# 1AC

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

### Contention One-Warming

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

Spotts 11

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

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

#### And its anthropogenic- 7 indicators

Shahan 11

Zachary, writer for Scientific American and Reuters (“Yes, Global Warming is Real AND Caused by Humans,” 10/28/11, http://planetsave.com/2011/10/28/yes-global-warming-is-real-and-caused-by-humans/)

Now, that’s the quick and simple, and for those of you not satisfied with the quick and simple, here’s more below (images after the list): I posted on 10 indicators showing that humans are causing global warming a long time ago, mostly reposting the great work of folks over at Skeptical Science. Here are the “fingerprints” proving the case (some of the images are for items listed, some are additional points): CO2 has, “coincidentally,” been increasing at about the same rate as global temperatures (odd, eh?). It’s clear from measuring the type of carbon building up in the atmosphere that it is carbon from burning fossil fuels. (Manning 2006) Oxygen levels are declining just as CO2 is increasing from the burning of fossil fuels.. to a degree that matches like two neighboring puzzle pieces (in other words, exactly as one would expect of one theorized that the atmospheric changes are due to the burning of fossil fuels). (Manning 2006) Hundreds of years of coral reef measurements show a sharp rise in carbon from fossil fuels, matching the increased burning of fossil fuels by humans in recent years. (Get the picture? The puzzle pieces all fit together. Surprising! Unless you understand the basic fact that our burning of fossil fuels is having an effect on the atmosphere and the oceans.) (Pelejero 2005) OK, so we know CO2 from the burning of fossil fuels is rising. Next is to show how this influences the climate. From the post linked above: “Satellites measure less heat escaping out to space, at the particular wavelengths that CO2 absorbs heat, thus finding ‘direct experimental evidence for a significant increase in the Earth’s greenhouse effect’. (Harries 2001, Griggs 2004, Chen 2007).” It has also been confirmed that that heat not reaching out to space is being sent back to Earth. (Philipona 2004, Wang 2009). And, in particular, at the wavelengths of CO2! As a climate scientist reports: “this experimental data should effectively end the argument by skeptics that no experimental evidence exists for the connection between greenhouse gas increases in the atmosphere and global warming.” (Evans 2006). “Greenhouse effect warming” should have specific fingerprints of its own. One of those should be that the Earth should warm faster at night than in the daytime. Confirmed. (Braganza 2004, Alexander 2006) And that the upper atmosphere (aka stratosphere) should be cooling. Confirmed. (Jones 2003). The tropopause — the line between the upper atmosphere (stratosphere) and the lower atmosphere (troposphere) — should also be rising. Confirmed. (Santer 2003). And for the last piece of evidence, I’ll quote the story linked before this list again: “An even higher layer of the atmosphere, the ionosphere, is expected to cool and contract in response to greenhouse warming. This has been observed by satellites (Laštovi?ka 2006).”

#### The nature of the global warming problem demands accepting scientific consensus

Dennis Patrick O'Hara and Alan Abelsohn 11, Assistant professor of ethics as well as the Director of the Elliott Allen Institute for Theology and Ecology at the University of St. Michael's College and assistant professor in the Department of Family and Community Medicine, and the Dalla Lana School of Public Health and lecturer in the Centre for Environment, at the University of Toronto (Ethics & the Environment, Volume 16, Number 1, Spring)

Another disclaimer that has been used to justify delayed and inadequate responses to climate change argues that until there is scientific certainty about the causes and required responses to climate change, nations are not obliged to act. However, as early as 1990, the scientific evidence collected by the IPCC had determined that "emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases…" (IPCC 1990, ix). The scientific consensus of the first IPCC Report (1990) has been repeatedly validated and strengthened as successive reports (1995, 2001, 2007) used increasingly confident language concerning the anthropogenic causes of climate change. Using the strongest language thus far, the most recent IPCC report declares that "warming of the climate system is unequivocal," and "most of the observed increase in globally-averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations" where the words "very likely" were defined as an assessed probability of occurrence of >90% (Intergovernmental Panel on Climate Change 2007b, 72, 39, 27). Such scientific consensus has not only been forged in the IPCC reports but has also been confirmed by other research bodies, such as the National Research Council (USA) and the American Association for the Advancement of Science.11 With this in mind, the argument that developed nations need not act while scientific uncertainty concerning climate change exists can be discredited on two levels: the degree of scientific certitude needed before action is required, and the different roles for science and ethics. The inevitable vicissitudes of daily living require humans to make the best decisions possible given the best information available; almost none of our decisions are made in the context of total certitude. For instance, we do not wait for certitude when formulating a medical diagnosis or prescribing treatment since such delays could lead to the demise of patients. We act with the best knowledge at hand, especially when a preponderance of evidence favors a particular course of action and indicates that there is an urgent need to [End Page 40] act. Nor do we need to know the exact weight that a baby will have when it is born in order to agree that a woman is presently pregnant (McKibben 1989, 29). Although we do not know the fetus's eventual birth weight, we deny neither its present development nor the mother's pregnancy. When the vast majority of credible experts who have studied climate change unanimously agree that anthropogenic GHGs are directly related to climate change, those who wish to argue otherwise must provide a comparable level of evidence to support their contrary position, especially when current evidence indicates that delays in resolving climate change issues are associated with human mortality and morbidity. To delay an effective response to the adverse effects of climate change until absolute certitude exists and until every climatic mechanism is understood is to demand an unprecedented level of certitude. Given the deaths and DALYs attributable to climate change, advocating delay is both immoral and perverse. Furthermore, while science determines when a risk is imminent, ethics decides if that risk is acceptable and if a response to the risk is obligated. Waiting for science to resolve all uncertainty related to the risk not only delays any response, it also shifts the decision-making solely to scientists, away from those who are either affected by the risk or are properly equipped to resolve moral questions. Moreover, scientific uncertainty does not absolve the agent from responsibility for the consequences of the action to which some uncertainty is associated. Since humans universally reject actions that seriously endanger basic human rights to life, health and security, the duty to refrain from activities that endanger these rights, including via climate change, is sufficiently strong that appeals to scientific uncertainty cannot overrule the duty to avoid harm.12 An agent has a duty to avoid harm in direct proportion to the harm that could result from the action of the agent, especially when the consequences will be significant and will be borne by those who have not consented to be put at risk, as is the case with climate change (Brown et al. 2006, 27). Accordingly, the United Nations Framework Convention on Climate Change asserted that the Parties to that agreement should "take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures…" (United Nations 1992b, Article 3). Developed nations have significantly increased GHG emissions that increase the risk to others—they can no longer claim ignorance, nor have [End Page 41] they been able to do so since the late 1980s. Therefore they are accountable to those who have been harmed, and they must not only provide reparation but also cease causing further harm. They may not demand a level of certitude that significantly exceeds the certitude that we encounter in the rest of our lives. Indeed, the very planetary dynamics that formed the Earth and us, and which continue to evolve and to provide a context for our existence, are characterized by chance and uncertainty (Gould 2002). To demand certitude, scientific or otherwise, contradicts the very pattern of our existence.

#### Electricity sector is key

Mormann 11(Felix, German JD and JSD from University of Passau School of law, as well as an LMM from UC BerkeleySchool of Law and is a research Fellow at Stanford’s Steyer Center for Energy Policy and Finance, writing for Economic Law Quarterly, “Requirements for a Renewables Revolution.” 05/02/11. http://www.boalt.org/elq/documents/elq38\_4\_03\_2012\_0808.pdf**)**

Renewable sources of energy are relevant not only to electricity generation but also to other sectors of the energy market, such as heat and transport. The latter especially features prominently in the public debate over ever stricter fuel-economy standards mandated by the U.S. Environmental Protection Agency (EPA).29 Notwithstanding the importance of renewable energy sources for heat and transport, this Article focuses on reducing greenhouse gas emissions as necessary to mitigate climate change through the timely transition to renewables in the electricity sector. From 1990 to 2008, electricity generation accounted for 32 percent of all U.S. greenhouse gas emissions, placing the electricity sector at the top of the emitters’ list, ahead of the transport sector, which is responsible for 27 percent of all U.S. greenhouse gas emissions.30 Globally, the energy sector accounts for 73 percent of greenhouse gas emissions, with the agricultural sector assuming a distant second place responsible for 16 percent.31 With U.S. and global electricity generation expected to increase by 22 percent and 74 percent respectively until 2030,32 any effort to significantly reduce greenhouse gas emissions must include major reforms in the electricity sector. A timely shift to renewable sources is the only long-term sustainable solution presently available.33 Moreover, the projected growth in electricity generation will easily be surpassed if the current trend towards electric vehicles (e.g., plug-in hybrids) continues.34 The resulting large-scale electrification of the transport sector would further increase the need for a timely decarbonization of the electricity sector. Otherwise greenhouse gas emissions may merely move from one sector (transport) to another, only slightly less carbon-intensive sector (electricity). While improvements in energy efficiency will also be important,35 the timely shift to renewables is essential if current efforts in climate change mitigation are to be successful.36 Fortunately, the case for rapid large-scale deployment of renewables in the electricity sector is not one of necessity only but of potential, too. In comparison to the fragmented structure of the heat-relevant building sector, for instance, the electricity sector is relatively centralized and, hence, easier to regulate and reform.37 Indeed, a recent study found that meeting the world’s entire demand with electricity generated from water, wind, and sunlight is technologically feasible as early as twenty years from today.38 Accordingly, this Article focuses on the use of renewables for the generation of electricity.

#### Natural Gas—The US will be locked in to natural gas unless renewable alternatives are developed—Natural Gas causes methane release and fast warming

Nordhaus and Shellenberger 12.

Ted Nordhaus and Michael Shellenberger 12 are the authors of Break Through: From the Death of Environmentalism to the Politics of Possibility, Feb 27 (<http://e360.yale.edu/feature/nordhaus_shellenberger_beyond_cap_and_trade_a_new_path_to_clean_energy/2499/>)

A funny thing happened while environmentalists were trying and failing to cap carbon emissions in the U.S. Congress. U.S. carbon emissions started going down. The decline began in 2005 and accelerated after the financial crisis. The latest estimates from the U.S. Energy Information Administration now suggest that U.S. emissions will continue to decline for the next few years and remain flat for a decade or more after that.¶ The proximate cause of the decline in recent years has been the recession and slow economic recovery. But the reason that EIA is projecting a long-term decline over the next decade or more is the glut of cheap natural gas, mostly from unconventional sources like shale, that has profoundly changed America’s energy outlook over the next several decades. **Gas is no panacea. It still puts a lot of carbon into the atmosphere** and has at the local level. **Methane leakage** resulting from the extraction and burning of natural gas **threatens to undo much of the carbon benefit** that gas holds over coal. And even were we to make a full transition from coal to gas, **we would** then **need to transition from gas to renewables** and nuclear **in order to reduce** U.S. **emissions deeply enough to achieve the reductions that climate scientists believe will be necessary to avoid dangerous global warming**. But the shale gas revolution, and its rather significant impact on the U.S. carbon emissions outlook, offers a stark rebuke to what has been the dominant view among policy analysts and environmental advocates as to what it would take in order to begin to bend down the trajectory of U.S. emissions, namely a price on carbon and a binding cap on emissions. The existence of a better and cheaper substitute is today succeeding in reducing U.S. emissions where efforts to raise the cost of fossil fuels through carbon caps or pricing — and thereby drive the transition to renewable energy technologies — have failed.¶ In fact, the rapid displacement of coal with gas has required little in the way of regulations at all. Conventional air pollution regulations do represent a very low, implicit price on carbon. And a lot of good grassroots activism at the local and regional level has raised the political costs of keeping old coal plants in service and bringing new ones online.¶ But those efforts have become increasingly effective as gas has gotten cheaper. The existence of a better and cheaper substitute has made the transition away from coal much more viable economically, and it has put the wind at the back of political efforts to oppose new coal plants, close existing ones, and put in place stronger EPA air pollution regulations.¶ Yet if cheap gas is harnessing market forces to shutter old coal plants, the existence of cheap gas from unconventional places is by no means the product of those same forces, nor of laissez faire energy policies. Our current glut of gas and declining emissions are in no small part the result of 30 years of federal support for research, demonstration, and commercialization of non-conventional gas technologies without which there would be no shale gas revolution today.¶ Starting in the mid-seventies, the Ford and Carter administrations funded large-scale demonstration projects that proved that shale was a potentially massive source of gas. In the years that followed, the U.S. Department of Energy continued to fund research and demonstration of new fracking technologies and developed new three-dimensional mapping and horizontal drilling technologies that ultimately allowed firms to recover gas from shale at commercially viable cost and scale. And the federal non-conventional gas tax credit subsidized private firms to continue to experiment with new gas technologies at a time when few people even within the natural gas industry thought that firms would ever succeed in economically recovering gas from shale.¶ The gas revolution now unfolding — and its potential impact on the future trajectory of U.S. emissions — suggests that the long-standing emphasis on emissions reduction targets and timetables and on pricing have been misplaced. Even now, carbon pricing remains the sine qua non of climate policy among the academic and think-tank crowds, while much of the national environmental movement seems to view the current period as an interregnum between the failed effort to cap carbon emissions in the last Congress and the next opportunity to take up the cap-and-trade effort in some future Congress.¶ And yet, the European Emissions Trading Scheme (ETS), which has been in place for almost a decade now and has established carbon prices well above those that would have been established by the proposed U.S. system, has had no discernible impact on European emissions. The carbon intensity of the European economy has not declined at all since the imposition of the ETS. Meanwhile green paragon Germany has embarked upon a coal-building binge under the auspices of the ETS, one that has accelerated since the Germans shut down their nuclear power plants.¶ Even so, proponents of U.S. emissions limits maintain that legally binding carbon caps will provide certainty that emissions will go down in the future, whereas technology development and deployment — along with efforts to regulate conventional air pollutants — do not. Certainly, energy and emissions projections have proven notoriously unreliable in the past — it is entirely possible that future emissions could be well above, or well below, the EIA’s current projections. But the cap-and-trade proposal that failed in the last Congress, like the one that has been in place in Europe, would have provided no such certainty. It was so riddled with loopholes, offset provisions, and various other cost-containment mechanisms that emissions would have been able to rise at business-as-usual levels for decades.¶ Arguably, the actual outcome might have been much worse. The price of the environmental movement’s demand for its “legally binding” pound of flesh was a massive handout of free emissions allocations to the coal industry, which might have slowed the transition to gas that is currently underway.¶ **Continuing to drive down U.S. emissions will ultimately require that we develop low- or no-carbon alternatives that are better and cheaper than gas**. **That won’t happen overnight**. The development of cost-effective technologies to recover gas from shale took more than 30 years. **But we’ve already made a huge down payment on the tech**nologies we will need.¶ Over the last decade, we have spent upwards of $200 billion to develop and commercialize new renewable energy technologies. China has spent even more. And **those investments are beginning to pay off. Wind is now almost as cheap as gas in some areas** — in prime locations with good proximity to existing transmission. **Solar is also close to achieving grid parity** in prime locations as well. And a new generation of nuclear designs that promises to be safer, cheaper, and easier to scale may ultimately provide zero-carbon baseload power. All of these technologies have a long way to go before they are able to displace coal or gas at significant scale. But the key to getting there won’t be more talk of caps and carbon prices. It will be to continue along the same path that brought us cheap unconventional gas — developing and deploying the technologies and infrastructure we need from the bottom up.¶ When all is said and done, a cap, or a carbon price, may get us the last few yards across the finish line. But a more oblique path, focused on developing better technologies and strengthening conventional air pollution regulations, may work just as well, or even better. For one thing should now be clear: **The key to decarbonizing our economy will be developing cheap alternatives that can cost-effectively replace fossil fuels. There simply is no substitute for making clean energy cheap**.

