## 1AC

### Contention One is Warming

#### The best science proves it’s anthropogenic

Muller 2012 [Richard, professor of physics at the University of California, Berkeley, and a former MacArthur Foundation fellow, “The Conversion of a Climate-Change Skeptic”, http://www.nytimes.com/2012/07/30/opinion/the-conversion-of-a-climate-change-skeptic.html?pagewanted=all]

CALL me a converted skeptic. Three years ago I identified problems in previous climate studies that, in my mind, threw doubt on the very existence of global warming. Last year, following an intensive research effort involving a dozen scientists, I concluded that global warming was real and that the prior estimates of the rate of warming were correct. I’m now going a step further: Humans are almost entirely the cause. My total turnaround, in such a short time, is the result of careful and objective analysis by the Berkeley Earth Surface Temperature project, which I founded with my daughter Elizabeth. Our results show that the average temperature of the earth’s land has risen by two and a half degrees Fahrenheit over the past 250 years, including an increase of one and a half degrees over the most recent 50 years. Moreover, it appears likely that essentially all of this increase results from the human emission of greenhouse gases. These findings are stronger than those of the Intergovernmental Panel on Climate Change [IPCC], the United Nations group that defines the scientific and diplomatic consensus on global warming. In its 2007 report, the I.P.C.C. concluded only that most of the warming of the prior 50 years could be attributed to humans. It was possible, according to the I.P.C.C. consensus statement, that the warming before 1956 could be because of changes in solar activity, and that even a substantial part of the more recent warming could be natural. Our Berkeley Earth approach used sophisticated statistical methods developed largely by our lead scientist, Robert Rohde, which allowed us to determine earth land temperature much further back in time. We carefully studied issues raised by skeptics: biases from urban heating (we duplicated our results using rural data alone), from data selection (prior groups selected fewer than 20 percent of the available temperature stations; we used virtually 100 percent), from poor station quality (we separately analyzed good stations and poor ones) and from human intervention and data adjustment (our work is completely automated and hands-off). In our papers we demonstrate that none of these potentially troublesome effects unduly biased our conclusions. The historic temperature pattern we observed has abrupt dips that match the emissions of known explosive volcanic eruptions; the particulates from such events reflect sunlight, make for beautiful sunsets and cool the earth’s surface for a few years. There are small, rapid variations attributable to El Niño and other ocean currents such as the Gulf Stream; because of such oscillations, the “flattening” of the recent temperature rise that some people claim is not, in our view, statistically significant. What has caused the gradual but systematic rise of two and a half degrees? We tried fitting the shape to simple math functions (exponentials, polynomials), to solar activity and even to rising functions like world population. By far the best match was to the record of atmospheric carbon dioxide (CO2), measured from atmospheric samples and air trapped in polar ice.

#### Fossil fuels are key

Vertessy and Clark3-13**-**2012[Rob, Acting Director of Australian Bureau of Meteorology, and Megan, Chief Executive Officer at the Commonwealth Scientific and Industrial Research Organisation, “State of the Climate 2012”, <http://theconversation.edu.au/state-of-the-climate-2012-5831>]

Carbon dioxide (CO2) emissions account for about 60% of the effect from anthropogenic greenhouse gases on the earth’s energy balance over the past 250 years. These global CO2 emissions are mostly from fossil fuels (more than 85%), land use change, mainly associated with tropical deforestation (less than 10%), and cement production and other industrial processes (about 4%). Australia contributes about 1.3% of the global CO2 emissions. Energy generation continues to climb and is dominated by fossil fuels – suggesting emissions will grow for some time yet. CO2 levels are rising in the atmosphere and ocean. About 50% of the amount of CO2 emitted from fossil fuels, industry, and changes in land-use, stays in the atmosphere. The remainder is taken up by the ocean and land vegetation, in roughly equal parts. The extra carbon dioxide absorbed by the oceans is estimated to have caused about a 30% increase in the level of ocean acidity since pre-industrial times. The sources of the CO2 increase in the atmosphere can be identified from studies of the isotopic composition of atmospheric CO2 and from oxygen (O2) concentration trends in the atmosphere. The observed trends in the isotopic (13C, 14C) composition of CO2 in the atmosphere and the decrease in the concentration of atmospheric O2 confirm that the dominant cause of the observed CO2 increase is the combustion of fossil fuels.

#### 4 degree warming is inevitable with current carbon usage trends – only emissions reductions solve

Potsdam Institute, 2012 (Potsdam Institute for Climate Impact Research and Climate Analytics, “Turn Down the Heat: Why a 4°C Warmer World Must be Avoided”, A report for the World Bank, November, http://climatechange.worldbank.org/sites/default/files/Turn\_Down\_the\_heat\_Why\_a\_4\_degree\_centrigrade\_warmer\_world\_must\_be\_avoided.pdf)

The emission pledges made at the climate conventions in Copenhagen and Cancun, if fully met, place the world on a trajectory for a global mean warming of well over 3°C. Even if these pledges are fully implemented there is still about a 20 percent chance of exceeding 4°C in 2100.10 If these pledges are not met then there is a much higher likelihood—more than 40 percent—of warming exceeding 4°C by 2100, and a 10 percent possibility of this occurring already by the 2070s, assuming emissions follow the medium business-as-usual reference pathway. On a higher fossil fuel intensive business-as-usual pathway, such as the IPCC SRESA1FI, warming exceeds 4°C earlier in the 21st century. It is important to note, however, that such a level of warming can still be avoided. There are technically and economically feasible emission pathways that could still limit warming to 2°C or below in the 21st century. To illustrate a possible pathway to warming of 4°C or more, Figure 22 uses the highest SRES scenario, SRESA1FI, and compares it to other, lower scenarios. SRESA1FI is a fossil-fuel intensive, high economic growth scenario that would very likely cause mean the global temperature to exceed a 4°C increase above preindustrial temperatures. Most striking in Figure 22 is the large gap between the projections by 2100 of current emissions reduction pledges and the (lower) emissions scenarios needed to limit warming to 1.5–2°C above pre-industrial levels. This large range in the climate change implications of the emission scenarios by 2100 is important in its own right, but it also sets the stage for an even wider divergence in the changes that would follow over the subsequent centuries, given the long response times of the climate system, including the carbon cycle and climate system components that contribute to sea-level rise. The scenarios presented in Figure 22 indicate the likely onset time for warming of 4°C or more. It can be seen that most of the scenarios remain fairly close together for the next few decades of the 21st century. By the 2050s, however, there are substantial differences among the changes in temperature projected for the different scenarios. In the highest scenario shown here (SRES A1FI), the median estimate (50 percent chance) of warming reaches 4°C by the 2080s, with a smaller probability of 10 percent of exceeding this level by the 2060s. Others have reached similar conclusions (Betts et al. 2011). Thus, even if the policy pledges from climate convention in Copenhagen and Cancun are fully implemented, there is still a chance of exceeding 4°C in 2100. If the pledges are not met and present carbon intensity trends continue, then the higher emissions scenarios shown in Figure 22 become more likely, raising the probability of reaching 4°C global mean warming by the last quarter of this century. Figure 23 shows a probabilistic picture of the regional patterns of change in temperature and precipitation for the lowest and highest RCP scenarios for the AR4 generation of AOGCMS. Patterns are broadly consistent between high and low scenarios. The high latitudes tend to warm substantially more than the global mean. RCP8.5, the highest of the new IPCC AR5 RCP scenarios, can be used to explore the regional implications of a 4°C or warmer world. For this report, results for RCP8.5 (Moss et al. 2010) from the new IPCC AR5 CMIP5 (Coupled Model Intercomparison Project; Taylor, Stouffer, & Meehl 2012) climate projections have been analyzed. Figure 24 shows the full range of increase of global mean temperature over the 21st century, relative to the 1980–2000 period from 24 models driven by the RCP8.5 scenario, with those eight models highlighted that produce a mean warming of 4–5°C above preindustrial temperatures averaged over the period 2080–2100. In terms of regional changes, the models agree that the most pronounced warming (between 4°C and 10°C) is likely to occur over land. During the boreal winter, a strong “arctic amplification” effect is projected, resulting in temperature anomalies of over 10°C in the Arctic region. The subtropical region consisting of the Mediterranean, northern Africa and the Middle East and the contiguous United States is likely to see a monthly summer temperature rise of more than 6°C.

#### 4 degrees of warming destroys global biodiversity – overwhelms resilience and adaptation – the impact is extinction

Potsdam Institute, 2012 (Potsdam Institute for Climate Impact Research and Climate Analytics, “Turn Down the Heat: Why a 4°C Warmer World Must be Avoided”, A report for the World Bank, November, http://climatechange.worldbank.org/sites/default/files/Turn\_Down\_the\_heat\_Why\_a\_4\_degree\_centrigrade\_warmer\_world\_must\_be\_avoided.pdf)

