# 1AC

## 1AC NDT Round 3

### Plan

#### The United States federal government should create a prize system for electricity in the United States produced from solar power satellite rectenna conversion.

### Contention One is Warming

#### Fossil fuel dependence is unsustainable and other renewables fail – SPS-ALPHA solves world energy needs and can be exported globally

Dvorsky 11-28 – George Dvorsky, writer for Io9, a daily science and technology publication, November 28th, 2012, "How space-based solar power will solve all our energy needs" io9.com/5963955/how-space+based-solar-power-will-solve-all-our-energy-needs

Humanity's demand for energy is growing at an astonishing rate. Combine this with an ever-dwindling supply of fossil fuels, and it becomes painfully clear that something innovative and powerful is required. There's one high-tech proposal that holds tremendous promise — an idea that has been around since the late 1960s. Here's how space-based solar power will **eventually** solve all our energy needs.¶ Humans needs more power¶ Assuming that economic progress and globalization continues at its current pace, **we'll need to produce twice the amount of energy that's consumed today by the 2030s — what will reach a monumental 220 trillion kiloWatt hours per year. And by the end of the century, we'll need four times the current rate of consumption.**¶ **Just as importantly, we're also going to have to kick the fossil fuel habit — and not only because it'll eventually run out. Rising CO2 emissions are wreaking havoc on the Earth's atmosphere, what's creating environmentally deleterious side-effects at a rate faster than expected.**¶ Moreover, if greenhouse gases are to be brought under control over the course of the next several decades, we'll need to get upwards of 90% of all our energy from either renewable or nuclear sources.¶ While there are a number of proposals on the table for how we might be able to meet these challenges, **none** really **appear to be truly viable**.¶ Except for solar powered satellites.¶ Obvious benefits¶ A closer look at a space-based solution yields a lengthy list of advantages.¶ Solar powered satellites **don't produce any greenhouse gases**, nor do they take up valuable real estate on Earth. Once the initial costs are met, they would be relatively cheap to maintain; the solar modules used for generating solar energy have a long service life, not to mention the astounding ROI that would come from a virtually unlimited energy source.¶ Additionally, they're not constrained by night/day cycles, the weather, or the changing seasons. And indeed, they would be much more efficient than any kind of ground-based station. The collection of solar energy in space is seven times greater per unit area than on the surface of the planet. Moreover, **the amount of solar energy available up there is staggering — on the order of billions of times greater than what we draw today; the Earth receives only one part in 2.3 billion of the Sun's output**. The potential for scalability is enormous, to say the least.¶ Solar powered satellites won't be prone to terrorist attacks and they'll **reduce geopolitical pressure for oil.** According to futurist Keith Henson, space-based solar could be used to power vehicles, like electric cars, or by enabling the production of synthetic fuels — which at a penny per kiloWatt hour would result in gasoline that costs one dollar a gallon.¶ At the same time, space-based solar would provide true energy independence for those nations who choose to implement it. And on top of that, the energy could be exported to virtually anywhere in the world; it would be especially valuable for isolated areas of the globe, including Africa and India.¶ Lastly, **space-based solar power would also yield** tremendous benefits to human and robotic space exploration**, including the powering of off-planet colonies on the Moon, Mars, and space stations.** It could also serve as the first seed in the development of a Dyson Sphere — a massive array of solar collectors that would completely envelope the sun at a distance of about 1 AU.¶ How it's going to work¶ Back in the late 1960s, Peter Glaser proposed the idea of solar powered satellites (SPS), what he envisioned as space-based photovoltaics that could transfer energy wirelessly back down to Earth. His design called for a large platform positioned in space in a high Earth orbit that would continuously collect and convert solar energy into electricity. In turn, that power would be used to drive a wireless power transmission (WPT) that beams the solar energy to receiving stations on Earth — what would be comprised of massive receiving dishes.¶ A number of visionaries have updated Glaser's vision to include the use of a microwave wireless power transmitter. This would involve large discrete structures (like a solar array and transmitter) that would have to be assembled in space. SPS systems could also include a modular electric/diode array laser WPT concept, involving self-assembling solar power-laser-thermal modules. Other designs call for an extremely modular microwave WPT SPS "sandwich structure" concept, requiring a significant number of small solar power-microwave-thermal modules that would be robotically assembled on orbit.¶ But to make it happen, we'll need to develop low-cost, environmentally-friendly launch vehicles. Eventually we'll send the materials up in a space elevator, but until then we'll have to come up with something more efficient. Thankfully, SpaceX and other private firms are already working on more efficient launch solutions.¶ Additionally, we'll require large scale construction and operations stations in orbit — space-based workplaces that would be more complex, larger, and more energy-demanding than the ISS. They would allow for the production of large, simple panels, that are easy to assemble and consist of many identical parts. Eventually, it may be possible to construct an entire flotilla of these solar collectors using materials extracted from asteroids.¶ Design proposals¶ As word gets out about the potential for SPS, and as the technology catches up to the idea, a number of design proposals have been put forth; this isn't just idle speculation anymore — it's something that's just about ready for prime-time.¶ For example, there's SPS-ALPHA (Solar Power Satellite via Arbitrarily Large PHased Array) which is being developed by NASA's John Mankins. Using a "biomimetic" approach, the project calls for huge platforms constructed from tens of thousands of small elements that could deliver tens to thousands of megawatts via wireless power transmission.¶ It would do this by using a large array of individually controlled thin-film mirrors outfitted on the curved surface of a satellite. These adjustable mirrors would intercept and redirect incoming sunlight toward photovoltaic cells affixed to the backside of the solar power satellite's large array. The Earth-pointing side of the array would be tiled with a collection of microwave-power transmission panels that generate the coherent, low-intensity beam of radio frequency energy and transmits that energy to Earth.¶ And what's particularly cool about this concept is that **it would enable the construction of a solar-power satellite that can be assembled entirely from individual system elements that weigh no more than 110 to 440 pounds (**50 **to 200** kilograms**), allowing all pieces to be** mass produced at low cost.