#### Diversity of fuels and decreased natural gas usage for energy production is essential to the future America’s agricultural sector—impact is starvation

IECA 3 [Industrial Energy Consumers of America, nonprofit organization created to promote the interests of manufacturing companies for which the availability, use and cost of energy, power or feedstock play a significant role in their ability to compete, July 22 2003, “IMPACT OF THE U.S. NATURAL GAS CRISIS ON THE NORTH AMERICAN NITROGEN FERTILIZER INDUSTRY,” http://www.ieca-us.com/wp-content/uploads/072203Fertilizerbriefing.pdf]

Natural gas is the principal and only economically feasible feedstock raw material used for producing anhydrous ammonia, the building block product for nitrogen fertilizer. The fertilizer industry accounts for approximately three percent of the total natural gas consumed in the United States, while natural gas costs at current price levels account for nearly 90 percent of the cost to produce ammonia. Natural gas is the primary feedstock in the production of virtually all commercial nitrogen fertilizers in the United States. It is important to be very clear about this: natural gas is not simply an energy source for us; it is the raw material from which nitrogen fertilizers are made. The production process involves a catalytic reaction between elemental nitrogen derived from the air with hydrogen derived from natural gas. The primary product from this reaction is anhydrous ammonia (NH3). Anhydrous ammonia is used directly as a commercial fertilizer or as the basic building block for producing virtually all other forms of nitrogen fertilizers such as urea, ammonium nitrate and nitrogen solutions, as well as diammonium phosphate and mono-ammonium phosphate. The volatility and high level of U.S. natural gas prices, virtually unprecedented in the history of our country, has resulted in the permanent closure of almost 20 percent of U.S. nitrogen fertilizer capacity and the idling of an additional 25 percent. By the end of December 2000, the U.S. nitrogen operating rate fell to below 70 percent of capacity. By the end of January 2001, operating rates dropped to an all-time low of only 46 percent. To put this into perspective, the average U.S. operating rate during the 1990s was 92 percent. During the gas spike in late February and early March of 2003, working capital requirements for one Mid-Western nitrogen manufacturer to buy gas for its operations nearly doubled--an increase of nearly $40 million in one month. 2 Impact on U.S. Farmers Natural gas prices began to steadily increase during calendar year 2000, rising from an average of $2.36 per MMBtu in January to over $6.00 per MMBtu in December 2000 and to a record $10 per MMBtu in January 2001 (Figure 3). In turn, this forced fertilizer production costs to unprecedented levels. Ammonia production costs, for example, spiked up from approximately $100 per ton to $170 per ton by June 2000, to $220 per ton in December 2000, and to an average of over $350 per ton in January 2001. The sharp rise in natural gas prices and the resulting curtailment of U.S. fertilizer production also has had a dramatic impact on fertilizer prices throughout the marketing chain and, in particular, at the farm level. Nitrogen prices at the farm level, for example, jumped this year to near-record high levels. According to U.S. Department of Agriculture data, the U.S. average farm-level price for ammonia jumped this spring to $373 per ton compared to an average spring price last year of $250. Similarly, urea prices have climbed from $191 to $261 and UAN prices from $127 to $161 in the same time period. This translates into an increase in cost to a typical Midwest corn farmer of $10 to $15 per acre. It is important to understand that most U.S. nitrogen fertilizer is consumed within a very short time frame in the fall and spring application seasons. During the 1990s, approximately 70-75 percent of the nitrogen fertilizers consumed by American farmers was supplied by domestic production with another 15 percent supplied from nearby Canadian plants. The remaining 10-15 percent of the volume was sourced from offshore suppliers. The continued consolidation in the industry due to high energy costs and other critical factors is also impacting the farm input retail dealer sector. Approximately 18 percent of the largest farming operations in the country currently use 80 percent of the inputs. There are currently 10,500 retail input outlets in America today. But the number of retail companies, which oversee these facilities, has dropped almost 45 percent from the more than 6,000 in 1995 to just 3,400 in 2002.3 Jobs and the Economy Since mid-2000, when the natural gas crisis began to manifest itself, 11 ammonia plants representing 21 percent of U.S. capacity have been permanently closed. The United States lost these jobs and this industrial output, in essence sending them overseas. This lost capacity was replaced by imported materials from regions that have inexpensive natural gas supplies, including the Middle East, the Former Soviet Union, Trinidad and Venezuela. Of the 20 million tons of ammonia capacity that existed in the United States prior to 2000, approximately 3.5 million tons have already been permanently closed. According to a recent study completed by Fertecon, the world’s largest fertilizer consulting company, another four million tons is at risk of closing within the next two years. In addition, it is anticipated that the remainder of the North American nitrogen industry will likely operate on a “swing basis.” Due to the current volatile natural gas markets, the industry has suffered through four years of extreme financial hardship. Two major U.S. producers have filed for bankruptcy. In June 2003, only 50 percent of remaining industry capacity was operating. Workers have been laid off, and more permanent plant closures may be inevitable. This will increase the dependence of the U.S. farmer and industrial consumer on foreign sources of nitrogen fertilizer supply. Ultimately, this puts in jeopardy our nation’s food security, and by extension, our national security. The level of attrition in the North American fertilizer industry in the past two decades is staggering and is being accelerated by increased natural gas costs and shutdowns of domestic production. There were 63 entitities owning domestic anhydrous ammonia production in the 1970s, now down to 22 in the early 2000s. Of the 82 corporate entities producing domestic nitrogen in the 1960s and 1970s, only 12 are currently producing product.4 For example, a world-scale nitrogen production facility in Donaldsonville, Louisiana, currently employs 507 full-time and contract workers. This facility accounts for $46 million a year in wages and $8 million in sales and property taxes. During a normal production year, the facility converts approximately 78 million MMBtu of natural gas into 2.25 million tons of ammonia, 1.75 million tons of urea, and 2.15 million tons of UAN. The complex has a daily requirement of over 200 million cubic feet of natural gas as a feedstock and fuel. Domestic fertilizer manufacturing facilities such as the one noted above have historically provided top-paying jobs and additional employment opportunities in local communities. According to a recent Baton Rouge Advocate article, jobs in chemical manufacturing are at the top of the pay scale among Louisiana manufacturers. The average chemical industry wage in February was $25.23 per hour, with a 44.2-hour workweek producing $1,115 per worker per week, compared to a general manufacturing wage of $17.63 per hour or $756 on a 42.9-hour workweek. Chemical industry jobs also have a high multiplier effect. In East Baton Rouge Parish, for example, each chemical job is estimated to support another 4.6 positions in the overall job market. Examples of Job Losses and Layoffs As reported in the June 30, 2003, Green Markets, Terra Industries Inc. due to not being able to cover its cash costs because of continuing high natural gas costs said it would shut down ammonia and urea production at its Blytheville, Arkansas, nitrogen complex by the end of June, resulting in the lay-off of 60 employees, which represents 65 percent of that facility’s workforce. As reported in the June 23, 2003, Green Markets, PotashCorp and Mississippi Chemical Corp began layoffs at its Memphis, Tenn., and Geismer, La., production facilities, respectively. A combined 190 employees are impacted at the two plants. 5 As reported in the April 28, 2003, Green Markets, Agrium Inc. told employees at its Kenai, Alaska, nitrogen facility April 24 that it would be laying off 65 workers due to restructuring as a result of reduced natural gas supplies. As reported in the March 10, 2003, Green Markets, IMC Global eliminated a total of 100 positions in a move to cut costs due to current conditions in the depressed world fertilizer market.6 Policy Recommendations High natural gas prices present the most serious threat to the fertilizer sector and to farmers in general, since the energy shocks of the 1970s. The fertilizer industry believes it is imperative that the U.S. develop a comprehensive and balanced energy policy – one that encourages the development of additional supplies and, at the same time, promotes the efficient use of a variety of energy sources and technologies. The fertilizer industry believes that a balanced and comprehensive energy policy is not only long overdue, but also essential to the long-term viability of this strategic sector. It is also crucial to the American farmer given that almost one-third of U.S. crop production is derived from nitrogen fertilizer. If we are to prevent further decimation of the North American nitrogen fertilizer industry, the U.S. government must enact policies that stabilize the supply/demand balance for natural gas.

#### Addressing the root cause of climate change attacks environmental racism and institutional racism in the United States

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

MARRAKECH -- The lack of transparency and public participation in the climate negotiations will further worsen conditions for Indigenous Peoples, people of color and workers in the US and US-Mexico border. Speakers from Indigenous Environmental Network, Southwest Network for Environmental and Economic Justice, CorpWatch and Redefining Progress held a briefing on Tuesday in Marrakech, bringing issues of racial justice and worker's rights to the center of the climate change negotiations.

Climate change is a reality in North America, and those least responsible for creating the problem -- Indigenous Peoples and communities of color, in particular -- will be the hardest hit. They have the least resources to cope with climatic changes -- a direct result of institutional racism in the US. In addition, the legacy of environmental racism in the US and the US-Mexico border has ensured that these communities are also hardest hit by environmental injustices, be they the dumping of nuclear waste, the siting of coal fired power plants and refineries or even the lack of adequate public transporation in communities of color. Various studies have clearly established that race plays a major factor in the siting of polluting industries in the US.

The corporate lobby has been very instrumental in derailing the negotiations on climate change and promising false solutions. "The Bush administration has sold out the interests of indigenous communities and communities of color to the fossil fuel industry that supported his election," said Tom Goldtooth of the Indigenous Environmental Network. "We need real solutions that address the root causes of climate change and environmental racism, not corporate solutions like carbon trading that will not do anything to stop greenhouse gases in the US -- a society addicted to fossil fuels," added Goldtooth.

Oil and other fossil fuel corporations are pushing the world to the edge of ecological havoc. At the same time, they continue to relentlessly destroy the health and well being of local communities and ecosystems where profits from oil are to be found- be it in the predominantly African American "Cancer Alley", the Gwich'in natives near the Arctic Refuge or Latinos in Austin, Texas. "Clearly, holding corporations accountable for the central role they play in perpetuating these local injustices as well as contributing to climate change is key to any solution to achieve Climate Justice. The US, which accounts for a quarter of CO2 emissions, must also be held accountable to forging genuine solutions," said Amit Srivastava of CorpWatch.

"For Indigenous People and people of color, climate change is a matter of life and death," said Ansje Miller of Redefining Progress, "Yet, our government turns its back on Americans most vulnerable to climate change by saying that we can't afford to address the problem. The truth is, we can't afford not to."

"Any solution must ensure the need for communities and workers to live in a safe, healthy, and clean environment and requires a just transition to build sustainable jobs and communities. To ensure these rights, we have to build a grassroots movement for Climate Justice that integrally links human rights, environmental justice and labor rights by including communities and workers in articulating the solutions," said Cipriana Jurado of the Southwest Network of Environmental and Economic Justice, who works on the US-Mexico border for the bi-national network.

#### Adopting a mindset of scientific inquiry for climate change makes sense because it’s a phenomenon uniquely suited to an empiricist methodology

Jean Bricmont 1, professor of theoretical physics at the University of Louvain, “Defense of a Modest Scientific Realism”, September 23, <http://www.physics.nyu.edu/faculty/sokal/bielefeld_final.pdf>

Given that instrumentalism is not defensible when it is formulated as a rigid doctrine, and since redefining truth leads us from bad to worse, what should one do? A hint of one sensible response is provided by the following comment of Einstein: Science without epistemology is insofar as it is thinkable at all primitive and muddled. However, no sooner has the epistemologist, who is seeking a clear system, fought his way through such a system, than he is inclined to interpret the thought-content of science in the sense of his system and to reject whatever does not fit into his system. The scientist, however, cannot afford to carry his striving epistemological systematic that far. ... He therefore must appeal to the systematic epistemologist as an unscrupulous opportunist.'1'1 So let us try epistemological opportunism. We are, in some sense, "screened'' from reality (we have no immediate access to it, radical skepticism cannot be refuted, etc.). There are no absolutely secure foundations on which to base our knowledge. Nevertheless, we all assume implicitly that we can obtain some reasonably reliable knowledge of reality, at least in everyday life. Let us try to go farther, putting to work all the resources of our fallible and finite minds: observations, experiments, reasoning. And then let us see how far we can go. In fact, the most surprising thing, shown by the development of modern science, is how far we seem to be able to go. Unless one is a solipsism or a radical skeptic which nobody really is one has to be a realist about something: about objects in everyday life, or about the past, dinosaurs, stars, viruses, whatever. But there is no natural border where one could somehow radically change one's basic attitude and become thoroughly instrumentalist or pragmatist (say. about atoms or quarks or whatever). There are many differences between quarks and chairs, both in the nature of the evidence supporting their existence and in the way we give meaning to those words, but they are basically differences of degree. Instrumentalists are right to point out that the meaning of statements involving unobservable entities (like "quark'') is in part related to the implications of such statements for direct observations. But only in part: though it is difficult to say exactly how we give meaning to scientific expressions, it seems plausible that we do it by combining direct observations with mental pictures and mathematical formulations, and there is no good reason to restrict oneself to only one of these. Likewise, conventionalists like Poincare are right to observe that some scientific "choices", like the preference for inertial over noninertial reference frames, are made for pragmatic rather than objective reasons. In all these senses, we have to be epistemological "opportunists". But a problem worse than the disease arises when any of these ideas are taken as rigid doctrines replacing 'realism". A friend of ours once said: "I am a naive realist. But I admit that knowledge is difficult." This is the root of the problem. Knowing how things really are is the goal of science; this goal is difficult to reach, but not impossible (at least for some parts of reality and to some degrees of approximation). If we change the goal if, for example, we seek instead a consensus, or (less radically) aim only at empirical adequacy then of course things become much easier; but as Bert rand Russell observed in a similar context, this has all the advantages of theft over honest toil. Moreover, the underdetermination thesis, far from undermining scientific objectivity, actually makes the success of science all the more remarkable. Indeed, what is difficult is not to find a story that "fits the data'\*, but to find even one non-crazy such story. How does one know that it is non-crazy7 A combination of factors: its predictive power, its explanatory value, its breadth and simplicity, etc. Nothing in the (Quinean) underdetermiiiation thesis tells us how to find inequivalent theories with some or all of these properties. In fact, there are vast domains in physics, chemistry and biology where there is only one"18 known non-crazy theory that accounts for Unknown facts and where many alternative theories have been tried and failed because their predictions contradicted experiments. In those domains, one can reasonably think that our present-day theories are at least approximately true, in some sense or other. An important (and difficult) problem for the philosophy of science is to clarify the meaning of “approximately true'" and its implications for the ontological status of unobservable theoretical entities. We do not claim to have a solution to this problem, but we would like to offer a few ideas that might prove useful.