Ecosystems and their species provide a range of important goods and services for human society. These include water, food, cultural and other values. In the AR4 an assessment of climate change effects on ecosystems and their services found the following: • If greenhouse gas emissions and other stresses continue at or above current rates, the resilience of many ecosystems is likely to be exceeded by an unprecedented combination of change in climate, associated disturbances (for example, flooding, drought, wildfire, insects, and ocean acidification) and other stressors (global change drivers) including land use change, pollution and over-exploitation of resources. • Approximately 20 to 30 percent of plant and animal species assessed so far are likely to be at increased risk of extinction, if increases in global average temperature exceed of 2–3° above preindustrial levels. • For increases in global average temperature exceeding 2 to 3° above preindustrial levels and in concomitant atmospheric CO2 concentrations, major changes are projected in ecosystem structure and function, species’ ecological interactions and shifts in species’ geographical ranges, with predominantly negative consequences for biodiversity and ecosystem goods and services, such as water and food supply. It is known that past large-scale losses of global ecosystems and species extinctions have been associated with rapid climate change combined with other ecological stressors. Loss and/or degradation of ecosystems, and rates of extinction because of human pressures over the last century or more, which have intensified in recent decades, have contributed to a very high rate of extinction by geological standards. It is well established that loss or degradation of ecosystem services occurs as a consequence of species extinctions, declining species abundance, or widespread shifts in species and biome distributions (Leadley et al. 2010). Climate change is projected to exacerbate the situation. This section outlines the likely consequences for some key ecosystems and for biodiversity. The literature tends to confirm the conclusions from the AR4 outlined above. Despite the existence of detailed and highly informative case studies, upon which this section will draw, it is also important to recall that there remain many uncertainties (Bellard, Bertelsmeier, Leadley, Thuiller, and Courchamp, 2012). However, threshold behavior is known to occur in biological systems (Barnosky et al. 2012) and most model projections agree on major adverse consequences for biodiversity in a 4°C world (Bellard et al., 2012). With high levels of warming, coalescing human induced stresses on ecosystems have the potential to trigger large-scale ecosystem collapse (Barnosky et al. 2012). Furthermore, while uncertainty remains in the projections, there is a risk not only of major loss of valuable ecosystem services, particularly to the poor and the most vulnerable who depend on them, but also of feedbacks being initiated that would result in ever higher CO2 emissions and thus rates of global warming. Significant effects of climate change are already expected for warming well below 4°C. In a scenario of 2.5°C warming, severe ecosystem change, based on absolute and relative changes in carbon and water fluxes and stores, cannot be ruled out on any continent (Heyder, Schaphoff, Gerten, & Lucht, 2011). If warming is limited to less than 2°C, with constant or slightly declining precipitation, small biome shifts are projected, and then only in temperate and tropical regions. Considerable change is projected for cold and tropical climates already at 3°C of warming. At greater than 4°C of warming, biomes in temperate zones will also be substantially affected. These changes would impact not only the human and animal communities that directly rely on the ecosystems, but would also exact a cost (economic and otherwise) on society as a whole, ranging from extensive loss of biodiversity and diminished land cover, through to loss of ecosystems services such as fisheries and forestry (de Groot et al., 2012; Farley et al., 2012). Ecosystems have been found to be particularly sensitive to geographical patterns of climate change (Gonzalez, Neilson, Lenihan, and Drapek, 2010). Moreover, ecosystems are affected not only by local changes in the mean temperature and precipitation, along with changes in the variability of these quantities and changes by the occurrence of extreme events. These climatic variables are thus decisive factors in determining plant structure and ecosystem composition (Reu et al., 2011). Increasing vulnerability to heat and drought stress will likely lead to increased mortality and species extinction. For example, temperature extremes have already been held responsible for mortality in Australian flying-fox species (Welbergen, Klose, Markus, and Eby 2008), and interactions between phenological changes driven by gradual climate changes and extreme events can lead to reduced fecundity (Campbell et al. 2009; Inouye, 2008). Climate change also has the potential to facilitate the spread and establishment of invasive species (pests and weeds) (Hellmann, Byers, Bierwagen, & Dukes, 2008; Rahel & Olden, 2008) with often detrimental implications for ecosystem services and biodiversity. Human land-use changes are expected to further exacerbate climate change driven ecosystem changes, particularly in the tropics, where rising temperatures and reduced precipitation are expected to have major impacts (Campbell et al., 2009; Lee & Jetz, 2008). Ecosystems will be affected by the increased occurrence of extremes such as forest loss resulting from droughts and wildfire exacerbated by land use and agricultural expansion (Fischlin et al., 2007). Climate change also has the potential to catalyze rapid shifts in ecosystems such as sudden forest loss or regional loss of agricultural productivity resulting from desertification (Barnosky et al., 2012). The predicted increase in extreme climate events would also drive dramatic ecosystem changes (Thibault and Brown 2008; Wernberg, Smale, and Thomsen 2012). One such extreme event that is expected to have immediate impacts on ecosystems is the increased rate of wildfire occurrence. Climate change induced shifts in the fire regime are therefore in turn powerful drivers of biome shifts, potentially resulting in considerable changes in carbon fluxes over large areas (Heyder et al., 2011; Lavorel et al., 2006) It is anticipated that global warming will lead to global biome shifts (Barnosky et al. 2012). Based on 20th century observations and 21st century projections, poleward latitudinal biome shifts of up to 400 km are possible in a 4° C world (Gonzalez et al., 2010). In the case of mountaintop ecosystems, for example, such a shift is not necessarily possible, putting them at particular risk of extinction (La Sorte and Jetz, 2010). Species that dwell at the upper edge of continents or on islands would face a similar impediment to adaptation, since migration into adjacent ecosystems is not possible (Campbell, et al. 2009; Hof, Levinsky, Araújo, and Rahbek 2011). The consequences of such geographical shifts, driven by climatic changes as well as rising CO2 concentrations, would be found in both reduced species richness and species turnover (for example, Phillips et al., 2008; White and Beissinger 2008). A study by (Midgley and Thuiller, 2011) found that, of 5,197 African plant species studied, 25–42 percent could lose all suitable range by 2085. It should be emphasized that competition for space with human agriculture over the coming century is likely to prevent vegetation expansion in most cases (Zelazowski et al., 2011) Species composition changes can lead to structural changes of the entire ecosystem, such as the increase in lianas in tropical and temperate forests (Phillips et al., 2008), and the encroachment of woody plants in temperate grasslands (Bloor et al., 2008, Ratajczak et al., 2012), putting grass-eating herbivores at risk of extinction because of a lack of food available—this is just one example of the sensitive intricacies of ecosystem responses to external perturbations. There is also an increased risk of extinction for herbivores in regions of drought-induced tree dieback, owing to their inability to digest the newly resident C4 grasses (Morgan et al., 2008). The following provides some examples of ecosystems that have been identified as particularly vulnerable to climate change. The discussion is restricted to ecosystems themselves, rather than the important and often extensive impacts on ecosystems services. Boreal-temperate ecosystems are particularly vulnerable to climate change, although there are large differences in projections, depending on the future climate model and emission pathway studied. Nevertheless there is a clear risk of large-scale forest dieback in the boreal-temperate system because of heat and drought (Heyder et al., 2011). Heat and drought related die-back has already been observed in substantial areas of North American boreal forests (Allen et al., 2010), characteristic of vulnerability to heat and drought stress leading to increased mortality at the trailing edge of boreal forests. The vulnerability of transition zones between boreal and temperate forests, as well as between boreal forests and polar/tundra biomes, is corroborated by studies of changes in plant functional richness with climate change (Reu et al., 2011), as well as analyses using multiple dynamic global vegetation models (Gonzalez et al., 2010). Subtle changes within forest types also pose a great risk to biodiversity as different plant types gain dominance (Scholze et al., 2006). Humid tropical forests also show increasing risk of major climate induced losses. At 4°C warming above pre-industrial levels, the land extent of humid tropical forest, characterized by tree species diversity and biomass density, is expected to contract to approximately 25 percent of its original size [see Figure 3 in (Zelazowski et al., 2011)], while at 2°C warming, more than 75 percent of the original land can likely be preserved. For these ecosystems, water availability is the dominant determinant of climate suitability (Zelazowski et al., 2011). In general, Asia is substantially less at risk of forest loss than the tropical Americas. However, even at 2°C, the forest in the Indochina peninsula will be at risk of die-back. At 4°C, the area of concern grows to include central Sumatra, Sulawesi, India and the Philippines, where up to 30 percent of the total humid tropical forest niche could be threatened by forest retreat (Zelazowski et al., 2011). There has been substantial scientific debate over the risk of a rapid and abrupt change to a much drier savanna or grassland ecosystem under global warming. This risk has been identified as a possible planetary tipping point at around a warming of 3.5–4.5°C, which, if crossed, would result in a major loss of biodiversity, ecosystem services and the loss of a major terrestrial carbon sink, increasing atmospheric CO2 concentrations (Lenton et al., 2008)(Cox, et al., 2004) (Kriegler, Hall, Held, Dawson, and Schellnhuber, 2009). Substantial uncertainty remains around the likelihood, timing and onset of such risk due to a range of factors including uncertainty in precipitation changes, effects of CO2 concentration increase on water use efficiency and the CO2 fertilization effect, land-use feedbacks and interactions with fire frequency and intensity, and effects of higher temperature on tropical tree species and on important ecosystem services such as pollinators. While climate model projections for the Amazon, and in particular precipitation, remain quite uncertain recent analyses using IPCC AR4 generation climate indicates a reduced risk of a major basin wide loss of precipitation compared to some earlier work. If drying occurs then the likelihood of an abrupt shift to a drier, less biodiverse ecosystem would increase. Current projections indicate that fire occurrence in the Amazon could double by 2050, based on the A2 SRES scenario that involves warming of approximately 1.5°C above pre-industrial levels (Silvestrini et al., 2011), and can therefore be expected to be even higher in a 4°C world. Interactions of climate change, land use and agricultural expansion increase the incidence of fire (Aragão et al., 2008), which plays a major role in the (re)structuring of vegetation (Gonzalez et al., 2010; Scholze et al., 2006). A decrease in precipitation over the Amazon forests may therefore result in forest retreat or transition into a low biomass forest (Malhi et al., 2009). Moderating this risk is a possible increase in ecosystem water use efficiency with increasing CO2 concentrations is accounted for, more than 90 percent of the original humid tropical forest niche in Amazonia is likely to be preserved in the 2°C case, compared to just under half in the 4°C warming case (see Figure 5 in Zelazowski et al., 2011) (Cook, Zeng, and Yoon, 2012; Salazar & Nobre, 2010). Recent work has analyzed a number of these factors and their uncertainties and finds that the risk of major loss of forest due to climate is more likely to be regional than Amazon basin-wide, with the eastern and southeastern Amazon being most at risk (Zelazowski et al., 2011). Salazar and Nobre (2010) estimates a transition from tropical forests to seasonal forest or savanna in the eastern Amazon could occur at warming at warming of 2.5–3.5°C when CO2 fertilization is not considered and 4.5–5.5°C when it is considered. It is important to note, as Salazar and Nobre (2010) point out, that the effects of deforestation and increased fire risk interact with the climate change and are likely to accelerate a transition from tropical forests to drier ecosystems. Increased CO2 concentration may also lead to increased plant water efficiency (Ainsworth and Long, 2005), lowering the risk of plant die-back, and resulting in vegetation expansion in many regions, such as the Congo basin, West Africa and Madagascar (Zelazowski et al., 2011), in addition to some dry-land ecosystems (Heyder et al., 2011). The impact of CO2 induced ‘greening’ would, however, negatively affect biodiversity in many ecosystems. In particular encroachment of woody plants into grasslands and savannahs in North American grassland and savanna communities could lead to a decline of up to 45 percent in species richness ((Ratajczak and Nippert, 2012) and loss of specialist savanna plant species in southern Africa (Parr, Gray, and Bond, 2012). Mangroves are an important ecosystem and are particularly vulnerable to the multiple impacts of climate change, such as: rise in sea levels, increases in atmospheric CO2 concentration, air and water temperature, and changes in precipitation patterns. Sea-level rise can cause a loss of mangroves by cutting off the flow of fresh water and nutrients and drowning the roots (Dasgupta, Laplante et al. 2010). By the end of the 21st century, global mangrove cover is projected to experience a significant decline because of heat stress and sea-level rise (Alongi, 2008; Beaumont et al., 2011). In fact, it has been estimated that under the A1B emissions scenario (3.5°C relative to pre-industrial levels) mangroves would need to geographically move on average about 1 km/year to remain in suitable climate zones (Loarie et al., 2009). The most vulnerable mangrove forests are those occupying low-relief islands such as small islands in the Pacific where sea-level rise is a dominant factor. Where rivers are lacking and/ or land is subsiding, vulnerability is also high. With mangrove losses resulting from deforestation presently at 1 to 2 percent per annum (Beaumont et al., 2011), climate change may not be the biggest immediate threat to the future of mangroves. However if conservation efforts are successful in the longer term climate change may become a determining issue (Beaumont et al., 2011). Coral reefs are acutely sensitive to changes in water temperatures, ocean pH and intensity and frequency of tropical cyclones. Mass coral bleaching is caused by ocean warming and ocean acidification, which results from absorption of CO2 (for example, Frieler et al., 2012a). Increased sea-surface temperatures and a reduction of available carbonates are also understood to be driving causes of decreased rates of calcification, a critical reef-building process (De’ath, Lough, and Fabricius, 2009). The effects of climate change on coral reefs are already apparent. The Great Barrier Reef, for example, has been estimated to have lost 50 percent of live coral cover since 1985, which is attributed in part to coral bleaching because of increasing water temperatures (De’ath et al., 2012). Under atmospheric CO2 concentrations that correspond to a warming of 4°C by 2100, reef erosion will likely exceed rates of calcification, leaving coral reefs as “crumbling frameworks with few calcareous corals” (Hoegh-Guldberg et al., 2007). In fact, frequency of bleaching events under global warming in even a 2°C world has been projected to exceed the ability of coral reefs to recover. The extinction of coral reefs would be catastrophic for entire coral reef ecosystems and the people who depend on them for food, income and shoreline. Reefs provide coastal protection against coastal floods and rising sea levels, nursery grounds and habitat for a variety of currently fished species, as well as an invaluable tourism asset. These valuable services to often subsistence-dependent coastal and island societies will most likely be lost well before a 4°C world is reached. The preceding discussion reviewed the implications of a 4°C world for just a few examples of important ecosystems. The section below examines the effects of climate on biological diversity Ecosystems are composed ultimately of the species and interactions between them and their physical environment. Biologically rich ecosystems are usually diverse and it is broadly agreed that there exists a strong link between this biological diversity and ecosystem productivity, stability and functioning (McGrady-Steed, Harris, and Morin, 1997; David Tilman, Wedin, and Knops, 1996)(Hector, 1999; D Tilman et al., 2001). Loss of species within ecosystems will hence have profound negative effects on the functioning and stability of ecosystems and on the ability of ecosystems to provide goods and services to human societies. It is the overall diversity of species that ultimately characterizes the biodiversity and evolutionary legacy of life on Earth. As was noted at the outset of this discussion, species extinction rates are now at very high levels compared to the geological record. Loss of those species presently classified as ‘critically endangered’ would lead to mass extinction on a scale that has happened only five times before in the last 540 million years. The loss of those species classified as ‘endangered’ and ‘vulnerable’ would confirm this loss as the sixth mass extinction episode (Barnosky 2011). Loss of biodiversity will challenge those reliant on ecosystems services. Fisheries (Dale, Tharp, Lannom, and Hodges, 2010), and agronomy (Howden et al., 2007) and forestry industries (Stram & Evans, 2009), among others, will need to match species choices to the changing climate conditions, while devising new strategies to tackle invasive pests (Bellard, Bertelsmeier, Leadley, Thuiller, and Courchamp, 2012). These challenges would have to be met in the face of increasing competition between natural and agricultural ecosystems over water resources. Over the 21st-century climate change is likely to result in some bio-climates disappearing, notably in the mountainous tropics and in the poleward regions of continents, with new, or novel, climates developing in the tropics and subtropics (Williams, Jackson, and Kutzbach, 2007). In this study novel climates are those where 21st century projected climates do not overlap with their 20th century analogues, and disappearing climates are those 20th century climates that do not overlap with 21st century projected climates. The projections of Williams et al (2007) indicate that in a 4°C world (SRES A2), 12–39 percent of the Earth’s land surface may experience a novel climate compared to 20th century analogues. Predictions of species response to novel climates are difficult because researchers have no current analogue to rely upon. However, at least such climates would give rise to disruptions, with many current species associations being broken up or disappearing entirely. Under the same scenario an estimated 10–48 percent of the Earth’s surface including highly biodiverse regions such as the Himalayas, Mesoamerica, eastern and southern Africa, the Philippines and the region around Indonesia known as Wallacaea would lose their climate space. With limitations on how fast species can disperse, or move, this indicates that many species may find themselves without a suitable climate space and thus face a high risk of extinction. Globally, as in other studies, there is a strong association apparent in these projections between regions where the climate disappears and biodiversity hotspots. Limiting warming to lower levels in this study showed substantially reduced effects, with the magnitude of novel and disappearing climates scaling linearly with global mean warming. More recent work by Beaumont and colleagues using a different approach confirms the scale of this risk (Beaumont et al., 2011, Figure 36). Analysis of the exposure of 185 eco-regions of exceptional biodiversity (a subset of the so-called Global 200) to extreme monthly temperature and precipitation conditions in the 21st century compared to 1961–1990 conditions shows that within 60 years almost all of the regions that are already exposed to substantial environmental and social pressure, will experience extreme temperature conditions based on the A2 emission scenario (4.1°C global mean temperature rise by 2100) (Beaumont et al., 2011). Tropical and sub-tropical eco-regions in Africa and South America are particularly vulnerable. Vulnerability to such extremes is particularly acute for high latitude and small island biota, which are very limited in their ability to respond to range shifts, and to those biota, such as flooded grassland, mangroves and desert biomes, that would require large geographical displacements to find comparable climates in a warmer world. The overall sense of recent literature confirms the findings of the AR4 summarized at the beginning of the section, with a number of risks such as those to coral reefs occurring at significantly lower temperatures than estimated in that report. Although non-climate related human pressures are likely to remain a major and defining driver of loss of ecosystems and biodiversity in the coming decades, it is also clear that as warming rises so will the predominance of climate change as a determinant of ecosystem and biodiversity survival. While the factors of human stresses on ecosystems are manifold, in a 4°C world, climate change is likely to become a determining driver of ecosystem shifts and large-scale biodiversity loss (Bellard et al., 2012; New et al., 2011). Recent research suggests that large-scale loss of biodiversity is likely to occur in a 4°C world, with climate change and high CO2 concentration driving a transition of the Earth´s ecosystems into a state unknown in human experience. Such damages to ecosystems would be expected to dramatically reduce the provision of ecosystem services on which society depends (e.g., hydrology—quantity flow rates, quality; fisheries (corals), protection of coastline (loss of mangroves). Barnosky has described the present situation facing the biodiversity of the planet as “the perfect storm” with multiple high intensity ecological stresses because of habitat modification and degradation, pollution and other factors, unusually rapid climate change and unusually high and elevated atmospheric CO2 concentrations. In the past, as noted above, this combination of circumstances has led to major, mass extinctions with planetary consequences. Thus, there is a growing risk that climate change, combined with other human activities, will cause the irreversible transition of the Earth´s ecosystems into a state unknown in human experience (Barnosky et al., 2012).

#### We have a Responsibility to respond to global warming – the emitting countries are largely developed and won’t be affected for long periods of time – developing countries are hit the hardest now

Nicholas Stern—Head of the British Government Economic Service—2007 (Former Head Economist for the World Bank, I.G. Patel Chair at the London School of Economics and Political Science, “The Economics of Climate Change: The Stern Review”, The report of a team commissioned by the British Government to study the economics of climate change led by Siobhan Peters, Head of G8 and International Climate Change Policy Unit, Cambridge University Press, p. 94-99)

Exposure: The geography of many developing countries leaves them especially vulnerable to climate change. Geographical exposure plays an important role in determining a country’s growth and development prospects. Many developing countries are located in tropical areas. As a result, they already endure climate extremes (such as those that accompany the monsoon and El Niño and La Niña cycles), intra and interannual variability in rainfall,3 and very high temperatures. India, for example, experienced peak temperatures of between 45°C and 49°C during the pre-monsoon months of 2003.4 Geographical conditions have been identified as important contributors to lower levels of growth in developing countries. If rainfall - that arrives only in a single season in many tropical areas - fails for example, a country will be left dry for over a year with powerful implications for their agricultural sector. This occurred in India in 2002 when the monsoon rains failed, resulting in a seasonal rainfall deficit of 19% and causing large losses of agricultural production and a drop of over 3% in India’s GDP.5 Recent analysis has led Nordhaus to conclude that “tropical geography has a substantial negative impact on output density and output per capita compared to temperate regions” .6 Sachs, similarly, argues that poor soils, the presence of pests and parasites, higher crop respiration rates due to warmer temperatures, and difficulty in water availability and control explain much of the tropical disadvantage in agriculture.7 Climate change is predicted to make these conditions even more challenging, with the range of possible physical impacts set out in Chapter 3. Even slight variations in the climate can have very large costs in developing countries as many places are close to the upper temperature tolerance of activities such as crop production. Put another way, climate change will have a disproportionately damaging impact on developing countries due, in part at least, to their location in low latitudes, the amount and variability of rainfall they receive, and the fact that they are “already too hot”.8  Sensitivity: Developing economies are very sensitive to the direct impacts of climate change given their heavy dependence on agriculture and ecosystems, rapid population growth and concentration of millions of people in slum and squatter settlements, and low health levels. Dependence on agriculture: Agriculture and related activities are crucial to many developing countries, in particular for low income or semi-subsistence economies. The rural sector contributes 21% of GDP in India, for example, rising to 39% in a country like Malawi,9 whilst 61% and 64% of people in South Asia and sub-Saharan Africa are employed in the rural sector.10 This concentration of economic activities in the rural sector – and in some cases around just a few commodities - is associated with low levels of income, as illustrated in Figure 4.2.11 The concentration of activities in one sector also limits flexibility to switch to less climate-sensitive activities such as manufacturing and services. The agricultural sector is one of the most at risk to the damaging impacts of climate change – and indeed current extreme climate variability - in developing countries, as discussed in Chapter 3.  Dependence on vulnerable ecosystems: All humans depend on the services provided by natural systems. However, environmental assets and the services they provide are especially important for poor people, ranging from the provision of subsistence products and market income, to food security and health services.1 Poor people are consequently highly sensitive to the degradation and destruction of these natural assets and systems by climate change. For example, dieback of large areas of forest – some climate models show strong drying over the Amazon if global temperature increases by more than 2°C, for example – would affect many of the one billion or more people who depend to varying degrees on forests for their livelihoods (Table 4.1).13  Population growth and rapid urbanisation: Over the next few decades, another 2-3 billion people will be added to the world’s population, virtually all of them in developing countries. 14 This will add to the existing strain on natural resources - and the social fabric - in many poor countries, and expose a greater number of people to the effects of climate change. Greater effort is required to encourage lower rates of population growth. Development on the MDG dimensions (in particular income, the education of women, and reproductive health) is the most powerful and sustainable way to approach population growth.15 Developing countries are also undergoing rapid urbanisation, and the trend is set to continue as populations grow. The number of people living in cities in developing countries is predicted to rise from 43% in 2005 to 56% by 2030.16 In Africa, for example, the 500km coast between Accra and the Niger delta will likely become a continuous urban megalopolis with more than 50 million people by 2020.17 It does not follow from this that policies to slow urbanisation are desirable. Urbanisation is closely linked to economic growth and it can provide opportunities for reducing poverty and decreasing vulnerability to climate change.18 Nonetheless, many of those migrating to cities live in poor conditions – often on marginal land – and are particularly vulnerable because of their limited access clean water, sanitation, and location in flood-prone areas. 19 In Latin America, for example, where urbanisation has gone far further than in Africa or Asia, more and more people are likely be forced to locate in cheaper, hazard prone areas such as floodplains or steep slopes.  Adaptive capacity: People will adapt to changes in the climate as far as their resources and knowledge allow. But developing countries lack the infrastructure (most notably in the area of water supply and management), financial means, and access to public services that would otherwise help them adapt. Poor water-related infrastructure and management: Developing countries are highly dependent on water – the most climate-sensitive economic resource - for their growth and development. Water is a key input to agriculture, industry, energy and transport and is essential for domestic purposes. Irrigation and effective water management will be very important in helping to reduce and manage the effects of climate change on ag riculture. 22 But many developing countries have low investment in irrigation systems, dams, and ground water. For example, Ethiopia has less than 1 % of the artificial water storage capacity per capita of North America, despite having to manage far greater hydrological variability.23 Many developing countries do not have enough water storage to manage annual water demand based on the current average seasonal rainfall cycle, as illustrated in Table 4.2. This will become an even greater bind with a future, less predictable cycle. In addition, inappropriate water pricing and subsidised electricity tariffs that encourage the excessive use of groundwater pumping (for agricultural use, for example) also increase vulnerability to changing climatic conditions. For example, 104 of Mexico’s 653 aquifers (that provide half the water consumed in the country) drain faster than they can replenish themselves, with 60% of the withdrawals being for irrigation .25 Similarly, water tables are falling in some drought-affected districts of Pakistan by up to 3 meters per year, with water now available only at depths of 200-300 meters.26 The consequences of inadequate investment in water-related infrastructure and poor management are important given that most climate change impacts are mediated through water (as discussed in Chapter 3).  Low incomes and underdeveloped financial markets: In many developing countries the capacity of poor people to withstand extreme weather events such as a drought is constrained both by low income levels and by limited access to credit, loans or insurance (in terms of access and affordability).27 These constraints are likely to become worse as wet and dry seasons become increasingly difficult to predict with climate change .28 This is often exacerbated by ~~weak~~ social safety nets that leave the poorest people very vulnerable to climate shocks. At the national level, many low-income countries have limited financial reserves to cushion the economy against natural disasters,29 coupled with underdeveloped financial markets and ~~weak~~ links to world financial markets that limit the ability to diversify risk or obtain or reallocate financial resources. Less than 1% of the total losses from natural disasters, for example, were insured in low-income countries during the period 1985 to 1999.30  Poor public services: Inadequate resources and poor governance (including corruption) often result in poor provision of public services. Early warning systems for extreme weather conditions, education programmes raising awareness of climate change, and preventive measures and control programmes for diseases spread by vectors or caused by poor nutrition are examples of public services that would help to manage and cope with the effects of climate change but receive ~~weak~~ support and attention in developing countries.