#### **SPS-Alpha can be up and running in a few years with only a few billion dollars – new tech ensures feasibility and low costs**

Mankins 12 – John C. Mankins, President of Artemis Innovation Management Solutions LLC is an internationally recognized leader in space systems and technology innovation, spent 25 years at NASA and CalTech's Jet Propulsion Laboratory. He holds undergraduate (Harvey Mudd College) and graduate (UCLA) degrees in Physics and an MBA in Public Policy Analysis (The Drucker School at Claremont Graduate University). Mr. Mankins is a member of the International Academy of Astronautics (IAA) and Chair of the Academy Commission III (Space Systems and Technology Development); and a member of the International Astronautical Federation (IAF), the American Institute of Aeronautics and Astronautics (AIAA), and the Sigma Xi Research Society. Editor/Authors are :Brian Wang, Director of Research. Sander Olson, Interviews and other articles Phil Wolff, Communications and social technologist. Alvin Wang. Computer, technology, social networking, and social media expert. June 7th, 2012, "A New Paradigm for Space-Based Solar Power," nextbigfuture.com/2012/06/new-paradigm-for-space-based-solar.html

Question: How exactly has the technology evolved since the 1970s? ¶ There have been a number of improvements. The **efficiency of solar photovoltaics has improved** from less than 10% efficiency to more than 30% efficiency now. I'm confident that within the next decade, solar photovoltaics could achieve efficiencies of up to 50%. There have also been **substantial improvements in key electronic components**, such as solid-state power amplifiers. The efficiencies have gone from 15% in the 1970s to **70% now**. With focused investments, we should be able to get devices with efficiencies approaching 80% by 2020. This will further increase the viability of space-based solar power. A wide range of other technologies have also improved dramatically, including **light-weight and high-strength materials, robotics, in-space propulsion and others.** ¶ Question: You are the chief architect behind the SPS-ALPHA design. What are the central aspects of this new paradigm? ¶ The SPS-ALPHA concept facilitates the design and development of a very large solar power satellite out of a large number of very small pieces. Each piece weighs perhaps 25-100 kilograms, but there are tens of thousands of pieces in the final product. **The beauty of this system is that all of the parts of the design can be manufactured readily in a standard factory – resulting in very low costs for the system hardware.** ¶ Question: So the power satellite would be composed of vast numbers of identical modules? ¶ Yes, the modules would be stackable – like pizza boxes – for ease of transportation to space, and then unstacked and assembled once they reach the operational orbit for the satellite. There might be about 6 or 8 different types of modular elements, and each type would be mass produced with from hundreds to tens of thousands of copies. They would initially be launched into a low Earth orbit, and from there transferred to a higher orbit for integration into the SPS platform. We are looking at using robotic systems to assemble the panels. ¶ Question: So your plan employs robots for most of the construction? ¶ Yes. The SPS-ALPHA architecture would only employ people on the ground to supervise the robots operating in space. The goal would be to assume the intervention of astronauts only in the event of a problem that could not be resolved using robots. As a rule of thumb, we expect that it may cost from 100-times to 1000-times more to have a suited astronaut perform a task in a high Earth orbit than to have a remotely-supervised robot do it. This field of technology has advanced rapidly in the past decade, and so we plan to employ robots extensively. ¶ Question: How long would it take to get a prototype system up and running? ¶ With sufficient funding, we could have a ground based, rudimentary prototype up and running by 2014. **An early prototype in orbit could be** built by 2017-2018. And in about a decade, a larger pilot plant could be in geosynchronous Earth orbit, generating 10 megawatts. The total cost for this roadmap could be several billion dollars, with most of the cost coming in the last few years. As a point of comparison, the pilot plant would be approximately the same size as the International Space Station, which cost $100 billion to manufacture, launch into space and assemble. **The cost savings would result from using standard, mass-produced pieces, standard launch systems and robotic assembly in space.**

#### Creating a prize system encourages SPS development and makes it economically viable

Globus 11Al Globus, Chair of the National Space Society's Space Settlement Advocacy Committee, July 2011, “A SPACE SOLAR POWER INDUSTRY FOR $2 BILLION OR YOUR MONEY BACK”

The proposed prize pays out for each kilowatt-hour (kwh – one thousand watts of energy for one hour) of power delivered from space to an operational electrical system on Earth. To receive prize money, power must be sold to a utility or other entity on Earth at near market rates. This insures that the power is delivered in a way that can and will be used, and provides additional income to the contestants. The prize is divided into three levels: $1, $0.7 and $0.3 per kwh. This is to provide continuing incentive to develop SSP at successively lower prices on the way to unsubsidized economic viability. Furthermore: 1. To encourage the development of a competitive industry, at each level the prize money is divided such that at least three satellites are needed to capture all of the funds. No individual satellite can earn more than 60% of the prize money and no two satellites more than 90%, leaving 10% for a third satellite. 2. To encourage development of multiple approaches to SSP, each satellite earning prize money at a single level must be owned and operated by a different entity and must use a substantially different approach to SSP generation. 3. To encourage development of successively more cost-effective systems, each satellite may only win prize money at a single level. Thus, this particular approach to structuring the prize will pay out all the prize money only if nine satellites are developed using at least three different approaches by at least three different companies. Table 1 describes the prize system quantitatively. Note that the number of levels, the pricing, and the percentages are somewhat arbitrary. They are chosen to give one or two satellites a real chance at profitability and the others a significant subsidy. Obviously, there may be other sets of levels that may be more effective. If successful, this prize system would require $2 billion, about one year’s development of the new human deep space system that might put humans on an asteroid in 2025, about the cost of a flagship deep space mission, or a little more than the cost of one shuttle launch6. While all of these are worthy projects, their impact pales beside the impact of a successful SSP industry. If successful, SSP could deliver essentially unlimited clean energy for a billion years and put the nations developing it in the world’s economic driver’s seat. It should also be noted that the launch systems and other development needed for a successful SSP industry would **make other space projects much easier** and cheaper than they are today. In an era of limited budgets, one wonders why billions are allocated to projects of great interest but little practical day-to-day value while projects such as SSP that could revolutionize life on Earth, not to mention space development, languish with essentially no funding.