#### DELIBERATIVE POLICYMAKING through DEBATE is the CRUCIAL internal link to solving warming through public policy and SUBSUMES their critiques

Herbeck and Isham 10

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Getting to 350 parts per million CO2 in the atmosphere will require massive investments in clean-energy infrastructure—investments that can too often be foiled by a combination of special interests and political sclerosis. Take the recent approval of the Cape Wind project by the U.S. Department of the Interior. In some ways, this was great news for clean-energy advocates: the project’s 130 turbines will produce, on average, 170 megawatts of electricity, almost 75 percent of the average electricity demand for Cape Cod and the islands of Martha’s Vineyard and Nantucket.1 But, because of local opposition by well-organized opponents, the approval process was lengthy, costly, and grueling —and all for a project that will produce only 0.04 percent of the total (forecasted) U.S. electricity demand in 2010.2,3 Over the next few decades, the world will need thousands of large-scale, low-carbon electricity projects—wind, solar, and nuclear power will certainly be in the mix. But if each faces Cape Wind–like opposition, getting to 350 is unlikely. How can the decision-making process about such projects be streamlined so that public policy reflects the view of a well-informed majority, provides opportunities for legitimate critiques, but does not permit the opposition to retard the process indefinitely? One answer is **found in** a set of innovative policy-making tools founded on the principle of deliberative democracy, defined as “decision making by discussion among free and equal citizens.”4 Such approaches, which have been developed and led by the Center for Deliberative Democracy (cdd.stanford.edu), America Speaks (www.americaspeaks.org), and the Consensus Building Institute (cbuilding.org), among others, are gaining popularity by promising a new foothold for effective citizen participation in the drive for a clean-energy future. Deliberative democracy stems from the belief that democratic leadership should involve educating constituents about issues at hand, and that citizens may significantly alter their opinions when faced with information about these issues. Advocates of the approach state that democracy should shift away from fixed notions toward a learning process in which people develop defensible positions.5 While the approaches of the Center for Deliberative Democracy, America Speaks, and the Consensus Building Institute do differ, all of these deliberative methodologies involve unbiased sharing of information and public-policy alternatives with a representative set of citizens; a moderated process of deliberation among the selected citizens; and the collection and dissemination of data resulting from this process. For example, in the deliberative polling approach used by the Center for Deliberative Democracy, a random selection of citizens is first polled on a particular issue. Then, members of the poll are invited to gather at a single place to discuss the issue. Participants receive balanced briefing materials to review before the gathering, and at the gathering they engage in dialogue with competing experts and political leaders based on questions they develop in small group discussions. After deliberations, the sample is asked the original poll questions, and the resulting changes in opinion represent the conclusions that the public would reach if everyone were given the opportunity to become more informed on pressing issues.6 If policymakers look at deliberative polls rather than traditional polls, they will be able to utilize results that originate from an informed group of citizens. As with traditional polls, deliberative polls choose people at random to represent U.S. demographics of age, education, gender, and so on. But traditional polls stop there, asking the random sample some brief, simple questions, typically online or over the phone. However, participants of deliberative polls have the opportunity to access expert information and then talk with one another before voting on policy recommendations. The power of this approach is illustrated by the results of a global deliberative process organized by World Wide Views on Global Warming (www.wwviews.org), a citizen’s deliberation organization based in Denmark.7 On September 26, 2009, approximately 4,000 people gathered in 38 countries to consider what should happen at the UN climate change negotiations in Copenhagen (338 Americans met in five major cities). The results derived from this day of deliberation were dramatic and significantly different from results of traditional polls. Overall, citizens showed strong concern about global warming and support for climate-change legislation, contrary to the outcomes of many standard climate-change polls. Based on the polling results from these gatherings, 90 percent of global citizens believe that it is urgent for the UN negotiations to produce a new climate change agreement; 88 percent of global citizens (82 percent of U.S. citizens) favor holding global warming to within 2 degrees Celsius of pre-industrial levels; and 74 percent of global citizens (69 percent of U.S. citizens) favor increasing fossil-fuel prices in developed countries. However, a typical news poll that was conducted two days before 350.org’s International Day of Climate Action on October 24, 2009, found that Americans had an overall declining concern about global warming.7 How can deliberative democracy help to create solutions for the climate-change policy process, to accelerate the kinds of policies and public investments that are so crucial to getting the world on a path to 350? Take again the example of wind in the United States. In the mid-1990s, the Texas Public Utilities Commission (PUC) launched an “integrated resource plan” to develop long-term strategies for energy production, particularly electricity.8 Upon learning about the deliberative polling approach of James Fishkin (then at the University of Texas at Austin), the PUC set up deliberative sessions for several hundred customers in the vicinity of every major utility provider in the state. The results were a surprise: it turned out that participants ranked reliability and stability of electricity supply as more important characteristics than price. In addition, they were open to supporting renewable energy, even if the costs slightly exceeded fossil-fuel sources. Observers considered this a breakthrough: based on these public deliberations, the PUC went on to champion an aggressive renewable portfolio standard, and the state has subsequently experienced little of the opposition to wind-tower siting that has slowed development in other states.8 By 2009, Texas had 9,500 megawatts of installed wind capacity, as much as the next six states (ranked by wind capacity) in the windy lower and upper Midwest (Iowa, Minnesota, Colorado, North Dakota, Kansas, and New Mexico).9 Deliberative democracy has proven effective in a wide range of countries and settings. In the Chinese township of Zeguo, a series of deliberative polls has helped the Local People’s Congress (LPC) to become a more effective decision-making body.10 In February 2008, 175 citizens were randomly selected to scrutinize the town’s budget—and 60 deputies from the LPC observed the process. After the deliberations, support decreased for budgeting for national defense projects, while support rose for infrastructure (e.g., rural road construction) and environmental protection. Subsequently, the LPC increased support for environmental projects by 9 percent.10 In decades to come, China must be at the forefront of the world’s investments in clean-energy infrastructure. The experience of Zeguo, if scaled up and fully supported by Chinese leaders, can help to play an important role. Deliberative democracy offers one solution for determining citizen opinions, including those on pressing issues related to climate change and clean energy.

#### Warming causes extinction - oceans

Sify 2010 – Sydney newspaper citing Ove Hoegh-Guldberg, professor at University of Queensland and Director of the Global Change Institute, and John Bruno, associate professor of Marine Science at UNC (Sify News, “Could unbridled climate changes lead to human extinction?”, <http://www.sify.com/news/could-unbridled-climate-changes-lead-to-human-extinction-news-international-kgtrOhdaahc.html>, WEA)

The findings of the comprehensive report: 'The impact of climate change on the world's marine ecosystems' emerged from a synthesis of recent research on the world's oceans, carried out by two of the world's leading marine scientists. One of the authors of the report is Ove Hoegh-Guldberg, professor at The University of Queensland and the director of its Global Change Institute (GCI). 'We may see sudden, unexpected changes that have serious ramifications for the overall well-being of humans, including the capacity of the planet to support people. This is further evidence that we are well on the way to the next great extinction event,' says Hoegh-Guldberg. 'The findings have enormous implications for mankind, particularly if the trend continues. The earth's ocean, which produces half of the oxygen we breathe and absorbs 30 per cent of human-generated carbon dioxide, is equivalent to its heart and lungs. This study shows worrying signs of ill-health. It's as if the earth has been smoking two packs of cigarettes a day!,' he added. 'We are entering a period in which the ocean services upon which humanity depends are undergoing massive change and in some cases beginning to fail', he added. The 'fundamental and comprehensive' changes to marine life identified in the report include rapidly warming and acidifying oceans, changes in water circulation and expansion of dead zones within the ocean depths. These are driving major changes in marine ecosystems: less abundant coral reefs, sea grasses and mangroves (important fish nurseries); fewer, smaller fish; a breakdown in food chains; changes in the distribution of marine life; and more frequent diseases and pests among marine organisms. Study co-author John F Bruno, associate professor in marine science at The University of North Carolina, says greenhouse gas emissions are modifying many physical and geochemical aspects of the planet's oceans, in ways 'unprecedented in nearly a million years'. 'This is causing fundamental and comprehensive changes to the way marine ecosystems function,' Bruno warned, according to a GCI release. These findings were published in Science

### Contention Two-Grid

#### Environmental injustices are perpetuated by an imbalance in energy externalities—a green urban grid is the only alternative

**Behles 12.** (Deborah, Associate Professor of Law and Clinical Staff Attorney, Environmental Law and Justice Clinic, Golden Gate University School of Law. William and Mary Environmental Law and Policy Review. “An Integrated Green Urban Electrical Grid.” Spring 2012. 36 Wm. & Mary Envtl. L. & Pol'y Rev. 671 Lexis.)

The New Green Grid Can Reduce Pollution and Provide Economic Development in Environmental Justice Neighborhoods n177 An integrated urban grid focused on local renewable resources such as solar panels and wind turbines will also have positive public health impacts due to the reduced reliance on fossil-fuel energy. In fact, in an optimal situation, an integrated urban grid can end reliance on burning fossil-fuel because the resources do not use fossil-fuel and the energy storage helps eliminate the need for fossil- fuel facilities to act as a backup. n178 This reduced reliance on fossil- fuel electricity generation decreases greenhouse gases and other harmful co- pollutants such as sulfur dioxide, nitrous oxides, and particulate matter. n179 These co-pollutant emissions have been consistently linked to adverse cardiovascular and respiratory effects including asthma and premature death. n180 Consequently, a reduction of these co-pollutants decreases these health risks. Although reliance on solar and wind power generally results in positive public health benefits, not all renewable energy resources have the same beneficial impact on public health. For example, many states allow combustion of biomass and municipal waste to qualify as renewable energy. n181 Burning these resources does not necessarily reduce the [\*699] quantity of harmful pollutants released into the air. n182 In addition, the greenhouse impact of the combustion of biomass and municipal waste has recently come under scrutiny, leading one state to reevaluate whether biomass should count as a renewable resource. n183 Due to these potential issues, the green urban grid should rely primarily on clean renewable resources such as solar, wind, geothermal, and small hydro to meet its generation needs. Reliance on these types of resources can reduce air pollution including greenhouse gases. These reductions, if planned correctly, can help communities currently overburdened by pollution. Numerous studies have shown that low-income and minority communities that often live in urban areas bear more of the cumulative burden of pollution. n184 In particular, minority and low-income communities disproportionately bear the adverse environmental and health impacts from fossil-fuel exploration, extraction, production, consumption, and disposal. n185 These activities produce and lead to several criteria pollutants including fine particulate matter and nitrous oxides, n186 which could be reduced by increased reliance on the green urban grid. For example, in the San Francisco Bay Area, the Bay Area Air Quality Management District has designated urban neighborhoods with high populations of minorities, such as Bayview Hunters Point and Richmond, as high impact areas for air pollution. n187

#### Plan displaces fossil fuels

Loudermilk ‘11

(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.

#### SMRs key to renewables penetration

Loudermilk ‘11

(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.¶

#### Seeking environmental justice key to avert extinction

Byrant 95 (Bunyan, Professor in the school of Natural Resources and Environment, and an adjunt professor in the center for Afro-American and African studies at the University of Michigan, “Environmental Justice: Issues, Policies, and Solutions, p.209-212, MV)

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

### Contention 3-Solvency

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

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Abstract: More and more companies—in the U.S. and abroad—are investing in new commercial nuclear enterprises, chief among them, small modular reactors (SMRs). The SMR industry is growing, with many promising developments in the works—which is precisely why the government should not interfere, as subsidies and government programs have already resulted in an inefficient system for large reactors. Heritage Foundation nuclear policy experts explain how the future for small reactors can remain bright.

Small modular reactors (SMRs) have garnered significant attention in recent years, with companies of all sizes investing in these smaller, safer, and **more cost-efficient** nuclear reactors. Utilities are even forming partnerships with reactor designers to prepare for potential future construction. Perhaps most impressive is that most of this development is occurring without government involvement. Private investors and entrepreneurs are **dedicating resources** to these technologies based on their future prospects, not on government set-asides, mandates, or subsidies, and despite the current regulatory bias in favor of large light water reactors (LWRs).

The result is a young, robust, innovative, and growing SMR industry. Multiple technologies are being proposed that each have their own set of characteristics based on price, fuel, waste characteristics, size, and any number of other variables. To continue this growth, policymakers should reject the temptation to offer the same sort of subsidies and government programs that have proven ineffective for large LWRs. While Department of Energy cost-sharing programs and capital subsidies seem attractive, they have yet to net any new reactor construction. Instead, policymakers should focus on the systemic issues that have continued to thwart the expansion of nuclear power in recent years. Specifically, the federal government needs to develop an efficient and **predictable regulatory pathway** to new reactor certification and to develop a sustainable nuclear waste management strategy.

Why SMRs?

Small modular reactors share many of the attractive qualities of large reactors, such as providing abundant emissions-free power, while adding new features that could make them more appropriate for certain applications, such as providing power to rural communities or for dedicated industrial use. SMRs are not yet positioned to take the place of traditional large LWRs, but they represent an important growth area for the commercial nuclear industry.

Indeed, should the promise of small modular reactors be realized, the technology could transform the nuclear industry. That is because these attributes would potentially mitigate some of the financial and regulatory problems that nuclear energy has recently faced. SMRs potentially cost less (at least in up-front capital), are more mobile and multifunctional, provide competition, and can largely be produced by existing domestic infrastructure.

Lower Costs Up Front. Large reactors are very expensive to license and construct and require massive up-front capital investments to begin a project. Small reactors, while providing far less power than large reactors, can be built in modules and thus be paid for over time. For example, estimates for larger reactors range from $6 billion to $10 billion and must be financed all at once. The Babcock & Wilcox Company’s modular mPower reactors, alternatively, can be purchased in increments of 125 megawatts (MW), which would allow costs to be spread out over time. Though cost estimates are not yet available for the mPower reactor, its designers have stated that they will be competitive. This should not be used as a reason to refrain from building larger, 1,000-plus MW reactors. Each utility will have its own set of variables that it must consider in choosing a reactor technology, but given that one of the primary justifications for government subsidies is that the high costs of large reactors puts unacceptable strain on utility balance sheets, an option that spreads capital outlays over time should be attractive.