#### Climate change is a double inequity—rich countries are responsible for emissions while poor countries bear the brunt of the consequences

Nicholas Stern—Head of the British Government Economic Service—2007 (Former Head Economist for the World Bank, I.G. Patel Chair at the London School of Economics and Political Science, “The Economics of Climate Change: The Stern Review”, The report of a team commissioned by the British Government to study the economics of climate change led by Siobhan Peters, Head of G8 and International Climate Change Policy Unit, Cambridge University Press, p. 29)

The incremental impact of a tonne of GHG is independent of where in the world it is emitted. But the volume of GHGs emitted globally is not uniform. Historically, rich countries have produced the majority of GHG emissions. Though all countries are affected by climate change, they are affected in different ways and to different extents. Developing countries will be particularly badly hit, for three reasons: their geography; their stronger dependence on agriculture; and because with their fewer resources comes greater vulnerability. There is therefore a double inequity in climate change: the rich countries have special responsibility for where the world is now, and thus for the consequences which flow from this difficult starting point, whereas poor countries will be particularly badly hit.

### Plan Text

#### The President of the United States should not have the authority to initiate armed forces into hostilities to prevent proliferation.

### Contention Two: Solvency

#### Counter-proliferation posture is codified in post-9-11 War Powers authority to preempt – only Congress can check

Gene Healy, 2003. Vice President, CATO Policy Scholars, CATO Institute Handbook for Congress, http://object.cato.org/sites/cato.org/files/serials/files/cato-handbook-policymakers/2003/9/hb108-11.pdf

In some ways, this is nothing new. Throughout the 20th century, congressional control of the war power eroded, not simply as a result of executive¶ branch aggrandizement, but also because of congressional complicity. The imperial presidency continues to grow, largely because many legislators want to duck their responsibility to decide the question of war and peace;¶ delegate that responsibility to the president; and reserve their right to¶ criticize him, should military action go badly.¶ Indeed, even in authorizing the president to use force, Congress¶ attempted to shirk its responsibility to decide on war. After voting for the¶ resolution, which gave the president all the authority he needs to attack¶ Iraq should he choose to do so, prominent members of Congress insisted¶ they hadn’t really voted to use force. That was for the president to decide.¶ As Senate Majority Leader Tom Daschle (D-S.D.) put it: ‘‘Regardless of¶ how one may have voted on the resolution last night, I think there is an¶ overwhelming consensus . . . that while [war] may be necessary, we’re¶ not there yet.’’¶ It is not for the president to decide whether we are ‘‘there yet.’’ The¶ Constitution leaves that question to Congress. Thus far in the war on¶ terror, though, Congress has dodged that responsibility, delegating it to¶ the president. The use-of-force resolution Congress passed immediately¶ after September 11, 2001, contains an even broader delegation of authority to the president, authorizing him to make war on ‘‘those nations, organizations, or persons he determines planned, authorized, committed, or aided¶ the terrorist attacks that occurred on Sept. 11, 2001, or harbored such¶ organizations or persons’’ [emphasis added]. By its plain terms, the resolution leaves it to the president to decide when the evidence that a target¶ nation has cooperated with al-Qaeda justifies war. President Bush has¶ exercised that authority in good faith so far, declining to argue that the¶ flimsy evidence of a Saddam–al-Qaeda connection permits him to attack¶ Iraq under the September 14, 2001, resolution. But if Congress wants a say on whether we should go to war with Iran, Syria, Lebanon, or any¶ number of other nations the president may target in the future, it will have a difficult case to make.¶ Such broad delegations of legislative authority are constitutionally suspect in the domestic arena; surely they are no less so when it comes to¶ questions of war and peace. As Madison put it:¶ Those who are to conduct a war cannot in the nature of things, be proper¶ or safe judges, whether a war ought to be commenced, continued, or¶ concluded. They are barred from the latter functions by a great principle¶ in free government, analogous to that which separates the sword from the¶ purse, or the power of executing from the power of enacting laws [emphasis¶ in original].¶ Preemptive Wars¶ The administration’s new security doctrine, which emphasizes preemptive military strikes, may have equally troubling consequences for congressional control over the war power. Under the new doctrine, rogue nations in the process of developing nuclear, chemical, or biological weapons will be vulnerable at any time to sudden attack by the United States. In a¶ graduation speech given at West Point on June 1, 2002, President Bush¶ discussed the new strategy: ‘‘The war on terror will not be won on the¶ defensive,’’ he said, ‘‘we must take the battle to the enemy . . . [and]¶ be ready for preemptive action when necessary.’’ The administration¶ formalized the policy in the National Security Strategy of the United¶ States of America, released in September. That document does not discuss¶ whether preemptive wars will be conducted pursuant to congressional¶ authorization or launched unilaterally as surprise attacks by the president.¶ In the case of Iraq, which may be the administration’s first preemptive¶ war, the president has not used the doctrine as an excuse to bypass the¶ constitutional requirement of congressional authorization. But the development of the doctrine must be carefully monitored by this Congress and¶ future ones, lest it become a pretext for unilateral presidential war making.¶ Granted, the Constitution does not categorically rule out unilateral military action by the president. No one would argue that, when missiles are¶ in the air or enemy troops are landing on our shores, the president is¶ obliged to call Congress into session before he can respond. As Madison’s¶ notes from the Constitutional Convention make clear, the constitutional consensus about war powers was that, though Congress had the power to ‘‘commence war,’’ the president would have ‘‘the power to repel sudden attacks.’’ Within that power, there’s some latitude for preemptive strikes.¶ If a rogue state plans a nerve gas attack on the New York subway system,¶ the president need not and should not wait until enemy agents are ashore¶ to order military action.¶ But if the preemptive strike doctrine morphs into a freestanding justification for presidential wars, that will have grave consequences for the¶ constitutional balance of power. The doctrine applies whether or not any¶ specific attack on the United States is planned and whether or not U.S.¶ intelligence can establish with any certainty that the target has weapons¶ of mass destruction (WMD). It could be used by this administration or¶ future ones to avoid the inconvenient task of securing authority from¶ Congress. That would change the president’s constitutional power to repel¶ sudden attacks into a dangerous and unconstitutional power to launch¶ sudden attacks.¶ Moreover, such a power would be ripe for abuse. Firm evidence of¶ WMD capability is very hard to come by—indeed, in the case of Iraq,¶ Secretary of Defense Donald Rumsfeld doubts that even an intensive, onthe-ground inspection regime, such as the United Nations operated in Iraq¶ until December 1998, could determine with any degree of certainty what¶ Saddam’s WMD capabilities are. Justifications for preemptive wars will¶ necessarily be speculative and susceptible to manipulation. The potential¶ for politically driven attacks would be enormous.¶ Public opinion polls indicate that Americans view President Bush as a¶ person of integrity and reward him with a high level of public trust. But¶ Bush will not be the last president to wield the broad new powers his¶ administration is forging in the domestic and foreign affairs arenas. As¶ Rumsfeld has noted, the war on terror will take years, and if and when¶ victory is achieved, we may not know with any certainty that we’ve won.¶ Our entire constitutional system repudiates the notion that electing good¶ men is a sufficient check on abuse of power. As President Bush himself¶ noted in his September 17 proclamation: ‘‘In creating our Nation’s Constitutional framework, the Convention’s delegates recognized the dangers¶ inherent in concentrating too much power in one person, branch, or institution.’’ It’s imperative that the 108th Congress resist the tendency to concentrate power and the further growth of the imperial presidency.

#### Obama’s counter-prolif posture is based on the Bush Doctrine interp of war powers authority to preempt

Mathew Waxman, September 11, 2013. “The Most Puzzling Line of the President’s Speech,” http://www.lawfareblog.com/2013/09/the-most-puzzling-line-of-the-presidents-speech/

My first question is to what he’s referring here, or to which part of the past decade. President Bush undoubtedly held very broad views of war powers, but the two major wars embarked up during his presidency, in Afghanistan and Iraq, were clearly congressionally authorized, and Congress has played a significant role in pushing their wind-down. The 2011 Libya intervention, by contrast, was not congressionally authorized, and the Obama administration adopted the view that the War Powers Resolution did not apply to the operations there (which, unlike the contemplated Syria operations, aimed to help bring down a regime). The Obama administration has also resisted the idea that Congress should re-examine the 2001 Authorization for Use of Military Force, which has been interpreted to apply in geographically broad ways that may or may not have been intended by Congress at the time it was adopted. My second question is why, if he believes it’s problematic that more and more war-making power has been put in the hands of the President to the exclusion of Congress, President Obama also adopts the position that he possesses unilateral constitutional authority to act in this case. We haven’t yet seen the underlying legal opinion and analysis, but Jack has pointed out here that in asserting the authority to act independently the Obama administration may be extending, not pulling back on, previous OLC reasoning about presidential power to use force. My third question is about effectiveness. I agree that as a general matter “America acts more effectively abroad when we stand together,” but which is better for the strategic goal Obama lays out here of deterring future chemical weapon use through limited strikes: a more congressionally constrained presidential power or a more flexible one? A President with broad unilateral authority, or a system of strong, formal constitutional checks? I’ve been thinking and writing recently about the relationship between constitutional allocation of war powers and strategies of deterrence or coercive diplomacy, and I believe that even without formally voting to authorize force or not, Congress plays an important role in politically constraining the President and in signaling abroad – to adversaries and allies alike – about our policy preferences and resolve. Part of what worries me about the President’s current approach is that even if the President can win a congressional vote to strike Syria in this instance, the debate so far has shown weak congressional commitment to a global chemical-weapons policing policy – which is what the President claims is important to U.S. security interests (“As the ban against these weapons erodes, other tyrants will have no reason to think twice about acquiring poison gas, and using them”).

#### Statutory restrictions control the perception of force posture – Congressional complicity with Bush doctrine authority implies “green-light” to preempt

Bacevich, 2007 (Andrew, professor of history and international relations at Boston University, “Rescinding the Bush Doctrine”, Boston News, March 1, http://www.boston.com/news/globe/editorial\_opinion/oped/articles/2007/03/01/rescinding\_the\_bush\_doctrine/)

RATHER THAN vainly sniping at President Bush over his management of the Iraq war, the Democratic-controlled Congress ought to focus on averting any recurrence of this misadventure. Decrying the so-called "surge" or curbing the president's authority to conduct ongoing operations will contribute little to that end. Legislative action to foreswear preventive war might contribute quite a lot. Long viewed as immoral, illicit, and imprudent, preventive war -- attacking to keep an adversary from someday posing a danger -- became the centerpiece of US national security strategy in the aftermath of 9/11. President Bush unveiled this new strategy in a speech at West Point in June 2002. "If we wait for threats to fully materialize," he said, "we will have waited too long." The new imperative was to strike before threats could form. Bush declared it the policy of the United States to "impose preemptive, unilateral military force when and where it chooses." Although the Constitution endows the legislative branch with the sole authority to declare war, the president did not consult Congress before announcing his new policy. He promulgated the Bush Doctrine by fiat. Then he acted on it. In 2003, Saddam Hussein posed no immediate threat to the United States; arguing that he might one day do so, the administration depicted the invasion of Iraq as an act of anticipatory self-defense. To their everlasting shame, a majority of members in both the House and the Senate went along, passing a resolution that "authorized" the president to do what he was clearly intent on doing anyway. Implicitly, the Bush Doctrine received congressional endorsement. Events since have affirmed the wisdom of seeing preventive war as immoral, illicit, and imprudent. The Bush administration expected a quick, economical, and decisive victory in Iraq. Advertising the war as an effort to topple a brutal dictator and liberate an oppressed people, it no doubt counted on battlefield success to endow the enterprise with a certain ex post facto legitimacy. Elated Iraqis showering American soldiers with flowers and candies would silence critics who condemned the war as morally unjustified and patently illegal. None of these expectations has come to pass. In its trial run, the Bush Doctrine has been found wanting. Today, Iraq teeters on the brink of disintegration. The war's costs, already staggering, continue to mount. Violence triggered by the US invasion has killed thousands of Iraqi civilians. We cannot fully absolve ourselves of responsibility for those deaths. Our folly has alienated friends and emboldened enemies. Rather than nipping in the bud an ostensibly emerging threat, the Iraq war has diverted attention from existing dangers (such as Al Qaeda) while encouraging potential adversaries (like Iran) to see us as weak. The remedy to this catastrophic failure lies not in having another go -- a preventive attack against Iran, for example -- but in acknowledging that the Bush Doctrine is inherently pernicious. Our reckless flirtation with preventive war qualifies as not only wrong, but also stupid. Indeed, the Bush Doctrine poses a greater danger to the United States than do the perils it supposedly guards against. We urgently need to abrogate that doctrine in favor of principles that reflect our true interests and our professed moral values. Here lies an opportunity for Congress to make a difference. The fifth anniversary of President Bush's West Point speech approaches. Prior to that date, Democratic leaders should offer a binding resolution that makes the following three points: First, the United States categorically renounces preventive war. Second, the United States will henceforth consider armed force to be an instrument of last resort. Third, except in response to a direct attack on the United States, any future use of force will require prior Congressional authorization, as required by the Constitution. The legislation should state plainly our determination to defend ourselves and our allies. But it should indicate no less plainly that the United States no longer claims the prerogative of using "preemptive, unilateral military force when and where it chooses." Declaring the Bush Doctrine defunct will not solve the problems posed by Iraq, but it will reduce the likelihood that we will see more Iraqs in our future. By taking such action, Congress will restore its relevance, its badly tarnished honor, and its standing in the eyes of the American people.

#### Broad development of nuclear energy is slow now – preempting prolif cements the “nuclear suppliers cartel,” killing technology trade and civilian growth

Mueller, 2008 (John, Dept of Political Science at Ohio State University, “The Costs and Consequences of Efforts to Prevent Proliferation”, July 16, http://politicalscience.osu.edu/faculty/jmueller//apsa08.pdf)

The nonproliferation focus has also exacerbated the nuclear waste problem in the United States. In the late 1970s, the Carter administration banned the reprocessing of nuclear fuel, something that radically reduces the amount of nuclear waste, under the highly questionable assumption that this policy would reduce the danger of nuclear proliferation. Nonproliferation efforts worldwide also hamper worldwide economic development by increasing the effective costs of developing nuclear energy--sometimes even making them prohibitive for some countries. As countries grow, they require ever increasing amounts of power. Any measure that limits their ability to acquire this vital commodity--or increases its price--effectively slows economic growth and essentially kills people by reducing the gains in life expectancy commonly afforded by economic development. The Non-Proliferation Treaty specifically guarantees to signing nonnuclear countries "the fullest possible exchange of technology" for the development of peaceful nuclear power. However, as Richard Betts points out, this rationale has been undermined by the development of a "nuclear suppliers cartel" which has worked to "cut off trade in technology for reprocessing plutonium or enriching uranium," thereby reducing the NPT to "a simple demand to the nuclear weapons have-nots to remain so."49 More broadly the nonproliferation quest has from time to time boosted international oil prices to the detriment of almost all the countries in the world except for the potential proliferator. Because nuclear power does not emit greenhouse gases, it is an obvious potential candidate for helping with the problem of global warming, an issue many people hold to be of the highest concern for the future of the planet.

