalement and sawing in half. The 18th century saw the widespread abolition of judicial torture, including the famous prohibition of "cruel and unusual punishment" in the eighth amendment of the U.S. Constitution. At the same time, many nations began to whittle down their list of capital crimes from the hundreds (including poaching, sodomy, witchcraft and counterfeiting) to just murder and treason. And a growing wave of countries abolished blood sports, dueling, witchhunts, religious persecution, absolute despotism and slavery. The fourth major transition is the respite from major interstate war that we have seen since the end of World War II. Historians sometimes refer to it as the Long Peace. Today we take it for granted that Italy and Austria will not come to blows, nor will Britain and Russia. But centuries ago, the great powers were almost always at war, and until quite recently, Western European countries tended to initiate two or three new wars every year. The cliché that the 20th century was "the most violent in history" ignores the second half of the century (and may not even be true of the first half, if one calculates violent deaths as a proportion of the world's population). Though it's tempting to attribute the Long Peace to nuclear deterrence, non-nuclear developed states have stopped fighting each other as well. Political scientists point instead to the growth of democracy, trade and international organizations—all of which, the statistical evidence shows, reduce the likelihood of conflict. They also credit the rising valuation of human life over national grandeur—a hard-won lesson of two world wars. The fifth trend, which I call the New Peace, involves war in the world as a whole, including developing nations. Since 1946, several organizations have tracked the number of armed conflicts and their human toll world-wide. The bad news is that for several decades, the decline of interstate wars was accompanied by a bulge of civil wars, as newly independent countries were led by inept governments, challenged by insurgencies and armed by the cold war superpowers. The less bad news is that civil wars tend to kill far fewer people than wars between states. And the best news is that, since the peak of the cold war in the 1970s and '80s, organized conflicts of all kinds—civil wars, genocides, repression by autocratic governments, terrorist attacks—have declined throughout the world, and their death tolls have declined even more precipitously. The rate of documented direct deaths from political violence (war, terrorism, genocide and warlord militias) in the past decade is an unprecedented few hundredths of a percentage point. Even if we multiplied that rate to account for unrecorded deaths and the victims of war-caused disease and famine, it would not exceed 1%. The most immediate cause of this New Peace was the demise of communism, which ended the proxy wars in the developing world stoked by the superpowers and also discredited genocidal ideologies that had justified the sacrifice of vast numbers of eggs to make a utopian omelet. Another contributor was the expansion of international peacekeeping forces, which really do keep the peace—not always, but far more often than when adversaries are left to fight to the bitter end. Finally, the postwar era has seen a cascade of "rights revolutions"—a growing revulsion against aggression on smaller scales. In the developed world, the civil rights movement obliterated lynchings and lethal pogroms, and the women's-rights movement has helped to shrink the incidence of rape and the beating and killing of wives and girlfriends. In recent decades, the movement for children's rights has significantly reduced rates of spanking, bullying, paddling in schools, and physical and sexual abuse. And the campaign for gay rights has forced governments in the developed world to repeal laws criminalizing homosexuality and has had some success in reducing hate crimes against gay people. \* \* \* \* Why has violence declined so dramatically for so long? Is it because violence has literally been bred out of us, leaving us more peaceful by nature? This seems unlikely. Evolution has a speed limit measured in generations, and many of these declines have unfolded over decades or even years. Toddlers continue to kick, bite and hit; little boys continue to play-fight; people of all ages continue to snipe and bicker, and most of them continue to harbor violent fantasies and to enjoy violent entertainment. It's more likely that human nature has always comprised inclinations toward violence and inclinations that counteract them—such as self-control, empathy, fairness and reason—what Abraham Lincoln called "the better angels of our nature." Violence has declined because historical circumstances have increasingly favored our better angels. The most obvious of these pacifying forces has been the state, with its monopoly on the legitimate use of force. A disinterested judiciary and police can defuse the temptation of exploitative attack, inhibit the impulse for revenge and circumvent the self-serving biases that make all parties to a dispute believe that they are on the side of the angels. We see evidence of the pacifying effects of government in the way that rates of killing declined following the expansion and consolidation of states in tribal societies and in medieval Europe. And we can watch the movie in reverse when violence erupts in zones of anarchy, such as the Wild West, failed states and neighborhoods controlled by mafias and street gangs, who can't call 911 or file a lawsuit to resolve their disputes but have to administer their own rough justice. Another pacifying force has been commerce, a game in which everybody can win. As technological progress allows the exchange of goods and ideas over longer distances and among larger groups of trading partners, other people become more valuable alive than dead. They switch from being targets of demonization and dehumanization to potential partners in reciprocal altruism. For example, though the relationship today between America and China is far from warm, we are unlikely to declare war on them or vice versa. Morality aside, they make too much of our stuff, and we owe them too much money. A third peacemaker has been cosmopolitanism—the expansion of people's parochial little worlds through literacy, mobility, education, science, history, journalism and mass media. These forms of virtual reality can prompt people to take the perspective of people unlike themselves and to expand their circle of sympathy to embrace them. These technologies have also powered an expansion of rationality and objectivity in human affairs. People are now less likely to privilege their own interests over those of others. They reflect more on the way they live and consider how they could be better off. Violence is often reframed as a problem to be solved rather than as a contest to be won. We devote ever more of our brainpower to guiding our better angels. It is probably no coincidence that the Humanitarian Revolution came on the heels of the Age of Reason and the Enlightenment, that the Long Peace and rights revolutions coincided with the electronic global village.