Safe Installation in Diverse Locations. Some designs are small enough to produce power for as few as 20,000 homes. One such reactor, Hyperion Power’s HPM (Hyperion Power Module) offers 25 MW of electricity for an advertised cost of $50 million per unit. This makes the HPM a potential power solution for isolated communities or small cities.[1] The Alaskan town of Galena, for example, is planning to power its community with a small reactor designed by Toshiba, while Fairbanks is looking into a small plant constructed by Hyperion.[2] In addition, Western Troy Capital Resources has stated that it will form a private corporation to provide electric power from small reactors for remote locations in Canada.[3] Public utility officials in Grays Harbor, Washington, have spoken with the NuScale Power company about powering the community with eight small nuclear plants;[4] and Hyperion Power has reported a high level of interest in small nuclear reactor designs from islands around the world.[5]

Using a small nuclear reactor could cut electricity costs in isolated areas since there would be no need for expensive transmission lines to carry power to remote locations.[6] SMRs could also potentially be integrated into existing energy infrastructure. SMRs could be built into old coal plants, for instance. The reactors would replace the coal boilers and be hooked into the existing turbines and distribution lines. According to the Nuclear Regulatory Commission, these modifications could be completed safely since small reactors will likely be easier to control during times of malfunction.[7]

Multi-functionality. SMRs can be used in a variety of applications that have substantial power and heat requirements. The chemical and plastics industries and oil refineries all use massive amounts of natural gas to fuel their operations. Similarly, small reactors could produce the heat needed to extract oil from tar sands, which currently requires large amounts of natural gas. While affordable today, natural gas prices vary significantly over time, so the long-term predictable pricing that nuclear provides could be very attractive. SMRs may also provide a practical solution for desalination plants (which require large amounts of electricity) that can bring fresh water to parts of the world where such supplies are depleting.[8] Perhaps most important, is that SMRs have the potential to bring power and electricity to the 1.6 billion people in the world today that have no access to electricity, and to the 2.4 billion that rely on biomass, such as wood, agricultural residue, and dung for cooking and heating.[9]

Competition. While competition among large nuclear-reactor technologies currently exists, small reactors will add a new dimension to nuclear-reactor competition. Multiple small technology designs are set to emerge on the market. Not only will competition among small reactors create a robust market, it will also provide an additional incentive for large reactors to improve. If smaller reactors begin to capture a share of the nuclear market and the energy market at large, it will drive innovation and ultimately lower prices for both new and existing technologies.

Domestic Production. Although the nuclear industry necessarily shrank to coincide with decreased demand, much of the domestic infrastructure remains in place today and could support the expansion of small-reactor technologies. Although the industrial and intellectual base has declined over the past three decades, forging production, heavy manufacturing, specialized piping, mining, fuel services, and skilled labor could all be found in the United States. Lehigh Heavy Forge Corporation in Bethlehem, Pennsylvania, could build the forges while Babcock & Wilcox could provide the heavy nuclear components, for instance. AREVA/Northrop Grumman Shipbuilding broke ground on a heavy components manufacturing facility last June.[10] Further, a number of companies are expanding manufacturing, engineering, and uranium enrichment capabilities—all in the United States.

If SMRs are so great, where is the construction?

While some designs are closer to market introduction than others, the fact is that America’s **regulatory** and policy environment is not sufficient to support a robust expansion of existing nuclear technologies, much less new ones. New reactor designs are difficult to license efficiently, and the lack of a sustainable nuclear waste management policy causes significant risk to private investment.

Many politicians are attempting to mitigate these market challenges by offering subsidies, such as loan guarantees. While this approach still enjoys broad support in Congress and industry, the reality is that it has not worked. Despite a lavish suite of subsidies offered in the Energy Policy Act of 2005, including loan guarantees, insurance against government delays, and production tax credits, no new reactors have been permitted, much less constructed. These subsidies are in addition to existing technology development cost-sharing programs that have been in place for years and defer significant research and development costs from industry to the taxpayer.

The problem with this approach is that it ignores the larger systemic problems that create the unstable marketplace to begin with. These systemic problems generally fall into three categories:

Licensing. The Nuclear Regulatory Commission (NRC) is ill prepared to build the regulatory framework for new reactor technologies, and no reactor can be offered commercially without an NRC license. In a September 2009 interview, former NRC chairman Dale E. Klein said that small nuclear reactors pose a dilemma for the NRC because the commission is uneasy with new and unproven technologies and feels more comfortable with large light water reactors, which have been in operation for years and has a long safety record.[11] The result is that enthusiasm for building non-light-water SMRs is generally squashed at the NRC as potential customers realize that there is little chance that the NRC will permit the project within a timeframe that would promote near-term investment. So, regardless of which attributes an SMR might bring to the market, the **regulatory risk** is such that real progress on commercialization is difficult to attain. This then leaves large light water reactors, and to a lesser extent, small ones, as the least risky option, which pushes potential customers toward that technology, which then undermines long-term progress, competition, and innovation.

Nuclear Waste Management. The lack of a sustainable nuclear waste management solution is perhaps the greatest obstacle to a broad expansion of U.S. nuclear power. The federal government has failed to meet its obligations under the 1982 Nuclear Waste Policy Act, as amended, to begin collecting nuclear waste for disposal in Yucca Mountain. The Obama Administration’s attempts to shutter the existing program to put waste in Yucca Mountain without having a backup plan has worsened the situation. This outcome was predictable because the current program is based on the flawed premise that the federal government is the appropriate entity to manage nuclear waste. Under the current system, waste producers are able to largely ignore waste management because the federal government is responsible. The key to a sustainable waste management policy is to directly connect financial responsibility for waste management to waste production. This will increase demand for more waste-efficient reactor technologies and drive innovation on waste-management technologies, such as reprocessing. Because SMRs consume fuel and produce waste differently than LWRs, they could contribute greatly to an economically efficient and sustainable **nuclear waste management strategy**.

Government Intervention. Too many policymakers believe that Washington is equipped to guide the nuclear industry to success. So, instead of creating a stable regulatory environment where the market value of different nuclear technologies can determine their success and evolution, they choose to create programs to help industry succeed. Two recent Senate bills from the 111th Congress, the Nuclear Energy Research Initiative Improvement Act (S. 2052) and the Nuclear Power 2021 Act (S. 2812), are cases in point. Government intervention distorts the normal market processes that, if allowed to work, would yield the most efficient, cost-effective, and appropriate nuclear technologies. Instead, the federal government picks winners and losers through programs where bureaucrats and well-connected lobbyists decide which technologies are permitted, and provides capital subsidies that allow investors to ignore the systemic problems that drive risk and costs artificially high. This approach is especially detrimental to SMRs because subsidies to LWRs distort the relative benefit of other reactor designs by artificially lowering the cost and risk of a more mature technology that already dominates the marketplace.

How to Fix a Broken System

At the Global Nuclear Renaissance Summit on July 24, 2008, then-NRC chairman Dale Klein said that a nuclear renaissance with regard to small reactors will take “decades to unfold.”[12] If Members of Congress and government agencies do not reform their current approach to nuclear energy, this will most certainly be the case. However, a new, market-based approach could lead to a different outcome. Instead of relying on the policies of the past, Congress, the Department of Energy, and the NRC should pursue a new, 21st-century model for small and alternative reactor technologies by doing the following:

Reject additional loan guarantees. Loan guarantee proponents argue that high up-front costs of new large reactors make them unaffordable without loan guarantees. Presumably, then, a smaller, less expensive modular option would be very attractive to private investors even without government intervention. But loan guarantees undermine this advantage by subsidizing the capital costs and risk associated with large reactors. A small reactor industry without loan guarantees would also provide competition and downward price pressure on large light water reactors. At a minimum, Congress should limit guarantees to no more than two plants of any reactor design and limit to two-thirds the amount of any expanded loan guarantee program that can support a single technology. Such eligibility limits will prevent support from going only to a single basic technology, such as large light water reactors.[13]

Avoid subsidies. Subsidies do not work if the objective is a diverse and economically sustainable nuclear industry. Despite continued attempts to subsidize the nuclear industry into success, the evidence demonstrates that such efforts invariably fail. The nuclear industry’s success stories are rooted in the free market. Two examples include the efficiency and low costs of today’s existing plants, and the emergence of a private uranium enrichment industry. Government intervention is the problem, as illustrated by the government’s inability to meet its nuclear waste disposal obligations.

Build expertise at the Nuclear Regulatory Commission. The NRC is built to regulate large light water reactors. It simply does not have the regulatory capability and resources to efficiently regulate other technologies, and building that expertise takes time. Helping the NRC to develop that expertise now would help bring new technologies into the marketplace more smoothly. Congress should direct and resource the NRC to develop additional broad expertise for liquid metal-cooled, fast reactors and high-temperature, gas-cooled reactors. With its existing expertise in light water technology, this additional expertise would position the NRC to effectively regulate an emerging SMR industry.

Establish a new licensing pathway. The current licensing pathway relies on reactor customers to drive the regulatory process. But absent an efficient and predictable regulatory pathway, few customers will pursue these reactor technologies. The problem is that the legal, regulatory, and policy apparatus is built to support large light water reactors, effectively discriminating against other technologies. Establishing an alternative **licensing pathway** that takes the unique attributes of small reactors into consideration could help build the necessary regulatory support on which commercialization ultimately depends.[14]

Resolve staffing, security, construction criteria, and fee-structure issues by December 31, 2011. The similarity of U.S. reactors has meant that the NRC could establish a common fee structure and many general regulatory guidelines for areas, such as staffing levels, security requirements, and construction criteria. But these regulations are inappropriate for many SMR designs that often have smaller staff requirements, unique control room specifications, diverse security requirements, and that employ off-site construction techniques. Subjecting SMRs to regulations built for large light water reactors would add cost and result in less effective regulation. The NRC has acknowledged the need for this to be resolved and has committed to doing so, including developing the budget requirements to achieve it. It has not committed to a specific timeline.[15] Congress should demand that these issues be resolved by the end of 2011.

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

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

With development of large-scale reactors in the United States slowed by constrained debt capital markets, the absence of climate legislation, low gas prices and flagging power demand, talk in the nuclear industry has shifted to next-generation reactors that are smaller, less capital-intensive and therefore more flexible. These small and modular reactors (SMRs), generally 300 MW or less, can serve remote locations, small power grids and large process heat needs, such as oil production from the Alberta tar sands.

Utilities as diverse as the Tennessee Valley Authority, which already generates 6,600 MW of nuclear power, and Public Service Co. of New Mexico, which previously assumed nuclear power was beyond its economic reach, have expressed interest in SMRs. Like all nuclear generation, SMRs can provide carbon-free baseload power, but SMRs can be constructed in a fraction of the time necessary for large-scale reactors for a fraction of the cost. The creation of a domestic SMR manufacturing industry also would create jobs and could increase U.S. exports.

SMR reactor designers, customers and regulators must determine whether a regulatory process that was developed for 1,000-plus-MW projects based on similar technologies can be right-sized to meet much smaller projects' needs based on diverse technologies that must be deliverable in a reasonable time to be economical.

There are wide-ranging, proposed SMR designs, including light-water reactors, high-temperature gas-cooled reactors, liquid metal-cooled fast reactors, and molten salt reactors, with the smallest design beginning around 10 MW.

The Hyperion Power Module uses a uranium nitride fuel and a lead-bismuth eutectic as the coolant. The 25-MWe reactor is intended to be buried 33 feet underground and fueled only every eight to 10 years. In contrast, the NuScale reactor is a small, light-water reactor, the same reactor type as many of its large-scale cousins but with a modular design that allows a facility to have just one unit or as many as 24 units. If a plant had all 24 units with each reactor operating at its 45-MWe design capacity, the facility could produce more than 1,000 MWe of electricity, which is on par with the electricity production of one large-scale reactor.

Several reactor developers have been in contact with the Nuclear Regulatory Commission (NRC) to discuss their designs and licensing: Babcock & Wilcox Co. for its 125-MW mPower reactor; GE-Hitachi for its 311-MW PRISM reactor; Hyperion Power Generation for its 25-MW HPM reactor; NuScale Power Inc. for its 45-MW reactor; Toshiba for its 10-MW 4S reactor; and Westinghouse for its 335-MW IRIS reactor. Other developers are working on other SMR designs but have not yet filed a letter of intent to submit an application with the NRC.

NRC Licensing

The **biggest challenge** to getting SMRs to market in the United States is NRC licensing. The NRC's licensing requirements are geared toward certifying a design and then conducting a site-specific construction and operating licensing proceeding for large-scale nuclear reactors, a process that can take as much as a decade. Many SMR reactor developers are focused on the design certification. This process allows the NRC to approve a reactor design independent of an application to construct or operate a plant. It has been used by the agency a handful of times during the past decade for large-scale reactors. It seems well-suited to the small-reactor designs, some of which are intended to be factory-built and transported whole for drop-in installation at sites.

SMRs must undergo rigorous NRC safety and licensing reviews, but under the regulations as written, an applicant for an SMR design certification would need to determine on its own and on a case-specific basis which of the safety and licensing standards in the regulations–all of which were designed with large reactors in mind–are relevant to its design and which ones should not be applicable. This is a **laborious**, **uncertain process**.

The NRC recognizes its regulations must be re-examined to address the new SMR technologies. The agency **has begun** to review the potential policy, technical and licensing issues for SMRs. The NRC has identified issues associated with the licensing process, design requirements, operational matters and financial matters where tailoring to meet SMRs' specific needs might be warranted.

NRC commissioners have recognized the need to examine their processes with the risks and requirements of SMRs in mind, and they have taken steps to accelerate the development of a risk-informed licensing framework for SMRs; one that might recognize some SMRs do not present the same level or nature of nuclear safety and security issues that must be addressed for their large-scale counterparts. For example, some SMRs can be built underground. Some use reactor design features or fuel types similar to existing research reactors that have operated safely for decades at universities across the country. Thus, the commissioners directed the NRC staff to report to the commission within six months on how risk-informed insights can be used to improve the licensing process for SMRs. Many hope the commission's initiative will result in the relaxation or **elimination** of unnecessary regulations in the NRC's licensing of SMRs.

Risk insights could inform the agency of the appropriate accident source terms to use for SMRs. A source term refers to the types and amounts of radioactive or hazardous material that could be released to the environment following an accident. Given their size, the bounding source term for SMRs is smaller than for large power reactors. Other factors can affect the source term, as well. Installation underground, for example, would provide an additional barrier to release. The NRC has used source terms for the assessment of the containment effectiveness and other safety features, site suitability and emergency planning. By establishing early the appropriate bounding source terms for individual SMR designs, the NRC will be better able to determine how to tailor **many other regulatory provisions** for that specific SMR design.

No one in the industry or at the NRC seems to be arguing for a whole new set of SMR licensing regulations. Such a rulemaking would take years and introduce new levels of uncertainty, which either would leave a nascent industry struggling for a foothold in the marketplace or drive it abroad to friendlier regulatory pastures and would leave the U.S. without SMR benefits.

Rather, by continuing on the NRC path of customizing its existing regulations to address only what should be different in the SMR design certification and licensing processes, the NRC can **build on** its existing and known licensing regime, which should result in the development of a usable licensing process in the shortest time.