#### Aff signal encourages suppliers – dual-use tech raises security flags – US posture is the number one factor in willingness to assist developing nuclear powers

Kate Davidson, UNE Business School Faculty of the Professions, University of New England, 2012. “Contemporary Perspectives on Nuclear Proliferation,” http://www.une.edu.au/\_\_data/assets/pdf\_file/0008/24110/econwp12-2.pdf

The role of the United States in matters of proliferation cannot be emphasised enough. In the Cold War period, the foreign policies of both the US and the Soviet Union were by and large premised upon nuclear matters and necessarily shaped the nuclear field we are faced with today. Post Cold War, US policy has dominated international interactions. The US does contribute enormously to the development of norms; however its own influence extends beyond and almost independently of these norms. In typical “do as I say, not as I do” style, the US exerts huge pressures on states to follow the path of non-proliferation despite their own attachment to nuclear weapons. Levite (2002/03, p76) acknowledges the “glaring omission” in the literature of a “systematic assessment of the vast array of non-proliferation instruments and assets employed by the United States across the cases of nuclear restraint and reversal”, mounting a convincing argument36 based on the claim that “an understanding with the United States is, in fact, a hallmark of many cases of nuclear slowdown or reversal” (p82). She contends that the US is least influential in effecting the nature of domestic regimes which shape nuclear ambitions, concluding that “success is within reach only to the extent that foreign influence and domestic conditions converge, and the foreign effort is closely tuned (in terms of both agenda and timing) to the domestic context” (p87). While the mechanisms by which the US asserts its influence are many and varied37, the hegemon’s role in non-proliferation is deemed to be fundamental.¶ Following on from this, since the US has been so willing to “purchase” non- proliferation through various means perhaps this leads states to making small developments towards the nuclear end which they can then “sell” in order to enhance their economic or diplomatic standing. Japan and North Korea have been implicated in such actions, and it is certainly a notion worth some consideration. It is also possible that Israel’s unwillingness to admit its own nuclear status is in part that doing so may compromise its foreign aid flows, particularly from the US.¶ The second and related issue of vital significance is the role of sanctions, both positive and negative, in non-proliferation measures. While such actions are inextricably linked with US policy and superpower, the theoretical grounding is markedly different. Quite fortunately for the purpose of this discussion, the very recent publishing of the book ‘Sanctions, Statecraft, and Nuclear Proliferation’ edited by Solingen (2012) addresses this very subject. While the authors focus largely on specific causal mechanisms, domestic distributional costs and benefits remain at the forefront and provide insight as to how sanctions and inducements, either targeted or comprehensive, can actually have unintended consequences, particularly given varying domestic political economy models and regime types.¶ As noted by Stein (2012, p30) although “sanctions are as old as antiquity”, they are more prevalent now than ever, but “ironically, sanctions can weaken a state absolutely¶ but also strengthen it relatively (to its society and domestic opposition)” (p55). That is, sanctions may actually support the regime which is driving a nuclear program and thereby strengthen its support – a counterproductive action by any standards. Similarly, Kreps and Pasha argue that military threats may make “good politics” domestically (p175), but empirically support the hypothesis that “military threats reinforce the coalitions that are hostile to international economic integration and cooperation with international regimes more generally” (p208) – the very regimes which Solingen argues are most likely to nuclearise.¶ Tying in with the initial point of discussion in this section, Nincic (2012) rethinks the US counter proliferation policy with regard to inducements, intuitively noting that “few measures could be fully effective when not initiated, or at least supported, by the world’s sole superpower” (p127). Observing the “abysmal failure and frequently counterproductive character of threats and punishment” (p153), Nincic pushes the role of positive engagement in non-proliferation measures. In a less US-centric rationale, Drezner (2012) claims “that more comprehensive economic sanctions – or more wide ranging inducements – will often be more likely to lead to the desired policy changes” than ‘smart sanctions’ which are specifically targeted to reduce externalities (p155).¶ The consistent failure of sanctions to procure desired outcomes is a theme throughout the various chapters. Solingen concludes by outlining three factors which burden the probability that sanctions would have the desired effects in the nuclear realm (2012, p347):¶ 1. Inward looking autocracies, being the most frequent targets of these sanctions, are also the least vulnerable to them.¶ 2. Selection bias results as “sanctions are expected to surface only when targets believe that concessions would risk regime survival more than defiance”. That is, targets receptive to inducements may pre-empt sanctions, leaving analysis of sanctions largely on inward-looking autocracies which “appear to be endogenous to why sanctions emerge as tools of statecraft to begin with”.¶ 3. Inward looking autocracies may price nuclear weapons markedly highly, justified as public goods, making them more resistant to comply with non-proliferation demands.¶ To illustrate the common use of these tools, Figure 6 shows the number of sanctions and inducements directed toward the four main targets of the period 1990 to 2009: North Korea, Libya, Iraq and Iran. From this the relative use of sanctions versus inducements for each target can be recognised, as can the dominance of the US in the utilisation of these tools. Other senders depicted in the legend of the Figure are non- US unilateral (Uni), United Nations (UN), and non-UN multilateral (Multi). It is also interesting to note that 78% of sanctions in the past three decades were imposed on non-democratic target states38, which gives rise to a possibility that perhaps discriminate treatment of non-democratic regimes by more powerful nations may provide incentive for nuclear weapon acquisition by the weaker state in a struggle for power. Or in other words, economic mistreatment gives rise to a perception of threatened security, which under the assumption of realism will provide motivation for nuclear weapon acquisition.¶ With Iran’s nuclear ambitions being so enthusiastically repressed at present, a few brief points are worth mentioning – the most obvious being that the huge numbers of sanctions have not worked. Stein notes the need to create an “international sanctioning cartel”39 can often “multilateralize an initial bilateral conflict” (p41). Unilateral sanctions are often ineffective or difficult to implement on their own and thus allies in sanctioning will often be sought. Drezner (2012, p167) points out that Iran “has been under some form of embargo for its entire existence, and the regime has grown comfortable with them”. Nader (2012) examines Iran in greater depth, finding it to be unclear whether sanctions have impacted Iran’s willingness to pursue its nuclear program but also suggesting the nation may actually thrive on a sense of political and economic isolation stemming from its ideology (p214). He concludes: “The regime’s survival is increasingly contingent on a favourable outcome regarding the nuclear program, whether it leads to a virtual or actual nuclear weapons capability. A sanctions regime contributing to Iran’s economic decline cannot alter this reality.” (p231)¶ A third point with regard to external incentives is, again, tied in tightly with the other two but worthy of mention: institutional organisations. A number of institutional non- proliferation measures have been already discussed: these include the IAEA, the UN, regional NWFZs and various other multilateral treaties. Through encouraging membership to these institutions and also utilising mechanisms under these structures, external pressure can be applied to nations in order to discourage them from developing nuclear weapons programs. The role of the US, and the use of sanctions and inducements by various nations, are both major features of any such institution, however, given the complex web of globalised trade and business patterns which have developed across the globe, the interactions of such institutions needs to be considered. ¶ While the subject of external incentives has focussed rather heavily on¶ discouraging proliferation, such circumstances may exist under which external pressures act in favour of nuclearisation. Aggressive marketing by nuclear technology companies may lead a nation down the path of nuclear energy, only to find its “Siamese twin” comes too**.** This now leads into the supply side explanation of ¶ proliferation. ¶ Access to nuclear technology: more able leads to more willing ¶ This theory of nuclear proliferation is a relatively new development in the literature40 ¶ and represents the supply side, positing that a state’s ability to build nuclear weapons ¶ will influence its probability of actually doing so. As nuclear technology has spread ¶ over the globe41¶ ¶ , the technical means of developing nuclear weapons has also spread ¶ through the dual purpose nature of the technology. The technical links between ¶ civilian nuclear facilities and military programs have previously been discussed, as has ¶ the notion of a virtual nuclear state, and it is important to remember that “whether or ¶ not a state wants a nuclear weapons is irrelevant if it is unable to acquire them” ¶ (Kroenig, 2009 p163). However, as many as fifty states could be considered to be ¶ nuclear weapons capable (Hymans, 2010 p13). The puzzle then is to explain the gap ¶ between the number of states which are technically capable of developing nuclear ¶ weapons and the number which actually choose to do so. Supply side theories seem to ¶ have relied heavily on empirical analysis, and as a result some of the quantitative ¶ proliferation literature will now be introduced to this discussion. ¶ Initially, there is a requirement that nuclear capability be defined. The possession of a ¶ nuclear reactor is obviously the first point required for a state to even be considered ¶ nuclear capable, however this is by no means sufficient. Contemporary literature has ¶ built on Meyer’s (1984) landmark book ‘The Dynamics of Nuclear Proliferation’ and ¶ Stoll’s (1996) revision of this data (cited in Sagan, 2011 p228). In defining nuclear ¶ latency, Meyer measured ten technical and economic indicators – previous national ¶ mining activity, indigenous uranium deposits, metallurgists, steel production, ¶ construction work force, chemical engineers, nitric acid production, electrical ¶ production capacity, nuclear engineers, physicists, chemists and explosives and ¶ electronics specialists42¶ ¶ . As neither the quantity or quality of a state’s nuclear ¶ engineers nor its explosives and electronics specialists could be accurately determined ¶ as being sufficient to develop a nuclear weapon, Meyer used two proxy indicators: ¶ whether the state had been operating a research reactor for three reactor years and ¶ whether the state manufactured automobiles, or assembled automobiles and ¶ manufactured radios and television sets. Based on these indicators, Meyer concluded ¶ that 34 states had the latent capability of building nuclear weapons in 1982 (cited in ¶ Sagan, 2011 p229). ¶ Stoll’s (1996) revision of the data set assumed that all states had access to nuclear ¶ materials since they were (purportedly) available on the open market, and thus ¶ “assumed away the crucial technical bottleneck of whether a state has access to ¶ uranium that, once enriched, could be used in a nuclear weapons program” (Sagan, ¶ 2011 p229). Stoll’s updated data set led to the conclusion that 48 states had latent ¶ weapons capability in 1992. ¶ ¶ Real world events brought supply side issues to the forefront of the proliferation ¶ debate and the 9/11 attack on the United States highlighted the potential role of non-¶ state actors in international conflict. Furthermore, the uncovering of the AQ Khan ¶ network of supplying nuclear equipment and knowledge, and the apparent ¶ nuclearisation of North Korea (more on these later) demonstrated that supply chains ¶ of nuclear material and technology were out of control, and the notion of second tier ¶ proliferation became a subject for debate. Braun and Chyba (2004) point to three ¶ challenges to the non-proliferation regime: ¶ ¶ i. Latent proliferation under the Non-proliferation Treaty ¶ ¶ ii. First tier nuclear proliferation, in which technology or material is ¶ stolen from private companies or state nuclear programs assists ¶ non-nuclear weapon states develop illegal programs ¶ ¶ iii. Second tier proliferation in which states in the developing world with ¶ varying technical capabilities trade amongst themselves to bolster ¶ one another’s nuclear and strategic weapons efforts ¶ ¶ They explore the proliferation “ring” formed by strategic alliances and trade occurring ¶ between and among a list of nations, most notably Pakistan, North Korea, Libya, Iran ¶ and Iraq. This inspired a greater focus on the supply of nuclear technology globally ¶ and more pertinently, the need to better understand the relationship between access ¶ to nuclear technology and materials, and weapons proliferation itself. ¶ ¶ Data coding applied to proliferation studies were further developed by Jo and Gartzke ¶ (2007), who considered the determinants of nuclear proliferation in terms of ¶ opportunity and willingness (p168). On the supply-side, they further organised ¶ opportunity into three categories (p169): the set of technologies related to the ¶ manufacture of nuclear weapons, nuclear fissile materials, and economic capacity. ¶ They then devised three variables upon which to base their analysis (Jo and Gartzke, ¶ 2007 p172-3). First, latent nuclear weapons production capability was constructed by ¶ summing resource and production capacities using seven components: uranium ¶ deposits, metallurgists, chemical engineers, and nuclear ¶ engineers/physicists/chemists, electronic/explosive specialists, nitric acid production ¶ capacity, and electricity production capacity. Second, economic capacity was ¶ constructed using data relating to states’ energy consumption and iron/steel ¶ production. Third, diffusion of knowledge of how to build nuclear weapons was ¶ assumed to occur, and quantified using a log transformation of years passed since ¶ 1938. The dependent variables were dichotomous and coded annually: NWEAPON ¶ identified whether states had a nuclear weapon in the given year, and NPROGRAM a ¶ nuclear weapons program. ¶ ¶ In relation to nuclear proliferation opportunity, they found that latent nuclear ¶ production capabilities increased the predicted probability of having a weapons ¶ program, but did not impact the conditional decision to produce weapons. ¶ Furthermore they concluded that barriers to proliferation ease with the diffusion of ¶ time. This data set was a significant step in the quantitative approach to proliferation ¶ studies and is very widely cited, thus warrants discussion here despite doing little to ¶ actually define nuclear latency. Their measure of nuclear latency was a simple scale ¶ from zero to seven reflecting the seven components of the index. Sagan (2011, p229) ¶ is quite critical of Jo and Gartzke’s coding, claiming the failure to treat possession of ¶ fissile materials as necessary for nuclear capability as inadequate. The shortcomings¶ of their coding rules are evidenced by the fact that North Korea and South Africa are ¶ both considered to not have full capability to develop weapons in 200143¶ ¶ (ibid). ¶ More recently, the supply side proliferation literature has explored the relationship between civilian nuclear assistance and nuclear proliferation. Matthew Fuhrmann has contributed enormously to the proliferation literature to this end44. He explored the determinants of dual-use trade (2008), defining dual-use commodities as having two ¶ applications: “they can be used in weapons of mass destruction (WMD) programs but ¶ also have many legitimate civilian applications” (p634). With most governments placing restrictions on the export of such commodities he was able to analyse licensed dual-use exports from the US between 1991 and 2001 (post Cold War era). He concludes his research to be “preliminary support for the assertion that states channel dual-use trade towards destinations where security guarantees exist and away from targets where security threats are present to minimise its potentially negative security externalities” 45¶ ¶ (p648). Following from this, Fuhrmann (2009a) explores whether the diffusion of knowledge makes proliferation more likely and further examines the determinants of civilian nuclear cooperation (2009b). These works tie in with the ¶ research of Matthew Kroenig, another significant contributor on the topic of nuclear ¶ assistance.

#### It’s reverse-causal – supplier perception is key to nuclear expansion – secure financing trumps obstacles

Sharon Squassoni, director and se- nior fellow of the Proliferation Prevention Program at the Center for Strategic and International Studies (CSIS). Prior to joining CSIS, she was a senior asso- ciate in the Nuclear Nonproliferation Program at the Carnegie Endowment for International Peace, December 2010. “Mapping Nuclear Power’s Future Spread, ” NUCLEAR POWER’S GLOBAL EXPANSION: WEIGHING ITS COSTS AND RISKS Henry Sokolski Editor, online

The largest increases in nuclear capacity in the next 20-30 years undoubtedly will occur in Asia, specifically, China, Japan, South Korea, and India. These countries are building nuclear power plants now and anticipate continued high economic growth levels. Other countries could feel the pinch of the current financial crisis more acutely, dampening demand for electricity below anticipated levels. A major expansion of nuclear power across the board, however, is not a foregone conclusion.¶ In addition, the traditional challenges besetting nuclear energy—cost, safety, waste, and proliferation—will likely continue to limit widespread growth. Government policies supporting nuclear energy in the future—as has been the case in the past—would be necessary to make major expansion a reality.¶ For many states, cost is the first and most immediate obstacle to nuclear expansion. But in those states where there is heavy involvement by the government in electricity markets, supporting nuclear energy may be as simple as providing government funding or financing. Solutions to nuclear waste tend to be deferred into the future, but policies by major suppliers to take back spent fuel could provide some incentives for growth. In states seeking nuclear power for the first time, actions to develop what some have termed the “three Ss”—safeguards, safety, and security— could improve their attractiveness to nuclear vendors. In all countries, some limits on, or costs attached to, carbon dioxide emissions could help enhance the attractiveness of nuclear power, but these should also enhance the attractiveness of renewable sources of energy as well.

#### Status quo scares demand, too – wannabe nuclear power states perceive preemption as the norm

Henry Sokolski Executive Director¶ The Nonproliferation Policy Education Center, Editor, December 2010. NUCLEAR POWER’S GLOBAL EXPANSION: WEIGHING ITS COSTS AND RISKS, online

With commercial nuclear energy projects, especially those exported overseas, there is a major additional worry—nuclear energy’s link to nuclear weapons proliferation. Here, the security risks are real, particularly in the Middle East. Israel, the United States, Iran, and Iraq have launched aerial bombing or missile strikes against reactors at Osirak in Iraq and Bushehr in Iran, even though Iraq and Iran were members of the Nu- clear Nonproliferation Treaty (NPT) and the attacked reactors were under International Atomic Energy Agency (IAEA) safeguards. If one includes the 2007 Israeli strike against Syria’s reactor and Iraq’s failed missile attack against Dimona during the first Gulf War, there have been no fewer than 13 acts of war directed against IAEA member state reactors. Such facts should put a security premium on efforts to subsidize the construction of such projects both here and abroad. Certainly, the more the U.S. and other advanced economies go out of their way to use gov- ernment financial incentives to promote the expansion of nuclear power programs domestically or overseas, the more difficult it is likely to be to dissuade devel- oping nations from making similar investments. This dynamic will exist even if the nuclear projects in ques- tion are clearly uncompetitive with nonnuclear alter- natives. Moreover, we should be trying to discourage subsidies that substantially assist these states to move closer to developing nuclear weapons options.