#### Overemphasis on method destroys effectiveness of the discipline

Wendt**,** Handbook of IR, 2002 p. 68

It should be stressed that in advocating a pragmatic view we are not endorsing method-driven social science. Too much research in international relations chooses problems or things to be explained with a view to whether the analysis will provide support for one or another methodological ‘ism’. But the point of IR scholarship should be to answer questions about international politics that are of great normative concern, not to validate methods. Methods are means, not ends in themselves. As a matter of personal scholarly choice it may be reasonable to stick with one method and see how far it takes us. But since we do not know how far that is, if the goal of the discipline is insight into world politics then it makes little sense to rule out one or the other approach on a priori grounds. In that case a method indeed becomes a tacit ontology, which may lead to neglect of whatever problems it is poorly suited to address. Being conscious about these choices is why it is important to distinguish between the ontological, empirical and pragmatic levels of the rationalist-constructivist debate. We favor the pragmatic approach on heuristic grounds, but we certainly believe a conversation should continue on all three levels.

#### A transition away from modernity causes massive wars- even those who are supposedly excluded now will continue to push for growth

Barnhizer, 6 David, Prof of Law, Cleveland State U, ‘Waking from Sustainability's "Impossible Dream”,’ Geo Int’l Envtl L Rev, pg. l/n