With several companies already in pre-application discussions with the NRC and gearing up to submit applications during the next few years, the NRC would be hard-pressed to provide the necessary guidance to potential applicants and conduct timely, efficient reviews of any submitted applications while creating an SMR rule. In addition, by using the existing regulations, the NRC and applicants can benefit from the NRC staff's experience and a proven process. If the NRC's new initiative to develop a risk-informed approach to licensing can help accelerate this process, it would be a great improvement. To assist the NRC in its efforts, SMR vendors should continue supporting the NRC's initiative through industry working groups.

Department of Energy (DOE) Assistance

The NRC is not the only agency looking to help move SMRs from concept to commercialization. The DOE has developed not just a five-year plan, but a 25-year plan to help move a range of SMR designs to market. The **DOE wants to help fund** over the next five years the development of an appropriately tailored licensing process at the NRC. As a second phase over the next 10 years, the DOE has asked for funding to help the first two SMRs get through the licensing gate. Although not all agree with its priorities, the DOE has concluded that SMRs based on light-water reactor technology, e.g., NuScale's design, because of their similarity to the technology of existing large nuclear plants, offer the nearest-term promise for commercialization. The DOE is likely to limit the initial competition for funding for design certification efforts to light-water reactor designs.

Recognizing that there are other SMR designs that incorporate more revolutionary technology, the DOE also sought funding for research and development on more advanced designs. In particular, it sees an important role for its high-speed computing capability to simulate and test the new designs. If private funding can be found, however, it is not clear the proponents of these alternate designs will have the patience to proceed on the DOE's timeline. Many have been working for a decade or more on their designs and already have approached the NRC to discuss licensing schedules.

The DOE might also play host at its Savannah River Site to an energy park that could include nonlight-water SMRs. If the vision is realized, the SMRs constructed at the proposed energy park could make Savannah River independent of the local power grid and help meet a 2009 presidential directive to cut significantly greenhouse gas emissions at government facilities.

In addition to its research and development role, the DOE will work with the international nuclear community to develop codes and standards that make sense for SMR technologies and in facilitating export approvals when SMR technology is ready for deployment overseas.

Another tool in the DOE's toolbox for advancing innovative energy technologies into commercial viability is the loan guarantee program. **It's unclear** whether that program, which many have said is essential for building large new nuclear plants, can be tailored to meet the needs of smaller, lower-cost designs. For the small plug-and-play reactor designs, loan guarantees might make the most sense for SMR manufacturing facilities, rather than individual power plants.

But SMRs and the struggling loan guarantee program will have reached milestones if the question of how best to structure loan guarantees to meet the needs of SMR developers and customers for assistance in commercial deployment becomes important for resolution.

#### SMR-based nuclear power is safe and solves warming—it’s key to a global nuclear renaissance.

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

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

#### Plan results in global SMR exports – massively reduces emissions.

Rosner 11

Robert Rosner, Stephen Goldberg, Energy Policy Institute at Chicago, The Harris School of Public Policy Studies, November 2011, SMALL MODULAR REACTORS –KEY TO FUTURE NUCLEAR POWER GENERATION IN THE U.S., <https://epic.sites.uchicago.edu/sites/epic.uchicago.edu/files/uploads/EPICSMRWhitePaperFinalcopy.pdf>

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

#### Finally, the plan jumpstarts the US nuclear industry and leads to comprehensive regulatory reform of nuclear power.

Spencer 8 (Jack, Research Fellow in Nuclear Energy at The Heritage Foundation's Roe Institute for Economic Policy Studies, Current is The Heritage Foundation’s senior reesrach fellow in nuclear energy policy, Previously worked on commercial, civilian and military components of nuclear energy at the Babcock & Wilcox Companies, Holds a bachelor's degree in international politics from Frostburg State University and a master's degree from the University of Limerick, *Time to Fast-track New Nuclear Reactors*, http://www.heritage.org/research/reports/2008/09/time-to-fast-track-new-nuclear-reactors)

Nuclear technology can help to meet America's growing demand for reliable, clean, affordable electricity. This has led many politicians, including presidential candidate John McCain, to conclude that the nation needs to start building new nuclear plants now.

The electric power industry has already begun plans to start building new reactors. While approximately 20 applications have been filed or are in preparation to build over 30 new reactors, no permits have been issued and no new plants have begun construction. A primary reason is that the **regulatory process** remains arduous and unknown. To overcome this, Congress should authorize a **fast-track permitting process** for a limited number of reactor projects.

A Slow, Arduous Process

The Department of Energy instituted the Nuclear Power 2010 program in 2002 as an effort to address the regulatory and institutional barriers to new reactors' near-term deployment. As its name implies, the original time frame called for new reactor deployment by 2010. Unfortunately, the program has not succeeded in this regard. Most believe that the earliest that a new plant will come on line is the latter half of the next decade.

The problem is **not technical or economic**-new reactors are being built around the globe, and plans for more are being announced every month. The problem is political. The Nuclear Regulatory Commission (NRC), after so many years with no applications for new reactors, does not have a proven process for **efficiently licensing** new reactors. The NRC estimates that it needs a minimum of 42 months to issue the design, site, and construction/operation licenses required for reactor construction to begin. This includes-in addition to the safety assessments that are NRC's primary responsibility-about two years for environmental reviews, a year for design reviews, and a year for public hearings. And even this time frame is contingent on complete applications and minimal opposition from outside interests. This has led for calls to streamline the process.

Streamlining is **necessary** because the process cannot just be sped up. Specific procedures are in place that the NRC must follow, and that process takes time. Simply adding manpower, as some have suggested, would only provide marginal benefit. Because training regulators can take two years, it would be years before the NRC could hire and train enough people to shorten time schedules.

To speed up the current permitting process, Congress should authorize a fast-track program that is open to new reactor applicants that meet certain conditions. The goal would be to cut by at least 50 percent the amount of time it takes to permit a new plant. This must be done without sacrificing safety standards or security.

The lessons learned from the fast-track program could be applied to necessary **regulatory overhauls in the future**.

The program's objective would be to reduce the permitting schedule from four years down to two or less and should be available for up to two construction permits per reactor design.

The fast-track program would consist of:

Focusing NRC Resources. Per congressional direction, the NRC should focus its resources on permitting designated fast-track applications as quickly as possible without sacrificing safety or quality assurance.

Mobilizing National Laboratory Capabilities. Although the NRC already uses the national labs to support their activities, the national labs should be compelled by Congress to organize themselves to support the fast-track applications.

Focus University Funding Around Supporting the Effort. The Department of Energy funds programs that support nuclear education in the university system. These programs should be focused on supporting the NRC's fast-track program. This would not only provide additional resources to fast-tracking permits but would also develop a workforce with the technical expertise to design and operate America's reactors.

Ensuring a Science- and Technical-Based Assessment. The NRC must have the freedom to pursue a transparent, fact-based process in a non-adversarial environment. While inputs from local stakeholders must be accommodated, the NRC must be allowed to make decisions based on good science and engineering in a timely manner. This requires an efficient process that allows legitimate concerns to be heard and resolved without being hijacked by outside, agenda-driven interests.

Fast-track program applicants would have to meet certain criteria. These would include:

NRC Certified or Proven Design. The NRC has already certified four designs (although one is currently being amended) and reviewing three others. While only reactors with certified designs are licensable, applicants with designs that are nearing completion, especially if those designs are proven elsewhere, should be eligible for a slightly modified fast-track program that would include design certification.

Proven Site with Broad Public Support. The reactor site must already be licensed for operating reactors, and the applicant must demonstrate that the new reactor is welcome by the local community. Furthermore, the applicant must establish that an additional reactor will be safe and environmentally compatible. Under such conditions, the NRC should be permitted to provide an expedited environmental review, which takes roughly two years under current policy.

Proven Reactor Owner/Operator. The application must be submitted by an operator with extensive experience with nuclear operations and be in good standing with the NRC. This is not to suggest that some current COL applicants are not capable, but fast-track applicants must have extensive nuclear operations experience and credibility with the state and local community. Each applicant would have to demonstrate its competence to the NRC before entering the program.

Proven Demand. The applicant must demonstrate that there is a market for the power to be produced by the reactor.

Complete COL (Combined Operations and Construction License) Application. The applicant must have a full and complete COL application per NRC guidance. One of the current problems slowing the NRC is the lack of completeness of some of the applications. Complete applications are critical to ensuring that the NRC is able to conduct a comprehensive design and safety review without having to go back to the applicant for additional information.

Long-Lead Components Commitment. The applicant must demonstrate both a financial commitment and a preparedness to earnestly move forward by securing a source for timely delivery of long-lead components. Many of the components used to build a nuclear power plant must be ordered years in advance. Applicants seeking fast-track permits should be required to place early orders or deposits as soon as they are granted a fast-track permitting status.

Applicant Fees. Like most other NRC activities, industry should fund most of the activities associated with the fast-track program through the assessment of a program participation fee.

To execute the program, Congress must:

Provide Specific Direction to the NRC, National Labs, and Department of Energy. Congress must explicitly state its intentions for the fast-track program and make funding contingent on the NRC, national labs, and DOE to organizing themselves to achieve the objective of early completion of new reactor construction.

Adequately Fund. If Congress is serious about reducing the time it takes to permit and build new reactors, it must give NRC, the national labs, and the DOE the resources and **regulatory flexibility** they need to get the job done. Rebuilding America's energy infrastructure is exactly the kind of direction that each of these institutions should be working toward.

Many Benefits, Few Drawbacks

Many in Congress have begun to realize that the nation's energy, economic, security, and environmental objectives cannot be met without nuclear power. This has led to multiple initiatives to restart the industry in the U.S. Unfortunately, many of these plans rely heavily on **subsidies** and are not sustainable. However, instituting a program to fast track the notoriously arduous process of permitting new plants would demonstrate Congress' commitment to nuclear power and provide the **regulatory stability** that investors need to grow the industry. Furthermore, it would provide a **common purpose** around which America's energy-related institutions could organize. And finally, it would provide the **information** necessary to bring about **comprehensive regulatory reform** that the nation needs for a nuclear renaissance to take hold.

### Contention 4: Debate Process

#### Our model of debate is process, not product – decision-making is learned in a safe space of competing thought experiments

Hanghoj 8

http://static.sdu.dk/mediafiles/Files/Information\_til/Studerende\_ved\_SDU/Din\_uddannelse/phd\_hum/afhandlinger/2009/ThorkilHanghoej.pdf¶ Thorkild Hanghøj, Copenhagen, 2008 ¶ Since this PhD project began in 2004, the present author has been affiliated with DREAM (Danish¶ Research Centre on Education and Advanced Media Materials), which is located at the Institute of¶ Literature, Media and Cultural Studies at the University of Southern Denmark. Research visits have¶ taken place at the Centre for Learning, Knowledge, and Interactive Technologies (L-KIT), the¶ Institute of Education at the University of Bristol and the institute formerly known as Learning Lab¶ Denmark at the School of Education, University of Aarhus, where I currently work as an assistant¶ professor.

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

#### Decision-making is a trump impact—it improves all aspects of life regardless of its specific goals

Shulman, president emeritus – Carnegie Foundation for the Advancement of Teaching, ‘9

(Lee S, Education and a Civil Society: Teaching Evidence-Based Decision Making, p. ix-x)

These are the kinds of questions that call for the exercise of practical reason, a form of thought that draws concurrently from theory and practice, from values and experience, and from critical thinking and human empathy. None of these attributes is likely to be thought of no value and thus able to be ignored. Our schools, however, are unlikely to take on all of them as goals of the educational process. The goal of education is not to render practical arguments more theoretical; nor is it to diminish the role of values in practical reason. Indeed, all three sources—theoretical knowledge, practical knowhow and experience, and deeply held values and identity—have legitimate places in practical arguments. An educated person, argue philosophers Thomas Green (1971) and Gary Fenstermacher (1986), is someone who has transformed the premises of her or his practical arguments from being less objectively reasonable to being more objectively reasonable. That is, to the extent that they employ probabilistic reasoning or interpret data from various sources, those judgments and interpretations conform more accurately to well-understood principles and are less susceptible to biases and distortions. To the extent that values, cultural or religious norms, or matters of personal preference or taste are at work, they have been rendered more explicit, conscious, intentional, and reflective. In his essay for this volume, Jerome Kagan reflects the interactions among these positions by arguing: We are more likely to solve our current problem, however, if teachers accept the responsibility of guaranteeing that all adolescents, regardless of class or ethnicity, can read and comprehend the science section of newspapers, solve basic mathematical problems, detect the logical coherence in non-technical verbal arguments or narratives, and insist that all acts of maliciousness, deception, and unregulated self-aggrandizement are morally unacceptable. Whether choosing between a Prius and a Hummer, an Obama or a McCain, installing solar panels or planting taller trees, a well-educated person has learned to combine their values, experience, understandings, and evidence in a thoughtful and responsible manner. Thus do habits of mind, practice, and heart all play a significant role in the lives of citizens.

#### State action and coercion key to solve existential problems and turns corporate dominance

Mansbridge ’11

Jane is the Charles Adams Professor at the John F. Kennedy School of Government at Harvard, “On the Importance of Getting Things Done,” <http://journals.cambridge.org/download.php?file=%2FPSC%2FPSC45_01%2FS104909651100165Xa.pdf&code=61d04501e14285b50244640216120c97>

T¶ rend plus inaction equals¶ drift. When a¶ trend has external causes¶ and no one can act to intervene, that inaction leads to¶ drift—the unimpeded trajectory of change. Drift in the¶ United States produces the¶ domination of American¶ democracy by business interests. Drift in international¶ decisions produces global¶ warming. Speciﬁc institutional designs for government, such as the US separation of¶ powers, can cause the inaction that facilitates drift. More fundamentally, ingrained patterns of thinking can cause inaction. Here¶ I argue that the long and multifaceted resistance tradition in the¶ West contributes to inaction by focusing on stopping, rather than¶ using, coercion.¶ By contrast, a political theory of democratic action explicitly¶ recognizes that solving collective action problems requires lawgiving, and that lawgiving requires coercion—getting people to¶ do what they would not otherwise do through the threat of sanction and the use of force. The work of democracy is to make that¶ coercion somewhat more legitimate. Thus, while a theory of democratic action should incorporate resistance, it should not—and¶ cannot—be driven by resistance.¶ In the United States and on the planet, we now face problems¶ vaster than any that James Madison conceived, involving interdependence on a global scale and potential catastrophe for unborn¶ generations. Serious attempts to deal with these problems continue to be stymied, in part by a view of democracy that is in many¶ of its strands a theory of individual and collective resistance, not a¶ theory of collective action.