#### States pursue nuclear capacity in a dead zone of i-law – plan would be a clear legal check on force

Cristian DeFrancia was a legal adviser at the Iran–United States Claims Tribunal in The Hague from 2005 to 2012. 2012. “Enforcing the Nuclear Nonproliferation Regime: The Legality of Preventive Measures,” online, vanderbilt journal of transnational law [vol. 45:705]

International law is highly restrictive on the use of force by states without Security Council authorization. The scope of self- defense to justify unilateral action on a preemptive basis has been thoroughly vetted through debates relating to the Iraq War, which have done little to produce consensus.401 In the meantime, jurists continue to facilitate an ever-widening gap by promoting impracticably broad offensive restrictions and narrow defensive permissions for the use of force. In the defensive context, as Theresa Reinold notes, a divergence has already resulted between state practice and international law doctrine.402 Where preventive force is concerned, the doctrine of anticipatory self-defense has gained little traction as a basis for justifying unilateral force.403 The concept of an “imminent” attack remains confined in nineteenth century conceptions, as articulated in the Caroline case.404 Notwithstanding Ian Brownlie’s early 1963 recognition that, due to the advent of long- range missiles in a state of readiness, “the difference between attack and imminent attack may now be negligible,”405 carving out a doctrine of anticipatory self-defense that does not eviscerate the prohibition on the use of force has historically been an unworkable proposition. Thus, unilateral preventive force does not occupy a sound position under the current scheme of international law. In the context of low-level conflict, numerous quandaries on the law of force surface. It is unclear, for example, whether targeted killings of Iranian nuclear scientists should be a matter of Iranian domestic law or a question of international humanitarian law. In the absence of an attribution of responsibility for such acts, it is difficult to prove a nexus to international conflict, inviting the question— similarly posed in the context of terrorism—of whether such isolated acts should be considered primarily a criminal law matter. Moreover, under prevailing standards on the use of force, isolated killings would likely not be considered an armed attack meriting the invocation of self-defense under Article 51 of the UN Charter.406 Forcible reprisals for such targeted killings would therefore be problematic under international law. The absence of clear-cut legal standards in the context of low-level conflict suggests that international law is ill- equipped to deal with such situations. Assuming that a state suspected of developing nuclear weapons is the victim of an unlawful use of force targeting the cessation of that activity, the suspect state may face the grim reality of having no effective remedy. Although international law does not excuse the unlawful use of force in the context of a counterproliferation strategy, a state that has been isolated as a result of its alleged interests in developing a nuclear weapon may be in the awkward situation of having little support in the collective security apparatus for addressing low-level uses of force. One prominent example is the attack on the Dair Alzour/Ali Kibar nuclear site in Syria in 2007 and the ensuing silence of the international community. At the time of the attack, both the attacker and the nature of the facility attacked remained unclear, though it later became clear that Israel launched the attack.407 The international response to the attack at Dair Alzour was relatively muted,408 with no Security Council condemnation (in contrast with Israel’s 1982 attack on the Iraqi Osirak reactor, which was condemned by the Security Council in Resolution 487).409 On May 24, 2011, the IAEA concluded on the basis of environmental samples, satellite imagery, photographs, and other assessments that the facility was likely a nuclear reactor that should have been declared to the Agency.410 The IAEA Board of Governors referred the matter to the Security Council on June 9, 2011.411 Although it’s widely understood that the airstrikes on Dair Alzour were an unlawful use of force, it is also undisputed that the muted reaction signals an increasing lack of global political concern regarding the legality of such low-level uses of force when the target state is outside of international norms regarding nuclear policy.412 The closest corollary in legal doctrine that captures the international community’s muted response to the Dair Alzour strikes is found in the doctrine of “clean hands,”413 or the principle that “an unlawful act cannot serve as the basis of an action in law.”

#### The prolif dilemma underlies all nuclear energy development – relaxing posture is key to safe distribution at a scale large enough to solve warming

Squassoni, 2009 (Sharon, Senior associate at the Carnegie Endowment for International Peace focusing on nuclear nonproliferation and national security, “Nuclear Power: How Much More?” Nuclear Policy Education Center, March 25, http://www.npolicy.org/article.php?aid=176&rid=2)

The amount of nuclear capacity required to make a signification contribution to global climate change mitigation is so large that it would inevitably be widely distributed across the globe. Such a distribution would have particular implications for nuclear proliferation. However, projected distributions of nuclear energy out to 2050 are extremely speculative. The industry itself does not engage in such projections, and countries that set nuclear energy production goals have a history of widely missing long-range targets, such as China and India. The discussion below considers a hypothetical distribution of nuclear energy for 2050, based on the 2003 MIT Study. [12] Scenario III, shown in Figure 7, uses the “High 2050” scenario in Appendix 2 (“Global Electricity Demand and the Nuclear Power Growth Scenario”) of the 2003 MIT study, The Future of Nuclear Power. Although this is not a distribution designed to achieve optimal CO2 reductions, it is expansion at a level significant enough (1500 GWe) to have an effect on CO2 emissions. This would mean a fourfold increase from current reactor capacity. The MIT study used an underlying assumption that the developed countries would continue with a modest annual increase in per capita electricity use and the developing countries would move to the 4000 kWh per person per year benchmark if at all feasible (the 4000 kWh benchmark being the dividing line between developed and advanced countries). Electricity demand was then pegged to estimated population growth. Finally, it was assumed that nuclear energy would retain or increase its current share of electricity generation. The least-off developing countries were assumed in the MIT study not to have the wherewithal for nuclear energy. It should be noted that MIT’s 2050 projection was “an attempt to understand what the distribution of nuclear power deployment would be if robust growth were realized, perhaps driven by a broad commitment to reducing greenhouse gas emissions and a concurrent resolution of the various challenges confronting nuclear power’s acceptance in various countries.” A few countries that the MIT High 2050 case included but are not included here are countries that currently have laws restricting nuclear energy, such as Austria. Implications for Uranium Enrichment A fourfold expansion of nuclear energy would entail significant new production requirements for uranium enrichment as shown in Figure 8 and possibly, reprocessing. The MIT study anticipated that 54 states would have reactor capacities that could possibly justify indigenous uranium enrichment. If a capability of 10 GWe is considered the threshold at which indigenous enrichment becomes cost-effective, more than 15 additional states could find it advantageous to engage in uranium enrichment. Figure 9 depicts what the geographic distribution of enrichment capacity might look like, based on the development of 10 GWe or more of reactor capacity. Of course, some states – such as Australia or Kazakhstan – might opt to enrich uranium regardless of domestic nuclear energy capacity, choosing to add value to their own uranium exports. In addition, states may choose to take the path of the UAE, which has formally renounced domestic enrichment and reprocessing in its domestic law, despite aspiring to reach 10 GWe of capacity. Ultimately, these decisions lie very much in the political realm, and can be reversed. Implications for Proliferation Proliferation experts generally fall into two camps – those that do not consider power reactors a cause for proliferation concern but focus on the sensitive aspects of the nuclear fuel cycle and those that are concerned about the entire fuel cycle. Advocates of nuclear energy point out that most states that have developed nuclear weapons have used dedicated production or research reactors rather than power reactors to produce their fissile material [13]; others point to the potential for a state to use peaceful nuclear power to further a clandestine weapons program, either through technology transfer, hiding clandestine activities within a peaceful nuclear fuel cycle or diverting lightly irradiated fuel to be further enriched. Regardless of one’s views on the proliferation risks of power reactors, the recent surge of enthusiasm for nuclear energy poses several proliferation risks. First, recent enthusiasm is not limited just to power reactors. On the enrichment side, President Bush’s 2004 initiative to limit capabilities to current technology holders failed, not just in strategy but also in tactics. For example, Argentina, Canada, and South Africa have all expressed an interest in keeping their enrichment options open. Brazil, which is commissioning a new centrifuge enrichment plant at Resende, will likely produce more low-enriched uranium than is needed for its own consumption by 2015. By and large, these countries do not produce nuclear energy on at scale large enough to make domestic enrichment capability economic. [14] However, they have keen national interests in maintaining their right to enrich. Faced with allied objections to restricting future options, the Bush Administration folded. This is partly the reason for the impasse at the NSG on further detailed criteria restricting enrichment and reprocessing. A perception of the U.S. approach as discriminatory could open the door to further challenges. Even if piecemeal efforts to limit the number of states with uranium-enrichment or spent fuel reprocessing capabilities succeed, these could ultimately further erode the NPT by extending the existence of haves and have-nots from nuclear weapons into the nuclear fuel cycle. In the short term, efforts to limit expansion could slow some states’ implementation of the safeguards-strengthening measures in the 1997 Model Additional Protocol. In the long term, other decisions to strengthen the NPT could be jeopardized. On the reprocessing end, the United States has recently embraced spent fuel reprocessing at home and abroad. From the Global Nuclear Energy Partnership (GNEP) to nuclear cooperation with India, Bush administration policies supported reprocessing. This is a complete reversal from the policies adopted in the mid-1970s not to encourage the use of plutonium in the civilian fuel cycle. A nuclear renaissance that embraces reprocessing as necessary to reduce spent fuel accumulation could result in more plutonium in transit, providing more potential targets for diversion. A renaissance that includes widespread installation of fast reactors would similarly increase targets for diversion. Although GNEP advocates stress that the kind of spent fuel “conditioning” they favor would not result in the separation of plutonium, there are few assurances thus far that new techniques are any more proliferation-resistant than PUREX. As opponents like to point out, no future fuel conditioning technique in the United States will be more proliferation resistant than storing spent fuel. And while most countries are probably interested in having someone else solve the problem either of spent fuel storage or high-level waste storage, no commercial reprocessing service currently will store high-level waste. Neither the United States, nor Russia, nor France has committed to taking back spent fuel under GNEP. A further question is whether the next generation of reactors will be more or less proliferation-resistant than existing reactors. As of December 2002, the Generation IV Forum had not yet adopted a standard methodology for evaluating proliferation resistance and physical protection for the six systems under consideration. In addition, there have been a few reports that India is considering exporting its Pressurized Heavy Water Reactors. India may not be the only state in a second tier of suppliers that might be interested in exporting reactors, injecting some uncertainty into assessments. Beyond the technical realm, there are very real political questions about widespread diffusion of civilian nuclear power. Would new nuclear states would raise proliferation concerns by virtue of their geographic location, the existence of terrorist groups on their soil, or other sources of political instability? Would expanded nuclear infrastructure in Egypt, Jordan, Indonesia, Malaysia, Morocco, Nigeria, Vietnam, and the GCC countries lead their neighbors to worry about and respond to the possibility that these countries will develop weapons programs? The expansion of nuclear power would also have practical consequences for the nuclear nonproliferation regime. Additional facilities will place additional safeguards requirements on IAEA inspectors It is unclear how the IAEA will meet these requirements – will these mean more inspection days or will other approaches be used under the “integrated safeguards” program? Although reactors themselves require relatively few inspection days, there will be significant work in helping prepare new nuclear states for nuclear power programs. Already, the IAEA has conducted workshops on infrastructure requirements, including energy needs and planning considerations; nuclear security and safeguards; physical infrastructure; current and future reactor technology; experience in developing nuclear programs; human resource requirements; and public perceptions. States must also develop their states systems of accounting and control. A nuclear expansion, in particular, that results in more states with bulk-handling facilities (enrichment and reprocessing) could place significant strain on the IAEA and the inspections system. Recent experience suggest that current methods of inspection cannot provide timely detection. The fact that the IAEA’s goals for timely detection are clearly longer than material conversion times – that is, the time it would take for a proliferator to produce finished metal shapes – is a big concern. The largest enrichment and reprocessing plants under safeguards now are under EURATOM safeguards; the IAEA’s role in verifying material balances in those plants is limited by the IAEA-EURATOM agreement. The only experience in safeguarding commercial-scale enrichment and reprocessing plants outside of EURATOM in a non-nuclear-weapon state is in Japan, where incidents with significant material losses have raised questions. British commercial reprocessing at the THORP facility also has produced recurring reports of significant materials losses. Perhaps the largest question about a nuclear expansion is whether or not planned technological developments will outpace nonproliferation initiatives, such as fuel supply assurances and multinational fuel-cycle centers, voluntary export guidelines, and further restrictions within the Nuclear Suppliers Group. Criticism of the U.S. GNEP program had been aimed in part at the aggressive timeline for technology demonstration of advanced reprocessing, in contrast to developments more closely tied to nonproliferation objectives, such as supporting more proliferation-resistant reactors with sealed fuel cores that would limit handling of fuel. Already, efforts to manage expansion of the front and back ends of the fuel cycle, whether nuclear fuel assurances, fuel banks, or fuel leasing projects, have abandoned any concepts of formal restraints in favor of incentives. It is too soon to tell how compelling those incentives will be. Finally, although there is disagreement among experts about the proliferation potential of light water reactors, it is clear that the proliferation potential of a country with no nuclear expertise is lower than that of a country with nuclear power and its associated infrastructure. The current encouraging climate for nuclear energy – new cooperation agreements between France and the UAE, Libya and Algeria, and between the United States and Turkey and Jordan, for a few – suggests that regardless of global climate change concerns, or whether or not a significant expansion occurs, some states in the Middle East will develop nuclear energy. It is not clear whether new nuclear reactors in the Middle East would result in new enrichment or reprocessing plants in the Middle East. In part, much depends on the outcome of negotiations with Iran on its enrichment capabilities. If states clearly renounce making nuclear fuel and allow sufficient wide- ranging inspections to verify such pledges, the proliferation implications could be significantly diminished. The hope is that this can be accomplished with the UAE.

#### Nuclear power is necessary to avoid four degrees warming

Comeau 3-12-20’13

[Steve, a database programmer and a member of Local Motion, a Burlington-based group that promotes people-powered transportation, “Comeau: Nuclear power can be tool in avoiding global warming”, http://vtdigger.org/2013/03/12/comeau-nuclear-power-can-be-tool-in-avoiding-global-warming/]

Nuclear power is used to generate electricity, primarily replacing the use of coal for that purpose. In the two years since the Fukushima-Daiichi nuclear facility disaster hundreds of thousands of people worldwide have died from air pollution related to burning coal. According to the World Health Organization, “Urban outdoor air pollution is estimated to cause 1.3 million deaths worldwide per year.” Much of that pollution can be attributed to coal, which accounts for over 40 percent of electricity generated in the world. Burning coal produces massive amounts of waste products including fly ash, sulfur dioxide, mercury, and other heavy metals. Burning coal is bad for the environment and human health. But the biggest issue with burning coal is that it is the largest contributor of CO2 emissions, and therefore a huge contributor to human-caused global warming. To make progress on reducing CO2 emissions related to global warming, coal needs to stay in the ground. Of course there are many political and economic forces that make this close to impossible, but it can only be done if the electricity produced by coal is replaced. The replacements available for that purpose are natural gas, renewable energy, and nuclear power. These all have issues and risks, but are far cleaner and with fewer health consequences than coal. There are many interesting developments that will allow nuclear power to be safer, produce less waste, and even use up the existing nuclear waste. Bill Gates is promoting a company called TerraPower, developing the Traveling Wave Reactor. Environmentalist Stewart Brand, editor of the Whole Earth Catalog, supports nuclear power and the development of integral fast reactors that use uranium more efficiently and can use waste from other reactors. James Hansen, a leading climate scientist and now an activist, also supports third- and fourth-generation nuclear reactors as a way to avert climate change. The projections from a variety of sources depict that CO2 emissions will decline slowly in the United States and likely continue to increase around the world — so pretty much a “business-as-usual” scenario. A report by PricewaterhouseCoopers, “Too late for two degrees,” shows that in 2001 the world energy related emissions grew by 3 percent. China’s emissions grew by 9.4 percent, but emissions in the United States dropped by 1.9 percent, in part due to a mild winter. The most revealing and useful metric is the CO2 measurements taken at the Mauna Loa Observatory in Hawaii since 1959. Based on the trend of the CO2 measurements over the past 20 years, the atmospheric CO2 level — currently at 396 ppm (parts per million) — will reach 450 ppm in 2034. This is approximately the level of CO2 where the average global temperature will increase by 2 degrees (3.6 degrees F) over the pre-industrial level. Based on the latest climate change science, disruptive climate change is occurring now and will continue to occur with increased warming. That part is certain. What is uncertain is the intensity and timing of the transition to dangerous climate change, the threshold which is thought to be 2 degrees C of warming over the pre-industrial level. According to a report published in November 2012 by the World Bank, titled “Turn Down the Heat — Why a 4℃ Warmer World Must be Avoided,” if the current commitments and pledges for reducing emissions are not fully implemented, warming of 4 degrees C (7.2 degrees F) could occur as early as the 2060s. This level of warming will likely produce enormous environmental harm, as well as social and economic disruption. I encourage everyone to download and read this World Bank report. We need a greater understanding and appreciation of the magnitude of the projected harm that dangerous climate change can cause. People will adapt to climate change, but that adaptation will include migration and displacement that is orders of magnitude greater than that caused by the Fukushima-Daiichi nuclear facility disaster. That adaptation will include the abandonment of large cities flooded by a rising sea and migration from regions parched by drought. The warming and CO2 levels will last for centuries and change the world ecosystems. To postpone or avert the greatest harm from climate change it is necessary to accept the risks and potential harm that come with nuclear power, renewable energy, and natural gas, because the alternative is so much worse. The environmentalist positions against the energy technologies that offer effective solutions for replacement of coal are not helpful. As stated in the World Bank report: “The projected 4℃ warming must not be allowed to occur — the heat must be turned down.”