The scale of social needs, including the need for expanded productive activity, has grown so large that it cannot be shut off at all, and certainly not abruptly. It cannot even be ratcheted down in any significant fashion without producing serious harms to human societies and hundreds of millions of people. Even if it were possible to shift back to systems of local self-sufficiency, the consequences of the transition process would be catastrophic for many people and even deadly to the point of continual conflict, resource wars, increased poverty, and strife. What are needed are concrete, workable, and pragmatic strategies that produce effective and intelligently designed economic activity in specific contexts and, while seeking efficiency and conservation, place economic and social justice high on a list of priorities. 60 The imperative of economic growth applies not only to the needs and expectations of people in economically developed societies but also to people living in nations that are currently economically underdeveloped. Opportunities must be created, jobs must be generated in huge numbers, and economic resources expanded to address the tragedies of poverty and inequality. Unfortunately, natural systems must be exploited to achieve this; we cannot return to Eden. The question is not how to achieve a static state but how to achieve what is needed to advance social justice while avoiding and mitigating the most destructive consequences of our behavior. Many developing country groups involved in efforts to protect the environment and resist the impacts of free trade on their communities have been concerned with the harmful effects of economic change. Part of the concern is the increased scale of economic activity. Some concerns relate to who benefits and who loses in the changing context imposed by globalization. These concerns are legitimate and understandable. So are the other deep currents running beneath their political positions, including those of resistance to change of any kind and a [\*621] rejection of the market approach to economic activities. In the system described inaccurately as free market capitalism, economic activity not only breaks down existing systems, it creates new systems and--as Joseph Schumpeter observed--continually repeats the process through cycles of "creative destruction." 61 This pattern of creative destruction unfolds as necessarily and relentlessly as does the birth-maturation-death-rebirth cycle of the natural environment. This occurs even in a self-sufficient or autarkic market system capable of managing all variables within its closed dominion. But when the system breaks out of its closed environment, the ability of a single national actor to control the system's dynamics erodes and ultimately disappears in the face of differential conditions, needs, priorities, and agendas. Globalization's ability to produce wealth for a particular group simultaneously produces harms to different people and interests and generates unfair resource redistribution within existing cultures. This is an unavoidable consequence of globalization. 62 The problem is that globalization has altered the rules of operation of political, economic, and social activities, and in doing so multiplied greatly our ability to create benefit and harm. 63 While some understandably want the unsettling and often chaotic effects of globalization to go away, it can only be dealt with, not reversed. The system in which we live and work is no longer closed. There are few contexts not connected to the dynamics of some aspect of the extended economic and social systems resulting from globalization. This means the wide ranging and incompatible variables of a global economic, human rights, and social fairness system are resulting in conflicts and unanticipated interpenetrations that no one fully understands, anticipates, or controls. 64 Local [\*622] self-sufficiency is the loser in this process. It can remain a nostalgic dream but rarely a reality. Except for isolated cultures and niche activities, there is very little chance that anyone will be unaffected by this transformational process. Change is the constant, and it will take several generations before we return to a period of relative stasis. Even then it will only be a respite before the pattern once again intensifies.

#### The distinction between the Eurocentric modern and colonial other is an insufficient explanation for violence

Miroslav Volf (Henry B. Wright Professor of Theology at Yale Divinity School since 1998) Journal of Ecumenical Studies 1-1-02
Though “otherness”–cultural, ethnic, religious, racial difference–is an important factor in our relations with others, we should not overestimate it as a cause of conflict. During the war in the former Yugoslavia in the early 1990′s, I was often asked, “What is this war about? Is it about religious and cultural differences? Is it about economic advantage? Is it about political power? Is it about land?” The correct response was, of course, that the war was about all of these things. Monocausal explanations of major eruptions of violence are rarely right. Moreover, various causes are intimately intertwined, and each contributes to others. That holds true also for otherness, which I am highlighting here. However, neither should we underestimate otherness as a factor. The contest for political power, for economic advantage, and for a share of the land took place between people who belonged to discrete cultural and ethnic groups. Part of the goal of the war in the former Yugoslavia was the creation of ethnically clean territories with economic and political autonomy. The importance of “otherness” is only slightly diminished if we grant that the sense of ethnic and religious belonging was manipulated by unscrupulous, corrupt, and greedy politicians for their own political and economic gain. The fact that conjured fears for one’s identity could serve to legitimize a war whose major driving force lay elsewhere is itself a testimony to how much “otherness” matters.