#### The inclusion of hypothetical impact scenarios supercharges the deliberative process by providing a normative means of assessing consequences

Larsen et al 9

 a KTH – Royal Institute of Technology, Department of Philosophy and History of Technology, Division of History of Science and Technology, Teknikringen 76, SE-100 44 Stockholm, Sweden¶ b KTH – Royal Institute of Technology, Department of Urban Planning and Environment, Division of Environmental Strategies Research, Drottning Kristinas väg 30, SE-100 44 Stockholm, Sweden ¶ Habitat International¶ Volume 33, Issue 3, July 2009, Pages 260–266¶ Climate Change and Human Settlements¶ Climatechange scenarios and citizen-participation: Mitigation and adaptation perspectives in constructing sustainable futures

 In constructing normative scenarios a set of images are generated illustrating future ways of living, travelling and consuming products and services where certain goal such as a reduced climate impact is fulfilled. These are not predictions of the future, but can be used as a way to act in accordance to achieving a desired future development. They can also be a contribution to the general debate or foundations for policy decisions. These scenarios also often include an account of changes in terms of consumption patterns and behavioural change. In this sense, these scenarios are extended beyond socio-economic predictions and relations to environmental load dealt within other field, such as climatechange predictions in the work of IPCC. The scenarios in focus here build on some predictive elements, but in addition the sustainability focus when including behavioural change also includes some normative elements as how to achieve a sustainable society in the future. In essence, this also means that images of behavioural change are included, but not necessary including explanations on how these changes came about (Larsen & Höjer, 2007). The behavioural change is there formulated by describing level of acceptance (of introducing a new environmental tax) or new behaviour in daily travel patterns (new modes of transport). However, even though scenario construction is often a creative process including a range of participants demanding change, trust is built and ideas exchanged, these processes are seldom analyzed as deliberative processes. Deliberation takes places in communicative processes where participants with diverse opinions, but open to preference shifts, are seen as equal (see Hendriks, Dryzek, & Hunold, 2007). Process values such as learning and mutual understanding are created in addition to outputs such as policies. Experiences from exploring transition pathways towards sustainability distinguish between process management aspects of learning (learns how?), learning about policy options and the context in which decisions take place (learns what?), the subjects of learning (who learns?), and the results of learning (Van de Kerkhof & Wieczorek, 2005: 735). Especially questions such as who takes part in the process and whom these participants are to represent become important since the scenarios often expect great behavioural changes. Is it legitimate to expect all people to change even if they did not feel as they were represented? It is important to keep in mind that scenario making processes are not set up only to share ideas and create mutual understanding, they aim at solving specific targets such as minimizing climate change. Some writers (e.g. Hendriks et al., 2007) underline the importance of deliberative processes being open and diverse and do not put as much attention to the outcome. Understanding the importance of legitimacy we see the process as crucial, but aiming for goals such as minimized climatechange both the content and the impact of the output are also critical. Thus, we agree with Connelly and Richardson (in press) seeing effective deliberation as a process where stakeholders are engaged and the primary assessment should be regarding the process' “effectiveness in delivering an intended policy”. They also underline that governance as a whole should be assessed regarding its possibilities to take action and achieve legitimacy, where legitimacy is understood as “the recognised right to make policy” (Connelly & Richardson, in press). There are thus three dimensions Connelly and Richardson (in press) find important: content sustainability, capacity to act and legitimacy. We believe those dimensions are also important for participatory processes generating scenarios aiming at mitigation as well as adaptation to climatechange, otherwise they will not have any strong (and legitimate) impact on development. Hendriks et al. (2007) make an important distinction between partisan and non-partisan forums. We believe this distinction is important also when analysing scenario generating processes since it affects the legitimacy of the outcome. Partisans can be activists or belong to interest groups, organisations or associations, which strive for particular matters. Partisans are thus committed to certain agendas and are therefore often seen as poor deliberators (Hendriks et al., 2007: 362). However, from a democracy perspective they are seen as important since they legitimate processes by making sure that particular stakes are represented. While partisan forums are made up to represent interest groups in society, non-partisan forums consist of randomly selected citizens, which ideally have rather open preferences. When exploring one partisan and one non-partisan process Hendriks et al. (2007) found that contrary to common expectations, partisan forums can have substantial legitimacy and impact problems. They also found that non-partisan forums might be favourable in deliberative capacity but they might fall short in external legitimacy and policy impact. The fact was that partisan participants accepted that deliberation means that you must be willing to adjust preferences, but they failed to do so (Hendriks et al., 2007: 370). Both the partisan and non-partisan forums included participants who stuck to their positions, but non-partisan participants had greater autonomy “so their deliberative capacity can be judged superior to that of partisan forums” (Hendriks et al., 2007: 371). In the study by Hendriks et al. (2007: 372) legitimacy is defined and operationalized as: “the extent to which key-actors, decision-makers and the media accept and support the procedure and its outcomes.” In other words, the legitimacy (as defined in that study) is grounded on actors largely outside the forums active in the deliberation processes. This study also showed (by interviews of experts themselves) that the deliberation by citizens and capacity of lay people was questioned by some experts (Hendriks et al., 2007: 373–374). In addition to this distinction of external legitimacy, the concept of legitimacy is in the literature largely divided in strategic and institutional legitimacy (Suchman, 1995: 572). The strategic tradition stresses the managerial standpoint in how organisations making legitimate strategies resulting in manipulating to gain societal support. Hence, rather than emphasising participatory processes (and the inherent process values), these values and the participatory process can be by-passed by e.g. “astroturfing”1 or other strategic options adopted. The branch of institutional studies of legitimacy, instead, emphasizes the “normative and cognitive forces that constrain, construct, and empower the organizational actors” as described in Suchman (1995: 571) examining the two approaches. The conclusion of this examination of the two parallel domains of research on legitimacy concludes three categories: pragmatic (based on audience self-interest), moral (based on normative approval) and cognitive (based on comprehensibility and taken-for-grantedness). In practical cases one of these categories can be more protruding or legitimacy being a blend of these three. The external legitimacy category, discussed previously, share some common traits with the audience self-interest category (labelled pragmatic) in the sense that actors external to the deliberative process (the audience consisting of experts and media) has a strong saying in the legitimate value of the outcome. The constellations of forums and involvement of stakeholders in governance processes is also featured in studies recognised as communicative planning theory (Healey, 1996) and the question also becomes relevant when implementing future-oriented development in European metropolitan regions (Healey, 2000). Campbell (2006) underlines that conceptualization of justice in contemporary planning theory is much about procedural concerns. However, individual liberties may be in conflict or as Campbell (2006: 95) puts it: “In relation to planning matters, the nature of interests is often complex and problematic; for example, individuals generally both desire clean air and to be able to drive their car(s) freely. Our preferences are therefore often inconsistent and overlapping.” Also the previous work with Swedish futures studies construction in the 1960–1970s having aims at democratic scenario construction by proposing a “particular responsibility to society's weakest groups” (Andersson, 2006: 288). At that time these groups were discussed in terms of the “weakest groups” (including the poor, elderly, unemployed and the disabled). Other examples of relevance when discussing communication among actors can be found in game theory (Sally, 1995). Conditions where reciprocity and trust can help overcome self-interests are built by “cheap talk”. As we will see, content sustainability, capacity to act and legitimacy are intimately connected. Findings from studies of collective actions frequently find that “when the users of a common-pool resource organize themselves to devise and enforce some of their own basic rules, they tend to manage local resources more sustainably than when rules are externally imposed on them” (Ostrom, 2000: 148). Common-pool resources are in this case understood as “natural or humanly created systems that generate a finite flow of benefits where it is costly to exclude beneficiaries and one person's consumption subtracts from the amount of benefits available to others” (Ostrom, 2000: 148). The explanation from game theory is that individuals obtain results that are “better than rational” when they are allowed to communicate, or do “cheap talk” as some economists call it (see e.g. Ostrom, 1998). In other words, communicative approaches can make collaboration work better since people have the possibility to bond with each other. From this reasoning we conclude that in a process where participants are active, open to preference shifts and are allowed to actually influence the result, both the content sustainability and the capacity to act might increase.

#  2AC

### Framework

#### The role of the ballot should be an intellectual endorsement or rejection of a topical affirmative’s advocated course of action. The neg gets competitive alternatives, DAs, K, and case turns.

#### Fiat is an if/then statement. If the plan were enacted, is it good or bad. Any other view moots the 1AC.

#### Prefer our framework

#### It functions productively in nearly all debate rounds, making it both predictable and fair. Theirs makes zero sense in any round not discussing the grammar of slave v. settler.

#### It allows both the aff and the neg’s Ks to be evaluated. Theirs moots most of the 1AC and crushes aff ground.

#### Theirs has no standard for evaluation, ours uses T/F, magnitude, probability.

#### Ours is best for topic education and deep research, theirs encourages nontopical defenses of “racism bad” vs. reject the grammar of the settler.

#### Do Both

#### Perm all of the plan plus the noncompetitive parts of the alt.

#### The aff is Disad to the alt.

#### Existence is a prerequisite to ontology

Wapner ‘03

(Paul, Associate prof and director of Global Environmental Policy Program @ American U, *Dissent*, Winter, <http://dissentmagazine.org/article/?article=539>)

THE THIRD response to eco-criticism would require critics to acknowledge the ways in which they themselves silence nature and then to respect the sheer otherness of the nonhuman world. Postmodernism prides itself on criticizing the urge toward mastery that characterizes modernity. But isn't mastery exactly what postmodernism is exerting as it captures the nonhuman world within its own conceptual domain? Doesn't postmodern cultural criticism deepen the modernist urge toward mastery by eliminating the ontological weight of the nonhuman world? What else could it mean to assert that there is no such thing as nature? I have already suggested the postmodernist response: yes, recognizing the social construction of "nature" *does* deny the self-expression of the nonhuman world, but how would we know what such self-expression means? Indeed, nature doesn't speak; rather, some person always speaks on nature's behalf, and whatever that person says is, as we all know, a social construction. All attempts to listen to nature are social constructions-*except one.* Even the most radical postmodernist must acknowledge the distinction between physical existence and non-existence. As I have said, postmodernists accept that there is a physical substratum to the phenomenal world even if they argue about the different meanings we ascribe to it. This acknowledgment of physical existence is crucial. We can't ascribe meaning to that which doesn't appear. **What doesn't exist can manifest no character**. Put differently, yes, the postmodernist should rightly worry about interpreting nature's expressions. And all of us should be wary of those who claim to speak on nature's behalf (including environmentalists who do that). But we need not doubt the simple idea that a prerequisite of expression is existence. This in turn suggests that preserving the nonhuman world-in all its diverse embodiments-must be seen by eco-critics as a fundamental good. Eco-critics must be supporters, in some fashion, of environmental preservation.

### Perm: Do Both

#### Perm solves- climate change offers a critical lens through which we can analyze whiteness manifest in futurity

Baldwin 12

[Andrew, Durham University, Department of Geography, Science Laboratories, South Road, Durham. “Whiteness and futurity¶ Towards a research agenda” Prog Hum Geogr April 2012 vol. 36 no. 2 172-187]

In spite of its diversity, the work mentioned above shares a common trait: it looks to past (colonial) signification to understand how white identities are constructed both historically and in the present in relation to Others. Much of it also seeks to foreground the contingency of whiteness in both the past and present. Curiously, though, this work neglects to consider what the notion of futurity might offer an analysis of the contingency of whiteness, which is ironic given how future-directed notions of progress, betterment and modernity have been and remain so foundational to colonial ontology. What, then, might be gained by examining constructions of postcolonial whiteness through futurity? Answers to this question could go in numerous directions, so let me illustrate one possible route by way of a contemporary example: the issue of climate change and migration.¶ Climate change and migration represents a growing body of policy. Figured mainly through the so-called climate change adaptation agenda, migration is considered to be an inevitable consequence of climate change through, for instance, rising sea levels. The general parameters of the debate about climate change and migration fall squarely within the security literature. On the one hand, climate change migrants are pictured as a threat to various forms of national security (Campbell et al., 2007). However, conversely, vulnerability to climate change (i.e. the possibility of migration) is thought to be a matter of human security (Adger, 2010). Here is not the place to rehearse these debates. Yet one striking feature of the policy debate that surrounds climate change and migration is that climate change-induced migration is almost always configured as a future phenomenon, the one notable exception being the relocation of the Carteret Islanders to Bougainville.¶ A rather poignant example of the way in which futurity shapes climate change and migration discourse is found in a Museum of London exhibit called London Futures. The exhibition is a collection of magical realist photographs that depict London under conditions of climate change. In one of the photographs, Buckingham Palace is shown surrounded by a vast informal settlement of the kind that might be found in parts of Mumbai or Nairobi. The image is clearly fictional. But as a ‘postcard’ from the future,4 it provides a virtual rendering of a climate-changed future bearing down on one of the most iconic symbols of Britishness and hence of British whiteness. Here, the iconic figure of postcolonial theory, the dark skinned, Third World Other, threatens to transform the London cityscape. Although open to wide interpretation, I would argue that the image works, in part, as an affective technology by conjuring the white anxieties of postcolonial Britain in order to mobilize the environmental citizen to action. As such, the image tethers the politics of climate change and environmental citizenship to those of race and whiteness through an appeal to the future. The here-and-now of London is thus re-imagined through an imagined yet-to-come, the virtuality of Blackness is pressed onto an actual, realist portrayal of whiteness. Perhaps the most important effect of the image, then, is to remind us that the environmental citizen is a future-oriented citizen and that to act on the basis of the future image of the climate change migrant reanimates the white-black binary of colonialism. However, and this is crucial, what is at stake here is not the colonial past infusing the present; to read the image this way would repeat the practice of understanding whiteness through a past-oriented lens. Instead, the image, alongside the entire discourse of climate change and migration, offers a way of thinking about how whiteness is constituted through an imagined future, even if that future is itself a colonial artifact. What this suggests is that while postcolonial white identity in Britain is, indeed a contingent formation, it is contingent not solely on the events of an imperial past, but on some form of future Other as well. In this sense, we could argue that British postcolonial identity is forged as much through anticipation as melancholy, as much through a glance forward as a citation of past signification.

#### Your criticism fails without that combination. Major impetus for political action is situated around futurity and a more broad based criticism of whiteness is only possible through its contextualization in futurity

**Baldwin 12**

[Andrew, Durham University, Department of Geography, Science Laboratories, South Road, Durham. “Whiteness and futurity¶ Towards a research agenda” Prog Hum Geogr April 2012 vol. 36 no. 2 172-187]

This paper has sought to show how the study of whiteness in geography has a strong tendency to conceptualize whiteness as an effect of the past. Work in geography that approaches the study of whiteness through labour history and, more specifically, through economic valuation, by and large assumes that the economic of whiteness is constituted by the accrual (or loss) of value as a function of historical time. Thus, ‘white’ real-estate value accrues overtime, or conversely white labour value decreases over time (i.e. real wages decline). A similar assumption is found in postcolonial analyses of white identity. As with much postcolonial theory, this work tends to assume that past colonial relations continue to organize contemporary experience, thus allowing some to speak about the colonial present (Gregory, 2004). In critical whiteness studies, the meaning of whiteness studies is produced within very specific historical-geographic contexts, which means that the study of whiteness, more than simply a critical orientation, is itself an object to be explained.