### Contention Three: Case Outweighs

#### Irrational bodies are built into prolif discourse, where “soft paths” for racism solidify into policy and affirm larger “patterns” that sustain deprivation and abandonment of the developing world – plan rearranges the institutional source of binary, exposing both of the lay of the land and thus revolutionary potential

Gusterson, 2004 [Hugh, People of the Bomb, p 25-27]

The dominant discourse that stabilizes this system of nuclear apartheid in Western ideology is a specialized variant within a broader system of colonial and postcolonial discourse that takes as its essentialist premise a profound Otherness separating Third World from Western countries.17 This inscription of Third World (especially Asian and Middle Eastern) na­tions as ineradicably different from our own has, in a different context, been labeled "Orientalism" by Edward Said. Said argues that orientalist discourse constructs the world in terms of a series of binary oppositions that produce the Orient as the mirror image of the West: where "we" are rational and disciplined, "they" are impulsive and emotional; where "we" are modern and flexible, "they" are slaves to ancient passions and routines; where "we" are honest and compassionate, "they" are treacherous and uncultivated. While the blatantly racist orientalism of the high colonial period has softened, more subtle orientalist ideologies endure in contempo­rary politics. They can be found, as Akhil Gupta has argued, in discourses of economic development that represent Third World nations as child na­tions lagging behind Western nations in a uniform cycle of development or, as Catherine Lutz and Jane Collins suggest, in the imagery of popular magazines such as *National Geographic."* I want to suggest here that an­other variant of contemporary orientalist ideology is also to be found in U.S. national security discourse.Following Anthony Giddens in his *Central Problems in Social Theory*, I define ideology as a way of constructing political ideas, institutions, and behavior that (1) makes the political structures and institutions created by dominant social groups, classes, and nations appear to be naturally given and inescapable rather than socially constructed; (2) presents the interests of elites as if they were universally shared; (3) obscures the connections between different social and political antagonisms so as to inhibit massive, binary confrontations (i.e., revolutionary situations); and (4) legitimates domination. The Western discourse on nuclear proliferation is ideological in all four of these senses: (1) it makes the simultaneous ownership of nu­clear weapons by the major powers and the absence of nuclear weapons in Third World countries seem natural and reasonable while problematizing attempts by such countries as India, Pakistan, and Iraq to acquire these weapons; (2) it presents the security needs of the established nuclear pow­ers as if they were everybody's; (3) it effaces the continuity between Third World countries' nuclear deprivation and other systematic patterns of dep­rivation in the underdeveloped world in order to inhibit a massive north- south confrontation; and (4) it legitimates the nuclear monopoly of the recognized nuclear powers.In the following pages I examine four popular arguments against hori­zontal nuclear proliferation and suggest that all four are ideological and ori­entalist. The arguments are that (1) Third World countries are too poor to afford nuclear weapons; (2) deterrence will be unstable in the Third World; (3) Third World regimes lack the technical maturity to be trusted with nu­clear weapons; and (4) Third World regimes lack the political maturity to be trusted with nuclear weapons. Each of these four arguments could as easily be turned backward and used to delegitimate Western nuclear weapons, as I show in the following commentary. Sometimes, in the specialized literature of defense experts, one finds frank discussion of near accidents, weaknesses, and anomalies in deterrence as it has been practiced by the established nuclear powers, but these admissions tend to be quarantined in specialized discursive spaces where the general public has little access to them and where it is hard to connect them to the broader public discourse on nuclear proliferation." In this chapter I retrieve some of these discussions of flaws in deterrence from their quarantined spaces and juxtapose them with the dominant discourse on the dangers of proliferation in order to destabilize its foundational as­sumption of a secure binary distinction between "the West" and "the Third World." It is my argument that, in the production of this binary distinc­tion, possible fears and ambivalences about Western nuclear weapons are purged and recast as intolerable aspects of the Other. This purging and recasting occurs in a discourse characterized by gaps and silences in its representation of our own nuclear weapons and exaggerations in its repre­sentation of those of the Other. Our discourse on proliferation is a piece of ideological machinery that transforms anxiety-provoking ambiguities into secure dichotomies. I should clarify two points here. First, I am not arguing that there are, finally, no differences between countries in terms of their reliability as custo­dians of nuclear weapons. I am arguing that those differences are complex, ambiguous, and crosscutting in ways that are not captured by a simple bi­nary division between, on the one hand, a few countries that have nuclear weapons and insist they are safe and, on the other hand, those countries that do not have nuclear weapons and are told they cannot safely acquire them. It is my goal here to demonstrate the ways in which this simple binary distinction works as an ideological mechanism to impede a more nuanced and realistic assessment of the polymorphous dangers posed by nuclear weapons in all countries and to obscure recognition of the ways in which our own policies in the West have often exacerbated dangers in the Third World that, far from being simply the problems of the Other, are problems produced by a world system dominated by First World institu­tions and states.

#### Challenging the way elites defer to market-based solutions reveals the legal and social premises of hierarchies that sustain white privilege – the aff policy design resuscitates discussion of global warming policy that acknowledges whiteness as part of the problem

Mandell 2008 [Bekah, A.B., Vassar College; J.D., Boston College Law School; Director of the Champlain Valley Office of Economic Opportunity Fair Housing Project, “Racial Reification and Global Warming: A Truly Inconvenient Truth,” Boston College Third World Law Journal Volume 28 | Issue 2 Article 3, 4-1-2008, <http://lawdigitalcommons.bc.edu/cgi/viewcontent.cgi?article=1046&context=twlj> ]

Fear of eroding the hierarchies that define race explains why politicians and other elites have consistently championed ineffectual “market-based approaches” to global warming.36 By focusing public and private energy on relatively insignificant individual behavior changes, the ¶ Bush administration and other privileged elites are able to maintain the ¶ racial hierarchy that consolidates their economic and social power.37¶ Politicians know that “[w]ithout white-over-black the state withers ¶ away.”38 Therefore, they have a profound incentive to maintain the racial hierarchy. Unsurprisingly, “because th[ese elites] accrue social and ¶ economic benefits by maintaining the status quo, they inevitably do.”39¶ This white consensus to maintain the spatial and mobility hierarchies ¶ that reify race is possible because, “[w]hite privilege thrives in highly ¶ racialized societies that espouse racial equality, but in which whites will ¶ not tolerate being either inconvenienced in order to achieve racial ¶ equality . . . or being denied the full benefits of their whiteness . . . .”40¶ With so much white privilege to lose, it becomes clear why even most ¶ passionate environmental advocates are far more willing to call for, and ¶ make, small non-structural changes in their behavior to ameliorate global warming, but are unwilling to embrace significant or meaningful ¶ actions to address the crisis.41¶ Even as global warming is starting to become the subject of increasing media coverage and as more environmental groups call for ¶ action to halt the crisis, most activism is limited to changes that maintain the existing spatial, social, economic and legal framework that defines American society.42 Despite knowing for decades that we have ¶ been living unsustainable lifestyles, and “hav[ing] had some intuition ¶ that it was a binge and the earth couldn’t support it, . . . aside from the ¶ easy things (biodegradable detergent, slightly smaller cars) we didn’t ¶ do much. We didn’t turn our lives around to prevent it.”43¶ Greenhouse emissions reduction challenges have cropped up on ¶ websites across the country, encouraging Americans to change their ¶ light bulbs, inflate their tires to the proper tire pressure to ensure optimal gas mileage, switch to hybrid cars, run dishwashers only when full, ¶ telecommute, or buy more efficient washers and dryers.44 However, ¶ popular emissions challenge web sites are not suggesting that Americans give up their cars, move into smaller homes in more densely populated urban neighborhoods near public transportation, or take other ¶ substantive actions to mitigate the global climate crisis.45 Even Al Gore the most famous voice in the climate change movement, reminds his ¶ fellow Americans that “[l]ittle things matter . . . buy a hybrid if you can, ¶ buy a flex-fuel car if you can. Get a higher mileage car that’s comfortable for your needs.”46 “[M]any yuppie progressive ‘greens’ are the ones who drove their SUVs to environmental rallies and, even worse, ¶ made their homes at the far exurban fringe, requiring massive car dependence in their daily lives,” taking residential segregation and racial ¶ and spacial hierarchies to previously unimagined dimensions.47 This ¶ focus on maintaining one’s privileged lifestyle while making minimal ¶ changes reflects the power of the underlying structural impediments ¶ blocking a comprehensive response to global climate change in the ¶ United States.48¶ It is not just political inaction that prevents a meaningful response. ¶ Millions of Americans do not demand a change in environmental policy because, just as with political elites, it is against the interests of those ¶ enjoying white privilege to take genuine ~~steps~~ to combat climate ¶ change.49 Real climate action would ultimately require relinquishing ¶ the spatial, social, and economic markers that have created and protected whiteness and the privilege it confers.50 Although “we too often ¶ fail to appreciate how important race remains as a system for amassing ¶ and defending wealth and privilege,” the painfully slow reaction of the ¶ American public to the growing dangers of global warming highlights ¶ just how important racial privilege remains and how reluctant its beneficiaries are to give it up.51 Elite reformists make meaningful change ¶ even more remote as they push for behaviors to tweak, but not to ¶ change the existing social, economic, and legal hierarchy in the face of “problems, [like global warming] that arise to threaten the predominance of the traditionalist, capitalist ruling class.”52

#### Our advocacy is one of negative state action, the aff fiats less imposition on a global scale – the state isn’t always good but policy-knowledge and deliberations are indispensable to the solution to climate change

**Hansen ‘9**, heads the [NASA](http://en.wikipedia.org/wiki/NASA) [Goddard Institute for Space Studies](http://en.wikipedia.org/wiki/Goddard_Institute_for_Space_Studies) and [adjunct professor](http://en.wikipedia.org/wiki/Professors_in_the_United_States#Adjunct_professor) in the Department of Earth and Environmental Sciences at [Columbia University](http://en.wikipedia.org/wiki/Columbia_University) (James, December, Storms of My Grandchildren, xi)

I believe the biggest obstacle to solving global warming is the role of money in politics, the undue sway of special interests. **But the public, and young people in particular, will need to get involved in a major way.** “What?” you say. You already did get involved by working your tail off to help elect President Barack Obama. Sure, I (a registered Independent who has voted for both Republicans and Democrats over the years) voted for change too, and I had moist eyes during his Election Day speech in Chicago. That was and always will be a great day for America. But let me tell you: President Obama does not get it. He and his key advisers are subject to heavy pressures, and so far the approach has been, “Let’s compromise.” **So you still have a hell of a lot of work ahead of you**. You do not have any choice. Your attitude must be “Yes, we can.” I am sorry to say that most of what our politicians are doing on the climate front is greenwashing – their proposals sound good, but they are deceiving you and themselves at the same time. Politicians think that if matters look difficult, compromise is a good approach. **Unfortunately, nature and the laws of physics cannot compromise – they** are what they are**.** Policy decisions on climate change are being deliberated every day by those without full knowledge of the science, and often with intentional misinformation spawned by special interests. This book was written to help rectify the situation. Citizens with a special interest – in their loved ones – need to become familiar with the science, exercise their democratic rights, and pay attention to politicians’ decisions. Otherwise, it seems, short-term special interests will hold sway in capitals around the world – and we are running out of time.

## 2AC

### O/V

#### The effects of global warming outweigh the K because it both encompasses and surpasses the destruction of the Black body. The G’wychin in Alaska are losing their land and livelihoods by the melting of ice in the Arctic and the shifting of Caribou migratory patterns. Islands in the Pacific are literally being sucked up by the sea. Agriculture is suffering in countries without the privilege of complex irrigation systems. And worst of all, nobody gives a shit because we can just turn up the AC without thinking about the way that electricity produced or sustained. It is this complacency in the systems of energy production that makes our interrogation of the topic specifically important in challenging climate change and a form of privilege that THEY have failed to recognize in this debate space.

#### The affirmation of the topic engages in a process of inverse double consciousness- to recognize the construction of American society (and thus the self) from the position of the oppressed. This makes complicity in the machinery of whiteness explicit and lays the foundation for the recognition of the autonomy of others and works towards decolonizing the white mind and structures of racist oppression.

Martinot 2010

[Steve, Adjunct Professor San Francisco State University*,The Machinery of Whiteness: Studies in the Structure of Racialization*, Temple University Press, 2010, pg 185-186, modified for ableist language]

Perhaps, as an alternative to trying to construct an anti-racist whiteness, a fi rst ~~step~~ toward decolonizing the United States, and the white mind, and ~~weakening~~ its cultural structures of racialization can be made by adopting an inverse form of DuBoisian double consciousness. DuBois theorized the notion of a double consciousness as the condition under which black people found themselves. For him, it meant always ~~seeing~~ oneself through the eyes of others. A black person was both excluded from being American by being black and striving to transcend the white-imposed mark of being black in order to be American. Each black person is judged in advance by those other ~~eyes~~, and always already rendered guilty in both the white ~~gaze~~ and one’s own interiorization of it. Yet one remains guilty of nothing more than having been ~~seen~~, of having been noticed because rendered noticeable by the other’s racialization of oneself. That is, a black person is noticed by whites because of something whites do to themselves, through which the black person is then ~~seen~~, and oppressed by being ~~seen~~ and socially categorized by the whites’ act of noticing. A reverse double consciousness for whites, as a ~~step~~ toward a decolonizing anti-racism, would be to ~~see~~ [recognize] themselves as they are ~~seen~~ [understood] by the oppressed, by those they racialize. The dominant tend to ~~see~~ [recognize] themselves as the norm, as simply human. Thus, a double consciousness would entail ~~seeing~~ [recognizing] themselves not as the norm but rather as the oppressors that they are in the eyes of those they oppress and racialize. It would be to see their hegemony, their dominance, their pretense to privilege through the eyes of those who suffer from it. This is not a question of guilt, but rather of ~~seeing~~ who one is, and who one is made to be, by one’s position, one’s role, and one’s complicity in the machinery of whiteness. Three things would happen. First, for a person to ~~see~~ [recognize] himself as he or she is ~~seen~~ [understood] by another would be to grant that other person a subjectivity, an autonomy of consciousness that is denied to that other by racism and white supremacy. One would have to ~~see~~ oneself as judged by that other, not as an individual but as a part of a social machine. Part of the purpose of the vilifi cation of the victims of racist violence is to de-authorize the racialized from rendering such judgments. Second, since white identity is based on the ability of whiteness to objectify those it racializes for itself, to ~~see~~ [recognize] oneself as ~~seen~~ [understood] by those racialized would dispel both the other’s objectifi cation by one’s white identity and one’s own ability to use them for white identity construction. One’s white identity, which depends on that objectifi cation, would unravel. And third, one would become an object (in one’s own mind) because one had become an object for those others. But one would become an object whose nature, in its capacity or potentiality to dominate, would be ~~seen~~ [understood] as other, as objectifi ed, by oneself. One could ~~see~~ [recognize] the dehumanization one had imposed on others in oneself. One could then ~~see~~ [recognize] the modes by which one dominates or oppresses simply by being white, because ~~seen~~ as such by those whom whites have racialized. It might be a place to start.

### 2AC

#### Our framework is that the aff and neg should defend competing methods – we’ve taken the position that the 1AC is a response to the Ideology of the status quo that requires we defend negative state action – any other framework is worse for debates.

#### Makes true offense impossible – shifts the debate to impact claims which allows one position to take the moral high ground by saying something like global warming is bad without a method to challenge that

#### Method is everything – Our Gusterson evidence says that ideologies are sustained by the policies that are implemented – the mandel evidence says that these specific energy policies are the product of whiteness and we need to challenge those

### Perm

#### Perm do the plan and reject the politics of whiteness – the 1AC is a methodological challenge to the whiteness of the status quo.