#### Blaming imperialism for all oppression masks more violent forms of oppression – prefer our evidence, its comparative

Fred **Halliday** (Middle East Report) **1999** “The Middle East at the Millennial Turn” http://www.merip.org/mer/mer213/213\_hallliday.html

Recent developments in the Middle East and the onset of new global trends and uncertainties pose a challenge not only to those who live in the region but also to those who engage it from outside. Here, too, previously-established patterns of thought and commitment are now open to question. The context of the l960s, in which journals such as MERIP Reports (the precursor of this publication) and the Journal of the North American Committee on Latin America (NACLA) were founded, was one of solidarity with the struggles of Third World peoples and opposition to external, imperialist intervention. That agenda remains valid: Gross inequalities of wealth, power and access to rights–a.k.a. imperialism–persist. This agenda has been enhanced by political and ethical developments in subsequent decades. Those who struggle include not only the national groups (Palestinians and Kurds) oppressed by chauvinist regimes and the workers and peasants (remember them?) whose labor sustains these states, but now also includes analyses of gender oppression, press and academic suppression and the denial of ecological security. The agenda has also elaborated a more explicit stress on individual rights in tandem with the defense of collective rights. History itself and the changing intellectual context of the West have, however, challenged this emancipatory agenda in some key respects. On the one hand, oppression, denial of rights and military intervention are not the prerogative of external states alone: An anti-imperialism that cannot recognize–and denounce–indigenous forms of dictatorship and aggression, or that seeks, with varying degrees of exaggeration, to blame all oppression and injustice on imperialism, is deficient. The Iranian Revolution, Ba‘thist Iraq, confessional militias in Lebanon, armed guerrilla groups in a range of countries, not to mention the Taliban in Afghanistan, often represent a much greater immediate threat to human rights and the principles in whose name solidarity was originally formulated than does Western imperialism. Islamist movements from below meet repressive states from above in their conduct. What many people in the region want is not less external involvement but a greater commitment by the outside world, official and non-governmental, to protecting and realizing rights that are universally proclaimed but seldom respected. At the same time, in a congruence between relativist renunciation from the region and critiques of "foundationalist" and Enlightenment thinking in the West, doubt has been cast on the very ethical foundation of solidarity: a belief in universal human rights and the possibility of a solidarity based on such rights. Critical engagement with the region is now often caught between a denunciation of the West's failure actively to pursue the democratic and human rights principles it proclaims and a rejection of the validity of these principles as well as the possibility of any external encouragement of them. This brings the argument back to the critique of Western policy, and of the relation of that critique to the policy process itself. On human rights and democratization, official Washington and its European friends continue to speak in euphemism and evasion. But the issue here is not to see all US involvement as inherently negative, let alone to denounce all international standards of rights as imperialist or ethnocentric, but rather, to hold the US and its European allies accountable to the universal principles they proclaim elsewhere. An anti-imperialism of disengagement serves only to reinforce the hold of authoritarian regimes and oppressive social practices within the Middle East.

#### No Impact - Western power and imperialism doesn’t foster violent interventions

Martin **Shaw** (Professor of International Relations and Politics at the University of Sussex) April **2001** “The Problem of the Quasi-Imperial State” http://www.sussex.ac.uk/Units/CGPE/Failed%20States/shaw.pdf