My argument is that a past-oriented approach to accounting for geographies of whiteness often neglects to consider how various forms of whiteness are shaped by discourses of futurity. This is not to argue that a historicist approach to conceptualizing white geographies is wrongheaded; the past continues to be a crucial time-space through which to understand whiteness. It is, however, to argue that such a past-focused orientation obscures the way the category of the future is invoked in the articulation of whiteness. As such, any analysis that seeks to understand how whitenesses of all kinds shape contemporary (and indeed past) racisms operates with only a partial understanding of the time-spaces of whiteness. My argument is that we can learn much about whitenesses and their corresponding forms of racism by paying special attention to the ways in which such whitenesses are constituted by futurity. I have offered some preliminary remarks on how we might conceptualize geographies of whiteness qua futurity, but these should only be taken as starting points. Much more pragmatically, what seems to be required is a fulsome investigation into the way the future shapes white geographies. What might such a project entail? For one, geographers would do well to identify whether and how the practice of governing through the future inaugurates new and repeats old forms of whiteness. It would also be worth comparing and contrasting how the future is made present in various dialectical accounts of whiteness. For instance, what becomes of whiteness when understood through the binary actual-possible as opposed to an actual-virtual binary, which has been my main concern? Alternatively, what becomes of the category of whiteness if it is shown to be constituted by a future that has no ontology except as a virtual presence? And, perhaps more pressing, how might whiteness be newly politicized?

Futurity provides a productive vocabulary for thinking about and challenging whiteness. It does not offer a means of overcoming white supremacy, nor does it provide white people with a normative prescription for living with their whiteness guilt- or worry-free. Futurity is, however, a lacuna in the study of whiteness both in geography and outside the discipline, and this alone suggests the need to take it seriously. But equally, and perhaps more urgently, there is the need to study whiteness and futurity given how central the future is to contemporary governance and politics. Indeed, at a moment when the future features prominently in both political rhetoric – in his inaugural speech, Obama implores America to carry ‘forth that great gift of freedom and [deliver] it safely to future generations’ – and everyday life, how people orient themselves towards the future is indelibly political. The future impels action. For Mann (2007), it is central to interest. For Thrift (2008), ‘value increasingly arises not from what is but from what is not yet but can potentially become, that is from the pull of the future’. Attention to whiteness and futurity may at minimum enable us to see more clearly the extent to which the pull of whiteness into the future reconfigures what is to be valued in the decades ahead.

### A2 Social Death

#### No social death – history proves

Vincent **Brown**, Prof. of History and African and African-American Studies @ Harvard Univ., December 20**09**, "Social Death and Political Life in the Study of Slavery," American Historical Review, p. 1231-1249

THE PREMISE OF ORLANDO PATTERSON’S MAJOR WORK, that enslaved Africans were natally alienated and culturally isolated, was challenged even before he published his influential thesis, primarily by scholars concerned with “survivals” or “retentions” of African culture and by historians of slave resistance. In the early to mid-twentieth century, when Robert Park’s view of “the Negro” predominated among scholars, it was generally assumed that the slave trade and slavery had denuded black people of any ancestral heritage from Africa. The historians Carter G. Woodson and W. E. B. Du Bois and the anthropologist Melville J. Herskovits argued the opposite. Their research supported the conclusion that while enslaved Africans could not have brought intact social, political, and religious institutions with them to the Americas, they did maintain significant aspects of their cultural backgrounds.32 Herskovits ex- amined “Africanisms”—any practices that seemed to be identifiably African—as useful symbols of cultural survival that would help him to analyze change and continuity in African American culture.33 He engaged in one of his most heated scholarly disputes with the sociologist E. Franklin Frazier, a student of Park’s, who empha- sized the damage wrought by slavery on black families and folkways.34 More recently, a number of scholars have built on Herskovits’s line of thought, enhancing our understanding of African history during the era of the slave trade. Their studies have evolved productively from assertions about general cultural heritage into more precise demonstrations of the continuity of worldviews, categories of belonging, and social practices from Africa to America. For these scholars, the preservation of distinctive cultural forms has served as an index both of a resilient social personhood, or identity, and of resistance to slavery itself. 35

Scholars of slave resistance have never had much use for the concept of social death. The early efforts of writers such as Herbert Aptheker aimed to derail the popular notion that American slavery had been a civilizing institution threatened by “slave crime.”36 Soon after, studies of slave revolts and conspiracies advocated the idea that resistance demonstrated the basic humanity and intractable will of the enslaved—indeed, they often equated acts of will with humanity itself. As these writ- ers turned toward more detailed analyses of the causes, strategies, and tactics of slave revolts in the context of the social relations of slavery, they had trouble squaring abstract characterizations of “the slave” with what they were learning about the en- slaved.37 Michael Craton, who authored Testing the Chains: Resistance to Slavery in the British West Indies, was an early critic of Slavery and Social Death, protesting that what was known about chattel bondage in the Americas did not confirm Patterson’s definition of slavery. “If slaves were in fact ‘generally dishonored,’ ” Craton asked, “how does he explain the degrees of rank found among all groups of slaves—that is, the scale of ‘reputation’ and authority accorded, or at least acknowledged, by slave and master alike?” How could they have formed the fragile families documented by social historians if they had been “natally alienated” by definition? Finally, and per- haps most tellingly, if slaves had been uniformly subjected to “permanent violent domination,” they could not have revolted as often as they did or shown the “varied manifestations of their resistance” that so frustrated masters and compromised their power, sometimes “fatally.”38 The dynamics of social control and slave resistance falsified Patterson’s description of slavery even as the tenacity of African culture showed that enslaved men, women, and children had arrived in the Americas bearing much more than their “tropical temperament.”

The cultural continuity and resistance schools of thought come together pow- erfully in an important book by Walter C. Rucker, The River Flows On: Black Re- sistance, Culture, and Identity Formation in Early America. In Rucker’s analysis of slave revolts, conspiracies, and daily recalcitrance, African concepts, values, and cul- tural metaphors play the central role. Unlike Smallwood and Hartman, for whom “the rupture was the story” of slavery, Rucker aims to reveal the “perseverance of African culture even among second, third, and fourth generation creoles.”39 He looks again at some familiar events in North America—New York City’s 1712 Coromantee revolt and 1741 conspiracy, the 1739 Stono rebellion in South Carolina, as well as the plots, schemes, and insurgencies of Gabriel Prosser, Denmark Vesey, and Nat Turner—deftly teasing out the African origins of many of the attitudes and actions of the black rebels. Rucker outlines how the transformation of a “shared cultural heritage” that shaped collective action against slavery corresponded to the “various steps Africans made in the process of becoming ‘African American’ in culture, orientation, and identity.”40

### A2: Wilderson

#### Blacks aren’t ontologically dead and Wilderson offers no alternative

SAËR MATY BÂ, teaches film at Portsmouth University, September 2011 "The US Decentred: From Black Social Death to Cultural Transformation" book review of Red, Black & White: Cinema and the Structure of US Antagonisms and Mama Africa: Reinventing Blackness in Bahia, Cultural Studies Review volume 17 number 2 http://epress.lib.uts.edu.au/journals/index.php/csrj/index pp. 381–91

Red, White and Black is particularly undermined by Wilderson’s propensity for exaggeration and blinkeredness. In chapter nine, ‘“Savage” Negrophobia’, he writes:¶ The philosophical anxiety of Skins is all too aware that through the Middle Passage, African culture became Black ‘style’ ... Blackness can be placed and displaced with limitless frequency and across untold territories, by whoever so chooses. Most important, there is nothing real Black people can do to either check or direct this process ... Anyone can say ‘nigger’¶ because anyone can be a ‘nigger’. (235)7¶ Similarly, in chapter ten, ‘A Crisis in the Commons’, Wilderson addresses the issue of ‘Black time’. Black is irredeemable, he argues, because, at no time in history had it been deemed, or deemed through the right historical moment and place. In other words, the black moment and place are not right because they are ‘the ship hold of the Middle Passage’: ‘the most coherent temporality ever deemed as Black time’ but also ‘the “moment” of no time at all on the map of no place at all’. (279)¶ Not only does Pinho’s more mature analysis expose this point as preposterous (see below), I also wonder what Wilderson makes of the countless historians’ and sociologists’ works on slave ships, shipboard insurrections and/during the Middle Passage,8 or of groundbreaking jazz‐studies books on cross‐cultural dialogue like The Other Side of Nowhere (2004). Nowhere has another side, but once Wilderson theorises blacks as socially and ontologically dead while dismissing jazz as ‘belonging nowhere and to no one, simply there for the taking’, (225) there seems to be no way back. It is therefore hardly surprising that Wilderson ducks the need to provide a solution or alternative to both his sustained bashing of blacks and anti‐ Blackness.9 Last but not least, Red, White and Black ends like a badly plugged announcement of a bad Hollywood film’s badly planned sequel: ‘How does one deconstruct life? Who would benefit from such an undertaking? The coffle approaches with its answers in tow.’ (340)

### A2 Wilderson’s conception of social death

A) Wilderson’s conception of social death is based off of a flawed methodology which interrupts the transformative potential of the African Diaspora

BÂ 2011 – Portsmouth University (SAËR MATY, “The US Decentred: From Black Social Death to Cultural Transformation,” Cultural Studies Review, volume 17 number 2 September 2011)

A few pages into Red, White and Black, I feared that it would just be a matter of time before Wilderson’s black‐as‐social‐death idea and multiple attacks on issues and scholars he disagrees with run (him) into (theoretical) trouble. This happens in chapter two, ‘The Narcissistic Slave’, where he critiques black film theorists and books. For example, Wilderson declares that Gladstone Yearwood’s Black Film as Signifying Practice (2000) ‘betrays a kind of conceptual anxiety with respect to the historical object of study— ... it clings, anxiously, to the film‐as‐text‐as‐legitimateobject of Black cinema.’ (62) He then quotes from Yearwood’s book to highlight ‘just how vague the aesthetic foundation of Yearwood’s attempt to construct a canon can be’. (63) And yet Wilderson’s highlighting is problematic because it overlooks the ‘Diaspora’ or ‘African Diaspora’, a key component in Yearwood’s thesis that, crucially, neither navel‐gazes (that is, at the US or black America) nor pretends to properly engage with black film. Furthermore, Wilderson separates the different waves of black film theory and approaches them, only, in terms of how a most recent one might challenge its precedent. Again, his approach is problematic because it does not mention or emphasise the inter‐connectivity of/in black film theory. As a case in point, Wilderson does not link Tommy Lott’s mobilisation of Third Cinema for black film theory to Yearwood’s idea of African Diaspora. (64) Additionally, of course, Wilderson seems unaware that Third Cinema itself has been fundamentally questioned since Lott’s 1990s’ theory of black film was formulated. Yet another consequence of ignoring the African Diaspora is that it exposes Wilderson’s corpusof films as unable to carry the weight of the transnational argument he attempts to advance. Here, beyond the US‐centricity or ‘social and political specificity of [his] filmography’, (95) I am talking about Wilderson’s choice of films. For example, Antwone Fisher (dir. Denzel Washington, 2002) is attacked unfairly for failing to acknowledge ‘a grid of captivity across spatial dimensions of the Black “body”, the Black “home”, and the Black “community”’ (111) while films like Alan and Albert Hughes’s Menace II Society (1993), overlooked, do acknowledge the same grid and, additionally, problematise Street Terrorism Enforcement and Prevention Act (STEP) policing. The above examples expose the fact of Wilderson’s dubious and questionable conclusions on black film. Red, White and Black is particularly undermined by Wilderson’s propensity for exaggeration and blinkeredness. In chapter nine, ‘“Savage” Negrophobia’, he writes: The philosophical anxiety of Skins is all too aware that through the Middle Passage, African culture became Black ‘style’ ... Blackness can be placed and displaced with limitless frequency and across untold territories, by whoever so chooses. Most important, there is nothing real Black people can do to either check or direct this process ... Anyone can say ‘nigger’ because anyone can be a ‘nigger’. (235)7 Similarly, in chapter ten, ‘A Crisis in the Commons’, Wilderson addresses the issue of ‘Black time’. Black is irredeemable, he argues, because, at no time in history had it been deemed, or deemed through the right historical moment and place. In other words, the black moment and place are not right because they are ‘the ship hold of the Middle Passage’: ‘the most coherent temporality ever deemed as Black time’ but also ‘the “moment” of no time at all on the map of no place at all’. (279) Not only does Pinho’s more mature analysis expose this point as preposterous (see below), I also wonder what Wilderson makes of the countless historians’ and sociologists’ works on slave ships, shipboard insurrections and/during the Middle Passage,8 or of groundbreaking jazz‐studies books on cross‐cultural dialogue like The Other Side of Nowhere (2004). Nowhere has another side, but once Wilderson theorises blacks as socially and ontologically dead while dismissing jazz as ‘belonging nowhere and to no one, simply there for the taking’, (225**)** there seems to be no way back. It is therefore hardly surprising that Wilderson ducks the need to provide a solution or alternative to both his sustained bashing of blacks and anti‐ Blackness.9 Last but not least, Red, White and Black ends like a badly plugged announcement of a bad Hollywood film’s badly planned sequel: ‘How does one deconstruct life? Who would benefit from such an undertaking? The coffle approaches with its answers in tow.’ (340)

### A2 Ethics 1st

#### Identifying ethics as separate from alternative actions is exactly what we impact turn—the idea that this comes before responses at the margin. They conceded coalitions key

**Isaac 2002** – political science professor at Indiana University (Jeffrey, Dissent, Spring, “Ends, means, and politics”, http://www.dissentmagazine.org/article/?article=601, WEA)