#### The Alt is not competitive with the 1AC – we defend that negative state action is good – our discussion of policy changes informed by climate science is the only way to challenge the conservative stranglehold on energy politics in the status quo

#### Alternative requires the aff – Permutation is the best strategy because it binds a multitude of criticisms to white supremacy

Ashley W. Doane 3 Associate Dean for Academic Administration and Associate Professor of Sociology at the University of Hartford and Eduardo Bonilla-Silva is Associate Professor of Sociology at Texas A and M University, White Out: The Continuing Significance of Racism, 2003, p. 36-37

A crucial initial step toward reviving the term, then, would be establishing the simple sociological and political truth – not exactly unknown to the Western sociopolitical tradition – that power relations can survive the formal dismantling of their more overt supports. Even for postapartheid South Africa, where whites are a minority, it should be obvious that their strategic economic and bureaucratic power will continue to give them differential power. For the United States, where racialized and vastly disproportionate concentrations of wealth, cultural hegemony, and bureaucratic control are of course reinforced by white political majoritarianism, the case should – were it not for ideological ~~blinders~~ – be much easier to make. So the argument would be that American white supremacy has not vanished but has changed from a de jure to de facto form. The merely formal rejection of white-supremacist principles will not suffice to transform the United States into a genuinely racially egalitarian society, since the actual social values and enduring politico-economic structures will continue to reflect the history of white domination (Crenshaw 1988:1336). White supremacy thus needs to be conceptualized in terms broader than the narrowly juridical. Frances Lee Ansley suggests the following definition: “a political, economic, and cultural system in which whites overwhelmingly control power and material resources, conscious and unconscious ideas of white superiority and entitlement are widespread, and relations of white dominance and non-white subordination are daily reenacted across a broad array of institutions and social settings” (1989:1024n). Through white-black racial domination has clearly been central to this system, a comprehensive perspective on American white supremacy would really require attention to, and a comparative analysis of, white relations with other peoples of color also: Native Americans, Mexican Americans, and Asian-Americans (Takaki 1990 [1979]; Okihiro 1994; Almaguer 1994; Foley 1997).

### Alt no solve

#### Specific policy actions must be taken – our method of challenging whiteness at both a level of policy and ideology is ciritical

Stepp, 11/5/2012 (Matthew, Contributor and Senior Policy Analyst of the D.C.-based think tank the Information Technology and Innovation Foundation, “Climate Hawks and 'Reverse Tribalism': How Our Policy Choices Are Fueling Climate Inaction”, Forbes, http://www.forbes.com/sites/matthewstepp/2012/11/05/climate-hawks-and-reverse-tribalism-how-are-policy-choices-are-fueling-climate-inaction/)

A self-aware and important discussion has emerged among climate advocates on ‘reverse tribalism’: the process by which some within the climate community scold climate hawks for making exaggerated claims about climate change and extreme weather (see Hurricane Sandy). As Grist writer Dave Roberts puts it, these ‘climate scolds’ believe they, “are saving the [climate hawk] activists from themselves,” by keeping them within the bounds of peer-reviewed science and not allowing their alarming message to be used against them to create climate denial and spurn policy action.¶ **But this process** of reverse tribalism **exists** in the first place **because climate advocates are supporting the wrong policy choices**. In other words, reverse tribalism isn’t a communications issue, it’s a policy issue and it’s at the heart of solving climate change.¶ On paper, making the connection between specific extreme weather events like Hurricane Sandy and climate change is seen as a communications strategy. It’s a way for climate hawks (and I consider myself one) to convey a visceral sense of what climate change means and even feels like. If Americans connect the images of flooded subways, long gas station lines, and washed away neighborhoods to human-driven climate change, then they’re more likely to support climate policy.¶ For communicators like Roberts, it’s the best way to get their point across. And I couldn’t agree more that climate change is an urgent, society-threatening problem that requires aggressive attention over many decades.¶ The problem is that making the extreme weather-climate change connection isn’t working, reverse tribalism or not. It didn’t work after Hurricane Katrina. Or after another year of historic droughts and wildfires. And it probably won’t work after Hurricane Sandy.¶ Sure, Sandy’s devastating impacts on New Jersey and New York are helping spark a long overdue discussion on climate change within the parameters of the Presidential election (if we count NYC Mayor Michael Bloomberg’s endorsement of President Obama on climate grounds as a national discussion), but this shows the limits of it as a communications strategy. Policy elites will discuss climate change, reporters will challenge politicos with climate questions, and cover stories will be written, but more likely than not anything actionable will come from it. I am not suggesting the discussion of climate change isn’t important, but don’t expect Hurricane Sandy to be the proverbial foot to the policymakers backside.¶ **Jarring images of extreme weather aren’t sparking action because ‘climate scolds’ are muddying the messaging.** No, as I wrote in Sunday’s Washington Post the images aren’t sparking action because the policy options most climate advocates and environmentalists are selling the public are bankrupt:¶ “Many environmentalists argue that the best way to address climate change is for Americans to change their lifestyles and make sacrifices for the good of the planet. Americans are told they must consume less, waste less and spend more to buy clean energy. While David Brooks’s “Bourgeois Bohemians” may be able to retrofit their homes with solar panels and drive Chevy Volts, most of us can’t.”¶ Shifting from using fossil fuels to clean energy isn’t an obvious or easy economic choice for most Americans. Clean energy technologies like wind, solar, nuclear, and electric vehicles are more expensive than carbon-intensive alternatives and suffer from limited performance and intermittency problems. As a result, the dominant climate policies emphasized by advocates and environmentalists are like selling nothing more than a bill of goods. Preferred government mandates like Clean Energy Standards or regulatory schemes like cap-and-trade will raise energy prices. In absence of mandates, significant tax-payer subsidies are required to spur even modest clean energy deployment. As I put it in the same piece in the Post, climate change policy has:¶ “…become a hair shirt that Americans are expected to wear for the ‘good of the planet.’ Middle America has long been told what not to do: not to buy incandescent light bulbs, drive gas-guzzling cars and trucks, or use dirty energy.”¶ If Americans were offered clean energy options that were affordable and better than gasoline, coal, and natural gas, much of the derision towards clean energy would go away. Only then would mandates accelerate the deployment of cheap, clean energy rather than force more expensive clean energy technologies on the market. Only then would long-term subsidies not be needed for the clean energy industry to simply survive. And the need to constantly harp on every extreme weather event as one more reason for Americans to sacrifice for the public good becomes less of an issue, as does reverse tribalism.¶ To remove these cost and technology performance barriers – and therefore the major barrier to mitigating climate change – climate advocates should be discussing how best to support clean energy innovation to develop cheaper, better clean energy options. It’s clear that we can’t put the deployment cart before the development horse without feeding the very derision that climate advocates hope to overcome by connecting extreme weather to climate change. It’s an endless positive feedback loop and a vicious one at that.¶ Many fellow climate hawks will respond by saying that I have it all wrong. We just need better messaging. The aforementioned ‘climate scolds’ need to back off the reverse tribalism. Or even more wonky, I shouldn’t bash deployment policies to elevate clean energy innovation – it’s not an either/or proposition. By which they really mean “clean energy R&D is okay, but what is really important is deploying the clean tech we have today.”¶ But the reality is that clean energy is not ready for prime time and all the deployment in the world won’t make it so. One hundred more lithium ion car battery factories won’t get us batteries that cost $100/kWh and have 5 times more storage capacity. Only R&D-based innovation will get us that. The same is true with other key clean energy technologies. Most climate advocates have it wrong by overwhelmingly emphasizing deployment.¶ What we need today – and what Americans would get behind as ‘climate policy’ – is an aggressive clean energy innovation strategy aimed at developing cheaper and better technology options. Smarter deployment policies may be needed down the road to scale better technologies, but they would come with less baggage than the blunt deployment policies used today. Climate advocates and environmentalists need to forget about messaging and start innovating.

### Futurism

#### It’s both inevitable and necessary

Whitt, 2009(Richard, Washington Telecom and Media Counsel at Google, “Adaptive Policymaking: Evolving and Applying Emergent Solutions for U.S. Communications Policy”, Federal Communications Law Journal, vol. 61, issue 3, Questia)

Emergence Economics tells us that prognostication and planning are difficult, if not impossible, to get right. The inevitable personal limitations of information, perception, and cognition, coupled with a dynamic and unpredictable environment, makes failure far more common than success. Attempting long-range planning can also clash with the adaptive principle of making contextual, evidence-based decisions. **Still, appreciating this reality should not lead to decisional ~~paralysis~~**. Those making public policy must do what they can to peer into the fog and discern some patterns that can help shape analysis. There are a number of possible ways to project into the present and future, using a mix of reason and imagination, to solve problems. I will briefly touch on three that are based more on policy option scenarios rather than outfight predictions. Peter Schwartz has devised what he calls "the art of the long view," which is **premised on developing and using scenarios to help cabin uncertainty and improve decision making**. (332) This multi-stage process involves (1) **identifying a focal decision**, (2) listing the key factors influencing the success or failure of that decision, (3) listing the driving forces (social, economic, political, environmental, and technological) that influence the key factors, (4) ranking the key factors and driving forces based on relative importance and degree of uncertainty, (5) **selecting the potential scenarios along a matrix**, (6) **fleshing out the scenarios**, (7) **assessing the implications**, and (8) selecting leading indicators and signposts. (333) An important takeaway here is that **the use of scenarios can help identify the various environmental forces that can affect implementation of a policy decision, reducing to some degree the uncertainty** that otherwise surrounds that process. Closer to the near-term, Richard Ogle talks about utilizing "the idea-spaces of the extended mind," which he identifies as including qualities like imagination, intuition, and insight. (334) As Ogle sees it, reason proceeds cautiously and looks backward, while the imagination and its allied capacities look more boldly forward. (335) More specifically, the Cartesian model of thinking is based on continuity, because logical and probabilistic reasoning cannot abide gaps. (336) By contrast, creative breakthroughs typically involve leaps into the unknown. (337) Because the imagination is the mind's supreme faculty for dealing with the future, and it reaches places where reason cannot go, Ogle suggests ways to harness the imagination to improve one's decision-making abilities. (338) As Ogle quotes Einstein, "Logic will get you from A to B, imagination will take you everywhere." (339) Finally, Thomas Homer-Dixon argues for the necessity to develop a "prospective mind ... comfortable with constant change, radical surprise, and even breakdown." (340) He sees each of these as inevitable features of our world, requiring us constantly to anticipate a wide variety of futures. "We need to exercise our imaginations so that we can challenge the unchallengeable and conceive the inconceivable." (341) He also argues: **"Precise prediction is impossible because our complex and nonlinear world is full of unknown unknowns-**-things we do not know that we do not know." (342) **But a mind open to numerous possibilities is better equipped to anticipate and deal with change than a mind closed off to such possibilities**.

### Wynter Link

#### Their Wynter argument is 100% in line with what the 1AC says – it says that whiteness structures responses to global warming by funneling funds into simple economic fixes rather than challenging underlying ideologies – that is what the 1AC says is messed up – that we can think that a tax will work when we won’t allow other countries to produce clean energy because they are dangerous and Irrational

### Tech Link

#### The Science of the 1AC is not ignorant to difference but is rigorously tested by scientists across many fields

Shulman 2010

[Seth, Union of Concerned Scientists, “Climate Pioneer”, http://www.ucsusa.org/global\_warming/science\_and\_impacts/science/climate-scientist-warren-washington.html]

Washington stresses that today's climate models have been subjected to so many tests and trials over such a long period that scientists have a high level of confidence in their ability to project how the climate is likely to change when subjected to a range of highly specific scenarios. One such key test scientists have performed, he explains, is the so-called twentieth-century reconstruction, in which researchers start the computer model with data from 1850 and run it to the present, accounting for changes in heat-trapping emissions, volcanic activity, and a host of other variables. Only when the model is accurate enough to reproduce the climate features of the twentieth century will scientists use it to estimate possible future climate change. As Washington explains, "The most important thing is not just that we can reproduce twentieth-century changes—which we can. It is that we can go back and rerun the calculations, changing just one thing at a time. In this way the model becomes useful not only for future projections but also for understanding what factors have the most influence on changes in the climate." What comes out most clearly, Washington says, is that the model simply cannot reproduce today's temperature record when scientists remove the increase in atmospheric carbon dioxide from fossil-fuel burning. "To get the kinds of climatic conditions we have today, you need that increase in carbon dioxide. For anyone doubtful about the effect of human activity on global warming, that finding really is a 'smoking gun.'"

#### Any alternative method to a politics of scientific deliberation ensures that the right can coopt the discussion by latching onto epistemological indicts of science

**Banning ‘9**, Professor of Communication at the University of Colorado (Elisabeth, “When Poststructural Theory and Contemporary Politics Collide-The Vexed Case of Global Warming”, September)

**This essay critically reads a preeminent public policy debate\*that of global warming\*with a two-fold purpose**. **Because global warming skeptics have used strategies and coercions that lie mostly beneath the radar of public life to manipulate public opinion**, I array some of their extensive efforts to control public information. I offer this array of efforts not just to reveal what has occurred behind the scenes, but also to illustrate that the resources, motives, and authority behind these efforts are anything but symmetrical. Rather, **while there are clearly opposing points that can be reified on a talk show as a two-sided debate, there is an imbalance between conclusions based on scientific conventions, protocols, and inter-subjective agreement, and conclusions based on commercial interests, private profit, and corporate gain.** The debate on global warming exemplifies what has been termed a ‘‘disingenuous’’ or ‘‘pseudo-controversy,’’ 5 in which commercial and political entities labor to generate a perception of widespread debate among a scientific community where instead there is a strong agreement. **The goal of this pseudo-controversy is to keep viable the appearance that there is ongoing debate about global warming and to foster uncertainty amongst US publics.** Those attempting to manipulate the results of science research and the rhetorical impact of scientific findings on global warming to achieve these ends are not limited to the Bush Administration, but include various political action groups, the Republican National Committee, energy industry representatives, and conservative punditry positioned in mainstream media news outlets and elsewhere. To capture a sense of the extent of these efforts in this essay, I synthesize the COGR with other research reports, news accounts, policy statements, letters, and speeches on the topic. **Studies of discrete or ‘‘limited’’ texts are common in interpretive work in rhetoric**, such as presidential actions or speeches, canonical works, or official policy, **but the discursive actions occurring behind these textual scenes often contradict and complicate public and official discourses**; indeed, that is their purpose. **Amassing the evidence provides the grounds for an analysis that addresses the epistemological question of how various publics in the US can know what information to believe in their policy deliberations**, an analysis that discerns the connections between phenomena that are often scrutinized discretely. **My investigation is thus unabashedly normative\*it assumes there is a social imperative to which public discourse should be accountable and ethical warrants to which scholarship must answer**\*and it is informed by Fredric Jameson’s critical stance that eschews aporias and antinomies in favor of a focus on the central contradiction of a ‘‘text,’’ however construed. 6 Both sides in the struggle to define global warming offer factual claims that result in positions that are irreconcilable. Both positions cannot be equally true, and this is the central contradiction on which I focus. **My account implicitly relies on McGee’s notion that rhetorical critics need to construct ‘‘discourses from scraps and pieces of evidence’’ that they amass,** 7 **in order to illustrate the links between discursive and non-discursive practices** (the historical events that become the basis for further discourse), **and to account for the stabilization of beliefs about a historical event** (global warming). **My second purpose is to ask what institutional and discursive conditions have enabled this moment, in which the broad ideals of academic freedom and protocols guiding scientific inquiry appear to hold precarious authority in the public arena, and the knowledge produced by this inquiry is increasingly viewed as political**. **A complex of factors contributes to the difficulty for US publics to know what to believe about global warming or who to hold accountable for changes in policy: The quality of information that US publics have received is certainly key**. **Perhaps a more** insidious set of epistemological problems**, however, are the assumptions that the debate over global warming is in fact a debate, that all discourse is equally political, and that there are no standards by which to determine what to accept as contingently true.** **Even the most rudimentary rhetorical analysis of the public discourse on global warming would reveal that the interlocutors in this debate are not equally positioned in terms of resources, motives, and authority, nor do they abide by a normative set of deliberative standards for public discourse**. **There** **are two institutional arenas related to this set of epistemological problems to which I pay particular attention**, **the public arena** with its broad array of government, economic, and political operatives; **and the academic arena**\***specifically\*how theoretical discourses on knowledge and truth generated within this arena have been exported to**, if not expropriated in, **public discourse.** **This co-optation of contemporary critical perspectives on knowledge and truth in public discourse deserves particular scrutiny: When commercial interests deploy contemporary critical perspectives on knowledge and truth to obfuscate and mislead publics, they impede interventions designed to restore conditions for public reason in the political realm. Rhetorical critics and critical communication scholars are uniquely positioned to intervene when scientific conclusions relevant to public policy but disadvantageous to private and elite interests are manipulated**. It is not clear, however, how critical scholars of any stripe intervene in order to press this social imperative into service in the public arena, or what might be the moment and manner of critical intervention in pseudo-controversies such as these. As I will show, those like myself who are indebted to poststructuralist 8 theories of knowledge, truth, and power and who want to intervene in contemporary struggles over policy find ourselves positioned awkwardly\*at best\*by these theories and our own standards of disinterestedness. Our capacities as critical rhetorical and communication scholars are not easily translated into practice and when they are, they face the same claims of partisan politics as all discourse. The question of how these capacities might be pressed into service, however, seems worthy of attention.

### Ignore How Warming affects people

#### We don’t do this – the 1AC understands that warming affects everyone differently – we’ve made an ethical demand on the judge that supporting the 1AC is necessary to challenge the way whiteness exists

#### How nuclear power affects people – not a question to the 1AC

### Wilderson Link

#### The negative has misidentified the way the 1AC understands suffering – we have yet to discuss anything but the way that anti-blackness structures energy policy. Nothing about the 1AC ignores our privilege in the system nor does it ignore the extreme violence that founds the system.