#### Scientific consensus concludes warming is real, anthropogenic, and will be catastrophic if left unchecked – SPS solves

Flournoy 12 –Dan Flournoy, PhD and MA from the University of Texas, Former Dean of the University College at Ohio University, Former Associate Dean at State University of New York and Case Institute of Technology, Project Manager for University/Industry Experiments for the NASA ACTS Satellite, Currently Professor of Telecommunications at Scripps College of Communications @ Ohio University, January 2012, "Solar Power Satellites," Springer Briefs in Space Development

In the Online Journal of Space Communication , Dr. Feng Hsu, a NASA scientist at Goddard Space Flight Center, a research center in the forefront of science of space and Earth, writes, “The **evidence of global warming is alarming**,” noting the potential for a catastrophic planetary climate change is real and troubling (Hsu 2010 ) . Hsu and his NASA colleagues were engaged in monitoring and analyzing climate changes on a global scale, through which they received first-hand scientific information and data relating to global warming issues, including the dynamics of polar ice cap melting. After discussing this research with colleagues who were world experts on the subject, he wrote: I now have no doubt global temperatures are rising, and that global warming is a serious problem confronting all of humanity. No matter whether these trends are due to human interference or to the cosmic cycling of our solar system, there are two basic facts that are crystal clear: (a) there is overwhelming scientific evidence showing **positive correlations between the level of CO2 concentrations** in Earth’s atmosphere **with respect to** the historical **fluctuations of global temperature** changes; and (b) the overwhelming majority of the world’s scientific community is in agreement about the risks of a potential catastrophic global climate change. That is, if we humans continue to ignore this problem and do nothing, if we continue dumping huge quantities of greenhouse gases into Earth’s biosphere, humanity will be at dire risk (Hsu 2010 ) . As a technology risk assessment expert, Hsu says he can show with some confidence that the planet will face more risk doing nothing to curb its fossil-based energy addictions than it will in making a fundamental shift in its energy supply. “This,” he writes, “is because the risks of a catastrophic anthropogenic climate change can be potentially the **extinction of human species**, a risk that is simply too high for us to take any chances” (Hsu 2010 ) . It was this NASA scientist’s conclusion that humankind must now embark on the next era of “sustainable energy consumption and re-supply, the most obvious source of which is the mighty energy resource of our Sun” (Hsu 2010 ) (Fig . 2.1 ).

#### Contrary evidence is unqualified and funded by oil hacks

Prothero 12 [Donald R. Prothero, Professor of Geology at Occidental College and Lecturer in Geobiology at the California Institute of Technology, 3-1-2012, "How We Know Global Warming is Real and Human Caused," Skeptic, 17.2, EBSCO]