What is striking about much of the political discussion on the left today is its failure to engage this earlier tradition of argument. The left, particularly the campus left—by which I mean “progressive” faculty and student groups, often centered around labor solidarity organizations and campus Green affiliates—has become moralistic rather than politically serious. Some of its moralizing—about Chiapas, Palestine, and Iraq—continues the third worldism that plagued the New Left in its waning years. Some of it—about globalization and sweatshops— is new and in some ways promising (see my “Thinking About the Antisweatshop Movement,” Dissent, Fall 2001). But what characterizes much campus left discourse is a substitution of moral rhetoric about evil policies or institutions for a sober consideration of what might improve or replace them, how the improvement might be achieved, and what the likely costs, as well as the benefits, are of any reasonable strategy. One consequence of this tendency is a failure to worry about methods of securing political support through democratic means or to recognize the distinctive value of democracy itself. It is not that conspiratorial or antidemocratic means are promoted. On the contrary, the means employed tend to be preeminently democratic—petitions, demonstrations, marches, boycotts, corporate campaigns, vigorous public criticism. And it is not that political democracy is derided. Projects such as the Green Party engage with electoral politics, locally and nationally, in order to win public office and achieve political objectives. But what is absent is a sober reckoning with the preoccupations and opinions of the vast majority of Americans, who are not drawn to vocal denunciations of the International Monetary Fund and World Trade Organization and who do not believe that the discourse of “anti-imperialism” speaks to their lives. Equally absent is critical thinking about why citizens of liberal democratic states—including most workers and the poor—value liberal democracy and subscribe to what Jürgen Habermas has called “constitutional patriotism”: a patriotic identification with the democratic state because of the civil, political, and social rights it defends. Vicarious identifications with Subcommandante Marcos or starving Iraqi children allow left activists to express a genuine solidarity with the oppressed elsewhere that is surely legitimate in a globalizing age. But these symbolic avowals are not an effective way of contending for political influence or power in the society in which these activists live. The ease with which the campus left responded to September 11 by rehearsing an all too-familiar narrative of American militarism and imperialism is not simply disturbing. It is a sign of this left’s alienation from the society in which it operates (the worst examples of this are statements of the Student Peace Action Coalition Network, which declare that “the United States Government is the world’s greatest terror organization,” and suggest that “homicidal psychopaths of the United States Government” engineered the World Trade Center attacks as a pretext for imperialist aggression. See http://www.gospan.org). Many left activists seem more able to identify with (idealized versions of) Iraqi or Afghan civilians than with American citizens, whether these are the people who perished in the Twin Towers or the rest of us who legitimately fear that we might be next. This is not because of any “disloyalty.” Charges like that lack intellectual or political merit. It is because of a debilitating moralism; because it is easier to denounce wrong than to take real responsibility for correcting it, easier to locate and to oppose a remote evil than to address a proximate difficulty. The campus left says what it thinks. But it exhibits little interest in how and why so many Americans think differently. The “peace” demonstrations organized across the country within a few days of the September 11 attacks—in which local Green Party activists often played a crucial role—were, whatever else they were, a sign of their organizers’ lack of judgment and common sense. Although they often expressed genuine horror about the terrorism, they focused their energy not on the legitimate fear and outrage of American citizens but rather on the evils of the American government and its widely supported response to the terror. Hardly anyone was paying attention, but they alienated anyone who was. This was utterly predictable. And that is my point. The predictable consequences did not matter. What mattered was simply the expression of righteous indignation about what is wrong with the United States, as if September 11 hadn’t really happened. Whatever one thinks about America’s deficiencies, it must be acknowledged that a political praxis preoccupation with this is foolish and self-defeating. The other, more serious consequence of this moralizing tendency is the failure to think seriously about global politics. The campus left is rightly interested in the ills of global capitalism. But politically it seems limited to two options: expressions of “solidarity” with certain oppressed groups—Palestinians but not Syrians, Afghan civilians (though not those who welcome liberation from the Taliban), but not Bosnians or Kosovars or Rwandans—and automatic opposition to American foreign policy in the name of anti-imperialism. The economic discourse of the campus left is a universalist discourse of human needs and workers rights; but it is accompanied by a refusal to think in political terms about the realities of states, international institutions, violence, and power. This refusal is linked to a peculiar strain of pacifism, according to which any use of military force by the United States is viewed as aggression or militarism. case in point is a petition circulated on the campus of Indiana University within days of September 11. Drafted by the Bloomington Peace Coalition, it opposed what was then an imminent war in Afghanistan against al-Qaeda, and called for peace. It declared: “Retaliation will not lead to healing; rather it will harm innocent people and further the cycle of violence. Rather than engage in military aggression, those in authority should apprehend and charge those individuals believed to be directly responsible for the attacks and try them in a court of law in accordance with due process of international law.” This declaration was hardly unique. Similar statements were issued on college campuses across the country, by local student or faculty coalitions, the national Campus Greens, 9- 11peace.org, and the National Youth and Student Peace Coalition. As Global Exchange declared in its antiwar statement of September 11: “vengeance offers no relief. . . retaliation can never guarantee healing. . . and to meet violence with violence breeds more rage and more senseless deaths. Only love leads to peace with justice, while hate takes us toward war and injustice.” On this view military action of any kind is figured as “aggression” or “vengeance”; harm to innocents, whether substantial or marginal, intended or unintended, is absolutely proscribed; legality is treated as having its own force, independent of any means of enforcement; and, most revealingly, “healing” is treated as the principal goal of any legitimate response. None of these points withstands serious scrutiny. A military response to terrorist aggression is not in any obvious sense an act of aggression, unless any military response—or at least any U.S. military response—is simply defined as aggression. While any justifiable military response should certainly be governed by just-war principles, the criterion of absolute harm avoidance would rule out the possibility of any military response. It is virtually impossible either to “apprehend” and prosecute terrorists or to put an end to terrorist networks without the use of military force, for the “criminals” in question are not law-abiding citizens but mass murderers, and there are no police to “arrest” them. And, finally, while “healing” is surely a legitimate moral goal, it is not clear that it is a political goal. Justice, however, most assuredly is a political goal. The most notable thing about the Bloomington statement is its avoidance of political justice. Like many antiwar texts, it calls for “social justice abroad.” It supports redistributing wealth. But criminal and retributive justice, protection against terrorist violence, or the political enforcement of the minimal conditions of global civility—these are unmentioned. They are unmentioned because to broach them is to enter a terrain that the campus left is unwilling to enter—the terrain of violence, a realm of complex choices and dirty hands. This aversion to violence is understandable and in some ways laudable. America’s use of violence has caused much harm in the world, from Southeast Asia to Central and Latin America to Africa. The so-called “Vietnam Syndrome” was the product of a real learning experience that should not be forgotten. In addition, the destructive capacities of modern warfare— which jeopardize the civilian/combatant distinction, and introduce the possibility of enormous ecological devastation—make war under any circumstances something to be feared. No civilized person should approach the topic of war with anything other than great trepidation. And yet the left’s reflexive hostility toward violence in the international domain is strange. It is inconsistent with avowals of “materialism” and evocations of “struggle,” especially on the part of those many who are not pacifists; it is in tension with a commitment to human emancipation (is there no cause for which it is justifiable to fight?); and it is oblivious to the tradition of left thinking about ends and means. To compare the debates within the left about the two world wars or the Spanish Civil War with the predictable “anti-militarism” of today’s campus left is to compare a discourse that was serious about political power with a discourse that is not. This unpragmatic approach has become a hallmark of post–cold war left commentary, from the Gulf War protests of 1991, to the denunciation of the 1999 U.S.-led NATO intervention in Kosovo, to the current post–September 11 antiwar movement. In each case protesters have raised serious questions about U.S. policy and its likely consequences, but in a strikingly ineffective way. They sound a few key themes: the broader context of grievances that supposedly explains why Saddam Hussein, or Slobodan Milosevic, or Osama bin Laden have done what they have done; the hypocrisy of official U.S. rhetoric, which denounces terrorism even though the U.S. government has often supported terrorism; the harm that will come to ordinary Iraqi or Serbian or Afghan citizens as a result of intervention; and the cycle of violence that is likely to ensue. These are important issues. But they typically are raised by left critics not to promote real debate about practical alternatives, but to avoid such a debate or to trump it. As a result, the most important political questions are simply not asked. It is assumed that U.S. military intervention is an act of “aggression,” but no consideration is given to the aggression to which intervention is a response. The status quo ante in Afghanistan is not, as peace activists would have it, peace, but rather terrorist violence abetted by a regime—the Taliban—that rose to power through brutality and repression. This requires us to ask a question that most “peace” activists would prefer not to ask: What should be done to respond to the violence of a Saddam Hussein, or a Milosevic, or a Taliban regime? What means are likely to stop violence and bring criminals to justice? Calls for diplomacy and international law are well intended and important; they implicate a decent and civilized ethic of global order. But they are also vague and empty, because they are not accompanied by any account of how diplomacy or international law can work effectively to address the problem at hand. The campus left offers no such account. To do so would require it to contemplate tragic choices in which moral goodness is of limited utility. Here what matters is not purity of intention but the intelligent exercise of power. Power is not a dirty word or an unfortunate feature of the world. It is the core of politics. Power is the ability to effect outcomes in the world. Politics, in large part, involves contests over the distribution and use of power. To accomplish anything in the political world, one must attend to the means that are necessary to bring it about. And to develop such means is to develop, and to exercise, power. To say this is not to say that power is beyond morality. It is to say that power is not reducible to morality. As writers such as Niccolo Machiavelli, Max Weber, Reinhold Niebuhr, and Hannah Arendt have taught, an unyielding concern with moral goodness undercuts political responsibility. The concern may be morally laudable, reflecting a kind of personal integrity, but it suffers from three fatal flaws: (1) It fails to see that the purity of one’s intention does not ensure the achievement of what one intends. Abjuring violence or refusing to make common cause with morally compromised parties may seem like the right thing; but if such tactics entail impotence, then it is hard to view them as serving any moral good beyond the clean conscience of their supporters; (2) it fails to see that in a world of real violence and injustice, moral purity is not simply a form of powerlessness; it is often a form of complicity in injustice. This is why, from the standpoint of politics—as opposed to religion—pacifism is always a potentially immoral stand. In categorically repudiating violence, it refuses in principle to oppose certain violent injustices with any effect; and (3) it fails to see that politics is as much about unintended consequences as it is about intentions; it is the effects of action, rather than the motives of action, that is most significant. Just as the alignment with “good” may engender impotence, it is often the pursuit of “good” that generates evil. This is the lesson of communism in the twentieth century: it is not enough that one’s goals be sincere or idealistic; it is equally important, always, to ask about the effects of pursuing these goals and to judge these effects in pragmatic and historically contextualized ways. Moral absolutism inhibits this judgment. It alienates those who are not true believers. It promotes arrogance. And it undermines political effectiveness.

### Ontology/Epistemology Focus Bad

#### Focusing on ontology/epistemology is reductionist and useless for change.

Owen, ‘2 David Owen, Reader of Political Theory at the Univ. of Southampton, Millennium Vol 31 No 3 2002 p. 655-7

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

# 1AR

### Geo

#### SMR key to genoengineering solves warming

Telegraph ’11

“Geo-engineering, nuclear power and climate change: playing God is good for the planet,”

Most Greens also emphatically object to geo-engineering – the idea that we could consciously alter the atmosphere to counteract climate change, for example by spraying sulphates high in the stratosphere to act as a sunscreen. But the objectors seem to forget that we are already carrying out massive geo-engineering every day, as a hundred million people step into their cars, a billion farmers dig their ploughs into the soil and 10 million fishermen cast their nets.¶ Certainly, deciding on something as epochal as intentional climatic geo-engineering would involve us in some awesome collective decisions, which we have only just begun to evolve the international governance structures to manage. But if we want the world of tomorrow to resemble the world of today, we will need to act fast. On climate change, meeting the proposed planetary boundary means being carbon-neutral worldwide by mid-century, and carbon-negative thereafter. The former will not be possible without nuclear new-build on a large scale, and the latter will need the deployment of air-capture technologies to reduce the concentration of ambient CO2.

### A2 Sexton ev.

#### Sexton mischaracterizes the social relations that they use for their impact claims

**Spickard 9** - UC, Santa Barbara (Paul Amalgamation Schemes: Antiblackness and the Critique of Multiracialism (review) American Studies - Volume 50, Number 1/2, Spring/Summer 2009, pp. 125-127 ajones)

One of the major developments in ethnic studies over the past two decades has been the idea (and sometimes the advocacy) of multiraciality. From a theoretical perspective, this has stemmed from a post-structuralist attempt to deconstruct the categories created by the European Enlightenment and its colonial enterprise around the world. From a personal perspective, it has been driven by the life experiences in the last half-century of a growing number of people who have and acknowledge mixed parentage. The leading figures in this scholarly movement are probably Maria Root and G. Reginald Daniel, but the writers are many and include figures as eminent as Gary Nash and Randall Kennedy. A small but dedicated group of writers has resisted this trend: chiefly Rainier Spencer, Jon Michael Spencer, and Lewis Gordon. They have raised no controversy, perhaps [End Page 125] because their books are not well written, and perhaps because their arguments do not make a great deal of sense. It is not that there is nothing wrong with the literature and the people movement surrounding multiraciality. Some writers and social activists do tend to wax rhapsodic about the glories of intermarriage and multiracial identity as social panacea. A couple of not-very-thoughtful activists (Charles Byrd and Susan Graham) have been coopted by the Gingrichian right (to be fair, one must point out that most multiracialists are on the left). And, most importantly, there is a tension between some Black intellectuals and the multiracial idea over the lingering fear that, for some people, adopting a multiracial identity is a dodge to avoid being Black. If so, that might tend to sap the strength of a monoracially-defined movement for Black community empowerment. With Amalgamation Schemes, Jared Sexton is trying to stir up some controversy. He presents a facile, sophisticated, and theoretically informed intelligence, and he picks a fight from the start. His title suggests that the study of multiraciality is some kind of plot, or at the very least an illegitimate enterprise. His tone is angry and accusatory on every page. It is difficult to get to the grounds of his argument, because the cloud of invective is so thick, and because his writing is abstract, referential, and at key points vague. For Sexton (as for the Spencers and Gordon) race is about Blackness, in the United States and around the world. That is silly, for there are other racialized relationships. In the U.S., native peoples were racialized by European intruders in all the ways that Africans were, and more: they were nearly extinguished. To take just one example from many around the world, Han Chinese have racialized Tibetans historically in all the ways (including slavery) that Whites have racialized Blacks and Indians in the United States. So there is a problem with Sexton's concept of race as Blackness. There is also a problem with his insistence on monoraciality. For Sexton and the others, one cannot be mixed or multiple; one must choose ever and only to be Black. I don't have a problem with that as a political choice, but to insist that it is the only possibility flies in the face of a great deal of human experience, and it ignores the history of how modern racial ideas emerged. Sexton does point out, as do many writers, the flawed tendencies in multiracial advocacy mentioned in the second paragraph above. But he imputes them to the whole movement and to the subject of study, and that is not a fair assessment. The main problem is that Sexton argues from conclusion to evidence, rather than the other way around. That is, he begins with the conclusion that the multiracial idea is bad, retrograde, and must be resisted. And then he cherry-picks his evidence to fit his conclusion. He spends much of his time on weaker writers such as Gregory Stephens and Stephen Talty who have been tangential to the multiracial literature. When he addresses stronger figures like Daniel, Root, Nash, and Kennedy, he carefully selects his quotes to fit his argument, and misrepresents their positions by doing so. Sexton also makes some pretty outrageous claims. He takes the fact that people who study multiracial identities are often studying aspects of family life (such as the shaping of a child's identity), and twists that to charge them with homophobia and nuclear family-ism. That is simply not accurate for any of the main writers in the field. The same is true for his argument by innuendo that scholars of multiraciality somehow advocate mail-order bride services. And sometimes Sexton simply resorts to ad hominem attacks on the motives and personal lives of the writers themselves. It is a pretty tawdry exercise. That is unfortunate, because Sexton appears bright and might have written a much better book detailing his hesitations about some tendencies in the multiracial movement. He might even have opened up a new direction for productive study of racial commitment amid complexity. Sexton does make several observations that are worth thinking about, [End Page 126] and surely this intellectual movement, like any other, needs to think critically about itself. Sadly, this is not that book.