Furthermore, Western leaders have consistently sought to shore up failed and failing (semi-) authoritarian state structures, rather than supporting their break-ups. The West has supported central Russian power throughout all the vicissitudes of the Gorbachev, Yeltsin and Putin regimes. The West has maintained a 'constructive' relationship with Chinese Communism through Tiananmen Square and all subsequent phases of repression. The eastern advances of NATO and the European Union have responded largely to the demands of local elites and populations - as well as to the fear of further state breakdown in regions close to Western Europe. Even after the West had defeated the Saddam regime in the Gulf War, and even as the latter waged genocidal war on Shi'ites and Kurds, it was reluctant to countenance the break-up of the Iraqi state. Likewise, the West's early response to the Yugoslav crisis was to try to shore up a federal state that was ceasing to exist, condoning the early atrocities of the Yugoslav National Army; after several years of war, it still backed Milosevic's Serbia as a force for stability. Only long after it became clear that the latter was leading to new wars, in Kosovo and (threatened) in Montenegro, did Western leaders move reluctantly to confront Serbia. Thus it was not only in East Timor, where the historically pro-Western Indonesian regime was the oppressor, that the West supported the existing centre and was late in coming to the rescue of the victims of genocide. Generally, therefore, Western power generally supports the maintenance of state structures even where these are dominated by regimes that are anti-Western as well as repressive. More extreme cases of 'state collapse' have tended to occur in countries like Somalia, Liberia and Sierra Leone that have been of minimal or declining strategic and economic significance. In these cases, even more than in Iraq or Yugoslavia, Western elites have generally been extremely reluctant to intervene. The more credible charge against the West is not that it intervenes widely in support of its own interests, but that: it avoids intervention and tolerates even genocidal repression, where its own interests are not strongly engaged; its interventions are therefore consistently late in responding to state and human crises;Page 18 18 its interventions are often half-baked, appeasing local elites and failing to anticipate events; its national elites are unwilling to risk even small numbers of 'their' soldiers, even when the lives of large numbers of non-Western civilians are at risk; it is disinterested in the strong development of global institutions, preferring ad hoc structures that it can manipulate to genuine global democratic governance. In what sense, then, can contemporary Western power be said to represent an advance on historic European empires and Cold War American power? The above is hardly a positive appraisal. Indeed, the main positive advantages of Western power lie in its internal characteristics (internationalisation and democratisation) rather than in the development of a positive post- imperial relationship with the non-Western world. The principal challenges to empire, authoritarianism and repression come today from civil society and social movements, rather than from the Western state.

#### Anti-imperialist strategies distort struggles for real global justice – resorting in massive violence in the periphery of your anti-western struggle

Martin **Shaw** (Professor of International Relations and Politics at the University of Sussex) April **2001** “The Problem of the Quasi-Imperial State” http://www.sussex.ac.uk/Units/CGPE/Failed%20States/shaw.pdf

It is worth asking how the politics of anti-imperialism distorts Western leftists' responses to global struggles for justice. John Pilger, for example, consistently seeks to minimise the crimes of Milosevic in Kosovo, and to deny their genocidal character - purely because these crimes formed part of the rationale for Western intervention against Serbia. He never attempted to minimise the crimes of the pro-Western Suharto regime in the same way. The crimes of quasi-imperial regimes are similar in cases like Yugoslavia and Indonesia, but the West's attitudes towards them are undeniably uneven and inconsistent. To take as the criterion of one's politics opposition to Western policy, rather than the demands for justice of the victims of oppression as such, distorts our responses to the victims and our commitment to justice. We need to support the victims regardless of whether Western governments take up their cause or not; we need to judge Western power not according to a general assumption of 'new imperialism' but according to its actual role in relation to the victims.

#### The critique is reductionist in the opposite direction- it is insufficient to say that because knowledge comes from western scholars that it cannot know anything about the Middle East

Charles Paul Freund (Reason magazine) December 2001 “The end of the Orientalist critique” http://www.travelbrochuregraphics.com/extra/2001\_nights\_the\_end\_of\_the\_orientalist\_critique.htm

For example, the curator for a recent traveling exhibit of American Orientalist antiques ("Noble Dreams, Wicked Pleasures") has closely examined the ways in which early ads for Camel cigarettes, the brief hoochy-coochy fad, and a single souvenir of the 1923 Shriners convention in Washington all express a "cavalier appropriation" of culture (in part because Shriners wear fezzes) and even signal a transfer of world power to the United States. Her argument assigns tendentious meanings to complex activities and signs, then locks them together as if cultural artifacts were so many jigsaw pieces. Another prominent critic claims that she is "othered" by the way Americans categorize what they eat. That is, dishes associated with India are exoticized as "Indian food," whereas American dishes claim the gustatory mainstream by being just "food." Her argument is a pointless misreading of conversational convenience, and ignores the fact that the American diet is the world’s most inclusive. Other critics, at the project’s extreme, deny that anyone from the West (the "so-called West") has any right at all to address any subject having to do with the ("so-called") East. This Kafkaesque view condemns whole hemispheres of people to guilt, and is no better than the views of Europe’s imperial Orientalists at their worst.

#### 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.