How do we know that global warming is real and primarily human caused? There are numerous lines of evidence that converge toward this conclusion. 1. Carbon Dioxide Increase Carbon dioxide in our atmosphere has increased at an unprecedented rate in the past 200 years. Not one data set collected over a long enough span of time shows otherwise. Mann et al. (1999) compiled the past 900 years' worth of temperature data from tree rings, ice cores, corals, and direct measurements in the past few centuries, and the sudden increase of temperature of the past century stands out like a sore thumb. This famous graph is now known as the "hockey stick" because it is long and straight through most of its length, then bends sharply upward at the end like the blade of a hockey stick. Other graphs show that climate was very stable within a narrow range of variation through the past 1000, 2000, or even 10,000 years since the end of the last Ice Age. There were minor warming events during the Climatic Optimum about 7000 years ago, the Medieval Warm Period, and the slight cooling of the Litde Ice Age in the 1700s and 1800s. But the magnitude and rapidity of the warming represented by the last 200 years is simply unmatched in all of human history. More revealing, the timing of this warming coincides with the Industrial Revolution, when humans first began massive deforestation and released carbon dioxide into the atmosphere by burning an unprecedented amount of coal, gas, and oil. 2. Melting Polar Ice Caps The polar icecaps are thinning and breaking up at an alarming rate. In 2000, my former graduate advisor Malcolm McKenna was one of the first humans to fly over the North Pole in summer time and see no ice, just open water. The Arctic ice cap has been frozen solid for at least the past 3 million years (and maybe longer),[ 4] but now the entire ice sheet is breaking up so fast that by 2030 (and possibly sooner) less than half of the Arctic will be ice covered in the summer.[ 5] As one can see from watching the news, this is an ecological disaster for everything that lives up there, from the polar bears to the seals and walruses to the animals they feed upon, to the 4 million people whose world is melting beneath their feet. The Antarctic is thawing even faster. In February-March 2002, the Larsen B ice shelf -- over 3000 square km (the size of Rhode Island) and 220 m (700 feet) thick -- broke up in just a few months, a story -typical of nearly all the ice shelves in Antarctica. The Larsen B shelf had survived all the previous ice ages and interglacial warming episodes over the past 3 million years, and even the warmest periods of the last 10,000 years -- yet it and nearly all the other thick ice sheets on the Arctic, Greenland, and Antarctic are vanishing at a rate never before seen in geologic history. 3. Melting Glaciers Glaciers are all retreating at the highest rates ever documented. Many of those glaciers, along with snow melt, especially in the Himalayas, Andes, Alps, and Sierras, provide most of the freshwater that the populations below the mountains depend upon -- yet this fresh water supply is vanishing. Just think about the percentage of world's population in southern Asia (especially India) that depend on Himalayan snowmelt for their fresh water. The implications are staggering. The permafrost that once remained solidly frozen even in the summer has now thawed, damaging the Inuit villages on the Arctic coast and threatening all our pipelines to the North Slope of Alaska. This is catastrophic not only for life on the permafrost, but as it thaws, the permafrost releases huge amounts of greenhouse gases which are one of the major contributors to global warming. Not only is the ice vanishing, but we have seen record heat waves over and over again, killing thousands of people, as each year joins the list of the hottest years on record. (2010 just topped that list as the hottest year, surpassing the previous record in 2009, and we shall know about 2011 soon enough). Natural animal and plant populations are being devastated all over the globe as their environments change.[ 6] Many animals respond by moving their ranges to formerly cold climates, so now places that once did not have to worry about disease-bearing mosquitoes are infested as the climate warms and allows them to breed further north. 4. Sea Level Rise All that melted ice eventually ends up in the ocean, causing sea levels to rise, as it has many times in the geologic past. At present, the sea level is rising about 3-4 mm per year, more than ten times the rate of 0.1-0.2 mm/year that has occurred over the past 3000 years. Geological data show that the sea level was virtually unchanged over the past 10,000 years since the present interglacial began. A few mm here or there doesn't impress people, until you consider that the rate is accelerating and that most scientists predict sea levels will rise 80-130 cm in just the next century. A sea level rise of 1.3 m (almost 4 feet) would drown many of the world's low-elevation cities, such as Venice and New Orleans, and low-lying countries such as the Netherlands or Bangladesh. A number of tiny island nations such as Vanuatu and the Maldives, which barely poke out above the ocean now, are already vanishing beneath the waves. Eventually their entire population will have to move someplace else.