#### We all have the privilege of living in a place where we don’t have to worry about our food source dying off or our island sinking – The Stern evidence says that as people who live in a largely emitting country the only ethical choice is to challenge the structures that allow emitting to occur

#### Wilderson’s argument is too sweeping, denies Black agency, and links to anti-politics

BÂ 11 (Dr. Saër Maty, Professor of Film – University of Portsmouth and Co-Editor – The Encyclopedia of Global Human Migration, "The US Decentred: From Black Social Death to Cultural Transformation", Cultural Studies Review, 17(2), September, p. 385-387)

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 corpus of 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.’

#### The invocation of social death as ontologically inevitable inscribes a pessimism towards politics which makes agency impossible and oversimplifies the history of resistance

Brown 9 Vincent, Prof. of History and African and African-American Studies @ Harvard Univ., December, "Social Death and Political Life in the Study of Slavery," American Historical Review, p. 1231-1249

Specters of the Atlantic is a compellingly sophisticated study of the relation be- tween the epistemologies underwriting both modern slavery and modern capitalism, but the book’s discussion of the politics of anti-slavery is fundamentally incomplete. While Baucom brilliantly traces the development of “melancholy realism” as an op- positional discourse that ran counter to the logic of slavery and finance capital, he has very little to say about the enslaved themselves. Social death, so well suited to the tragic perspective, stands in for the experience of enslavement. While this heightens the reader’s sense of the way Atlantic slavery haunts the present, Baucom largely fails to acknowledge that the enslaved performed melancholy acts of accounting not unlike those that he shows to be a fundamental component of abolitionist and human rights discourses, or that those acts could be a basic element of slaves’ oppositional activities. In many ways, the effectiveness of his text depends upon the silence of slaves—it is easier to describe the continuity of structures of power when one down- plays countervailing forces such as the political activity of the ~~weak~~. So Baucom’s deep insights into the structural features of Atlantic slave trading and its afterlife come with a cost. Without engagement with the politics of the enslaved, slavery’s history serves as an effective charge leveled against modernity and capitalism, but not as an uneven and evolving process of human interaction, and certainly not as a locus of conflict in which the enslaved sometimes won small but important victories.11¶ Specters of the Atlantic is self-consciously a work of theory (despite Baucom’s prodigious archival research), and social death may be largely unproblematic as a matter of theory, or even law. In these arenas, as David Brion Davis has argued, “the slave has no legitimate, independent being, no place in the cosmos except as an instrument of her or his master’s will.”12 But the concept often becomes a general description of actual social life in slavery. Vincent Carretta, for example, in his au- thoritative biography of the abolitionist writer and former slave Olaudah Equiano, agrees with Patterson that because enslaved Africans and their descendants were “stripped of their personal identities and history, [they] were forced to suffer what has been aptly called ‘social death.’ ” The self-fashioning enabled by writing and print “allowed Equiano to resurrect himself publicly” from the condition that had been imposed by his enslavement.13 The living conditions of slavery in eighteenth-century Jamaica, one slave society with which Equiano had experience, are described in rich detail in Trevor Burnard’s unflinching examination of the career of Thomas Thistle- wood, an English migrant who became an overseer and landholder in Jamaica, and who kept a diary there from 1750 to 1786. Through Thistlewood’s descriptions of his life among slaves, Burnard glimpses a “world of uncertainty,” where the enslaved were always vulnerable to repeated depredations that actually led to “significant slave dehumanization as masters sought, with considerable success, to obliterate slaves’ personal histories.” Burnard consequently concurs with Patterson: “slavery completely stripped slaves of their cultural heritage, brutalized them, and rendered ordinary life and normal relationships extremely difficult.”14 This was slavery, after all, and much more than a transfer of migrants from Africa to America.15 Yet one wonders, after reading Burnard’s indispensable account, how slaves in Jamaica or- ganized some of British America’s greatest political events during Thistlewood’s time and after, including the Coromantee Wars of the 1760s, the 1776 Hanover conspiracy, and the Baptist War of 1831–1832. Surely they must have found some way to turn the “disorganization, instability, and chaos” of slavery into collective forms of belonging and striving, making connections when confronted with alien- ation and finding dignity in the face of dishonor. Rather than pathologizing slaves by allowing the condition of social death to stand for the experience of life in slavery, then, it might be more helpful to focus on what the enslaved actually made of their¶ situation.¶ Among the most insightful texts to explore the experiential meaning of Afro- Atlantic slavery (for both the slaves and their descendants) are two recent books by Saidiya Hartman and Stephanie Smallwood. Rather than eschewing the concept of social death, as might be expected from writing that begins by considering the per- spective of the enslaved, these two authors use the idea in penetrating ways. Hart- man’s Lose Your Mother: A Journey along the Atlantic Slave Route and Smallwood’s Saltwater Slavery: A Middle Passage from Africa to American Diaspora extend social death beyond a general description of slavery as a condition and imagine it as an experience of self. Here both the promise and the problem with the concept are most fully apparent.16¶ Both authors seek a deeper understanding of the experience of enslavement and its consequences for the past, present, and future of black life than we generally find in histories of slavery. In Hartman’s account especially, slavery is not only an object of study, but also the focus of a personal memoir. She travels along a slave route in Ghana, from its coastal forts to the backcountry hinterlands, symbolically reversing the first stage of the trek now commonly called the Middle Passage. In searching prose, she meditates on the history of slavery in Africa to explore the precarious nature of belonging to the social category “African American.” Rendering her re- markable facility with social theory in elegant and affective terms, Hartman asks the question that nags all identities, but especially those forged by the descendants of slaves: What identifications, imagined affinities, mythical narratives, and acts of re- membering and forgetting hold the category together? Confronting her own alienation from any story that would yield a knowable genealogy or a comfortable identity, Hartman wrestles with what it means to be a stranger in one’s putative motherland, to be denied country, kin, and identity, and to forget one’s past—to be an orphan.17 Ultimately, as the title suggests, Lose Your Mother is an injunction to accept dis- possession as the basis of black self-definition.¶ Such a judgment is warranted, in Hartman’s account, by the implications of social death both for the experience of enslavement and for slavery’s afterlife in the present. As Patterson delineated in sociological terms the death of social personhood and the reincorporation of individuals into slavery, Hartman sets out on a personal quest to “retrace the process by which lives were destroyed and slaves born.”18 When she contends with what it meant to be a slave, she frequently invokes Patterson’s idiom: “Seized from home, sold in the market, and severed from kin, the slave was for all intents and purposes dead, no less so than had he been killed in combat. No less so than had she never belonged to the world.” By making men, women, and children into commodities, enslavement destroyed lineages, tethering people to own- ers rather than families, and in this way it “annulled lives, transforming men and women into dead matter, and then resuscitated them for servitude.” Admittedly, the enslaved “lived and breathed, but they were dead in the social world of men.”19 As it turns out, this kind of alienation is also part of what it presently means to be African American. “The transience of the slave’s existence,” for example, still leaves its traces in how black people imagine and speak of home:¶ We never tire of dreaming of a place that we can call home, a place better than here, wherever here might be . . . We stay there, but we don’t live there . . . Staying is living in a country without exercising any claims on its resources. It is the perilous condition of existing in a world in which you have no investments. It is having never resided in a place that you can say is yours. It is being “of the house” but not having a stake in it. Staying implies transient quarters, a makeshift domicile, a temporary shelter, but no attachment or affiliation. This sense of not belonging and of being an extraneous element is at the heart of slavery.20¶ “We may have forgotten our country,” Hartman writes, “but we haven’t forgotten our dispossession.”21¶ Like Baucom, Hartman sees the history of slavery as a constituent part of a tragic present. Atlantic slavery continues to be manifested in black people’s skewed life chances, poor education and health, and high rates of incarceration, poverty, and premature death. Disregarding the commonplace temporalities of professional historians, whose literary conventions are generally predicated on a formal distinction between past, present, and future, Hartman addresses slavery as a problem that spans all three. The afterlife of slavery inhabits the nature of belonging, which in turn guides the “freedom dreams” that shape prospects for change. “If slavery persists as an issue in the political life of black America,” she writes, “it is not because of an antiquated obsession with bygone days or the burden of a too-long memory, but because black lives are still imperiled and devalued by a racial calculus and a political arithmetic that were entrenched centuries ago.”22¶ A professor of English and comparative literature, Hartman is in many respects in a better position than most historians to understand events such as the funeral aboard the Hudibras. This is because for all of her evident erudition, her scholarship is harnessed not so much to a performance of mastery over the facts of what hap- pened, which might substitute precision for understanding, as to an act of mourning, even yearning. She writes with a depth of introspection and personal anguish that is transgressive of professional boundaries but absolutely appropriate to the task. Reading Hartman, one wonders how a historian could ever write dispassionately about slavery without feeling complicit and ashamed. For dispassionate accounting—exemplified by the ledgers of slave traders—has been a great weapon of the powerful, an episteme that made the grossest violations of personhood acceptable, even necessary. This is the kind of bookkeeping that bore fruit upon the Zong. “It made it easier for a trader to countenance yet another dead black body or for a captain to dump a shipload of captives into the sea in order to collect the insurance, since it wasn’t possible to kill cargo or to murder a thing already denied life. Death was simply part of the workings of the trade.” The archive of slavery, then, is “a mortuary.” Not content to total up the body count, Hartman offers elegy, echoing in her own way the lamentations of the women aboard the Hudibras. Like them, she is concerned with the dead and what they mean to the living. “I was desperate to reclaim the dead,” she writes, “to reckon with the lives undone and obliterated in the making of human commodities.”23¶ It is this mournful quality of Lose Your Mother that elevates it above so many histories of slavery, but the same sense of lament seems to require that Hartman overlook small but significant political victories like the one described by Butter- worth. Even as Hartman seems to agree with Paul Gilroy on the “value of seeing the consciousness of the slave as involving an extended act of mourning,” she remains so focused on her own commemorations that her text makes little space for a consideration of how the enslaved struggled with alienation and the fragility of belonging, or of the mourning rites they used to confront their condition.24 All of the ques- tions she raises about the meaning of slavery in the present—both highly personal and insistently political—might as well be asked about the meaning of slavery to slaves themselves, that is, if one begins by closely examining their social and political lives rather than assuming their lack of social being. Here Hartman is undone by her reliance on Orlando Patterson’s totalizing definition of slavery. She asserts that “no solace can be found in the death of the slave, no higher ground can be located, no perspective can be found from which death serves a greater good or becomes any- thing other than what it is.”25 If she is correct, the events on the Hudibras were of negligible importance. And indeed, Hartman’s understandable emphasis on the personal damage wrought by slavery encourages her to disavow two generations of social history that have demonstrated slaves’ remarkable capacity to forge fragile com- munities, preserve cultural inheritance, and resist the predations of slaveholders. This in turn precludes her from describing the ways that violence, dislocation, and death actually generate culture, politics, and consequential action by the enslaved.26¶ This limitation is particularly evident in a stunning chapter that Hartman calls “The Dead Book.” Here she creatively reimagines the events that occurred on the voyage of the slave ship Recovery, bound, like the Hudibras, from the Bight of Biafra to Grenada, when Captain John Kimber hung an enslaved girl naked from the mizzen stay and beat her, ultimately to her death, for being “sulky”: she was sick and could not dance when so ordered. As Hartman notes, the event would have been unre- markable had not Captain Kimber been tried for murder on the testimony of the ship’s surgeon, a brief transcript of the trial been published, and the woman’s death been offered up as allegory by the abolitionist William Wilberforce and the graphic satirist Isaac Cruikshank. Hartman re-creates the murder and the surge of words it inspired, representing the perspectives of the captain, the surgeon, and the aboli tionist, for each of whom the girl was a cipher “outfitted in a different guise,” and then she puts herself in the position of the victim, substituting her own voice for the unknowable thoughts of the girl. Imagining the experience as her own and wistfully representing her demise as a suicide—a final act of agency—Hartman hopes, by this bold device, to save the girl from oblivion. Or perhaps her hope is to prove the impossibility of ever doing so, because by failing, she concedes that the girl cannot be put to rest. It is a compelling move, but there is something missing. Hartman discerns a convincing subject position for all of the participants in the events sur- rounding the death of the girl, except for the other slaves who watched the woman die and carried the memory with them to the Americas, presumably to tell others, plausibly even survivors of the Hudibras, who must have drawn from such stories a basic perspective on the history of the Atlantic world. For the enslaved spectators, Hartman imagines only a fatalistic detachment: “The women were assembled a few feet away, but it might well have been a thousand. They held back from the girl, steering clear of her bad luck, pestilence, and recklessness. Some said she had lost her mind. What could they do, anyway? The women danced and sang as she lay dying.”¶ Hartman ends her odyssey among the Gwolu, descendants of peoples who fled the slave raids and who, as communities of refugees, shared her sense of dispos- session. “Newcomers were welcome. It didn’t matter that they weren’t kin because genealogy didn’t matter”; rather, “building community did.” Lose Your Mother con- cludes with a moving description of a particular one of their songs, a lament for those who were lost, which resonated deeply with her sense of slavery’s meaning in the present. And yet Hartman has more difficulty hearing similar cries intoned in the past by slaves who managed to find themselves.27¶ Saltwater Slavery has much in common with Lose Your Mother. Smallwood’s study of the slave trade from the Gold Coast to the British Americas in the late seventeenth and early eighteenth centuries likewise redeems the experience of the people traded like so many bolts of cloth, “who were represented merely as ciphers in the political arithmetic,” and therefore “feature in the documentary record not as subjects of a social history but as objects or quantities.”28 Each text offers a penetrating analysis of the market logic that turned people into goods. Both books work with the concept of social death. However, Smallwood examines the problem of social death for the enslaved even more closely than Hartman does.29¶ Like Hartman, Smallwood sees social death as a by-product of commodification. “If in the regime of the market Africans’ most socially relevant feature was their exchangeability,” she argues, “for Africans as immigrants the most socially relevant feature was their isolation, their desperate need to restore some measure of social life to counterbalance the alienation engendered by their social death.” But Small- wood’s approach is different in a subtle way. Whereas for Hartman, as for others, social death is an accomplished state of being, Smallwood veers between a notion of social death as an actual condition produced by violent dislocation and social death as a compelling threat. On the one hand, she argues, captivity on the Atlantic littoral was a social death. Exchangeable persons “inhabited a new category of mar- ginalization, one not of extreme alienation within the community, but rather of ab- solute exclusion from any community.” She seems to accept the idea of enslaved commodities as finished products for whom there could be no socially relevant relationships: “the slave cargo constituted the antithesis of community.” Yet elsewhere she contends that captives were only “menaced” with social death. “At every point along the passage from African to New World markets,” she writes, “we find a stark contest between slave traders and slaves, between the traders’ will to commodify people and the captives’ will to remain fully recognizable as human subjects.”30 Here, I think, Smallwood captures the truth of the idea: social death was a receding ho- rizon—the farther slaveholders moved toward the goal of complete mastery, the more they found that struggles with their human property would continue, even into the most elemental realms: birth, hunger, health, fellowship, sex, death, and time.¶ If social death did not define the slaves’ condition, it did frame their vision of apocalypse. In a harrowing chapter on the meaning of death (that is, physical death) during the Atlantic passage, Smallwood is clear that the captives could have no frame of reference for the experience aboard the slave ships, but she also shows how des- perate they were to make one. If they could not reassemble some meaningful way to map their social worlds, “slaves could foresee only further descent into an endless purgatory.” The women aboard the Hudibras were not in fact the living dead; they were the mothers of gasping new societies. Their view of the danger that confronted them made their mourning rites vitally important, putting these at the center of the women’s emerging lives as slaves—and as a result at the heart of the struggles that would define them. As Smallwood argues, this was first and foremost a battle over their presence in time, to define their place among ancestors, kin, friends, and future progeny. “The connection Africans needed was a narrative continuity between past and present—an epistemological means of connecting the dots between there and here, then and now, to craft a coherent story out of incoherent experience.” That is precisely what the women on the Hudibras fought to accomplish.31

### Coal

#### Anti-nuclear opposition is responsible for the spread of coal; their alternative simply re-affirms the structural forces that make structural violence possible in the form of coal pollution

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After 40 Years, Environmentalists Start To See the Nuclear Light, Llewellyn King, November 25, 2009 – 8:47 pm

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

#### Coal plants perpetuate structural violence – comparatively worse than the plan

Margonelli, ‘8

[Lisa, fellow -- The New America Foundation, 3-20, “Core Arguments,” http://www.newamerica.net/publications/articles/2008/core\_arguments\_6916]

Craven's best argument for nuclear energy is that coal is much worse. Nukes in the United States haven't killed anyone outright, Cravens says, while air pollution from coal is known to cause 24,000 deaths a year. Nuclear power produces about two pounds of radioactive waste to generate all the electricity that the average American will use in a lifetime. That may sound like a lot, but coal-fired power generation produces nearly 69 tons of solid waste while providing the same amount of power, not to mention untold tons of greenhouse gases. And radiation? Coal loses again: A coal plant emits between 100 and 400 times more radiation than a nuclear plant. (Coal itself is radioactive, as are -- mildly -- bananas, lima beans, cigarettes and the granite walls of Grand Central Station. Furthermore, it's safer to work in a nuclear power plant than in a bank. Who knew?)