[ 7] Even a small sea level rise might not drown all these areas, but they are much more vulnerable to the large waves of a storm surge (as happened with Hurricane Katrina), which could do much more damage than sea level rise alone. If sea level rose by 6 m (20 feet), most of the world's coastal plains and low-lying areas (such as the Louisiana bayous, Florida, and most of the world's river deltas) would be drowned. Most of the world's population lives in low-elevation coastal cities such as New York, Boston, Philadelphia, Baltimore, Washington, D.C., Miami, and Shanghai. All of those cities would be partially or completely under water with such a sea level rise. If all the glacial ice caps melted completely (as they have several times before during past greenhouse episodes in the geologic past), sea level would rise by 65 m (215 feet)! The entire Mississippi Valley would flood, so you could dock an ocean liner in Cairo, Illinois. Such a sea level rise would drown nearly every coastal region under hundreds of feet of water, and inundate New York City, London and Paris. All that would remain would be the tall landmarks such as the Empire State Building, Big Ben, and the Eiffel Tower. You could tie your boats to these pinnacles, but the rest of these drowned cities would lie deep underwater. Climate Change Critic's Arguments and Scientists' Rebuttals Despite the overwhelming evidence there are many people who remain skeptical. One reason is that they have been fed distortions and misstatements by the global warming denialists who cloud or confuse the issue. Let's examine some of these claims in detail: \* "It's just natural climatic variability." No, it is not. As I detailed in my 2009 book, Greenhouse of the Dinosaurs, geologists and paleoclimatologists know a lot about past greenhouse worlds, and the icehouse planet that has existed for the past 33 million years. We have a good understanding of how and why the Antarctic ice sheet first appeared at that time, and how the Arctic froze over about 3.5 million years ago, beginning the 24 glacial and interglacial episodes of the "Ice Ages" that have occurred since then. We know how variations in the earth's orbit (the Milankovitch cycles) controls the amount of solar radiation the earth receives, triggering the shifts between glacial and interglacial periods. Our current warm interglacial has already lasted 10,000 years, the duration of most previous interglacials, so if it were not for global warming, we would be headed into the next glacial in the next 1000 years or so. Instead, our pumping greenhouse gases into our atmosphere after they were long trapped in the earth's crust has pushed the planet into a "super-interglacial," already warmer than any previous warming period. We can see the "big picture" of climate variability most clearly in ice cores from the EPICA (European Project for Ice Coring in Antarctica), which show the details of the last 650,000 years of glacial-inters glacial cycles (Fig. 2). At no time during any previous interglacial did the carbon dioxide levels exceed 300 ppm, even at their very warmest. Our atmospheric carbon dioxide levels are already close to 400 ppm today. The atmosphere is headed to 600 ppm within a few decades, even if we stopped releasing greenhouse gases immediately. This is decidedly not within the normal range of "climatic variability," but clearly unprecedented in human history. Anyone who says this is "normal variability" has never seen the huge amount of paleoclimatic data that show otherwise. \* "It's just another warming episode, like the Medieval Warm Period, or the Holocene Climatic Optimum or the end of the Little Ice Age." Untrue. There were numerous small fluctuations of warming and cooling over the last 10,000 years of the Holocene. But in the case of the Medieval Warm Period (about 950-1250 A.D.), the temperatures increased only 1°C, much less than we have seen in the current episode of global warming (Fig. 1). This episode was also only a local warming in the North Atlantic and northern Europe. Global temperatures over this interval did not warm at all, and actually cooled by more than 1°C. Likewise, the warmest period of the last 10,000 years was the Holocene Climatic Optimum ( 5,000-9,000 B.C.E.) when warmer and wetter conditions in Eurasia contributed to the rise of the first great civilizations in Egypt, Mesopotamia, the Indus Valley, and China. This was largely a Northern Hemisphere-Eurasian phenomenon, with 2-3°C warming in the Arctic and northern Europe. But there was almost no warming in the tropics, and cooling or no change in the Southern Hemisphere.[ 8] From a Eurocentric viewpoint, these warming events seemed important, but on a global scale the effect was negligible. In addition, neither of these warming episodes is related to increasing greenhouse gases. The Holocene Climatic Optimum, in fact, is predicted by the Milankovitch cycles, since at that time the axial tilt of the earth was 24°, its steepest value, meaning the Northern Hemisphere got more solar radiation than normal -- but the Southern Hemisphere less, so the two balanced. By contrast, not only is the warming observed in the last 200 years much greater than during these previous episodes, but it is also global and bipolar, so it is not a purely local effect. The warming that ended the Little Ice Age (from the mid-1700s to the late 1800s) was due to increased solar radiation prior to 1940. Since 1940, however, the amount of solar radiation has been dropping, so the only candidate remaining for the post-1940 warming is carbon dioxide.[ 9] "It's just the sun, or cosmic rays, or volcanic activity or methane." Nope, sorry. The amount of heat that the sun provides has been decreasing since 1940,[ 10] just the opposite of the critics' claims (Fig. 3). There is no evidence of an increase in cosmic ray particles during the past century.[ 11] Nor is there any clear evidence that large-scale volcanic events (such as the 1815 eruption of Tambora in Indonesia, which changed global climate for about a year) have any long-term effects that would explain 200 years of warming and carbon dioxide increase. Volcanoes erupt only 0.3 billion tonnes of carbon dioxide each year, but humans emit over 29 billion tonnes a year,[ 12] roughly 100 times as much. Clearly, we have a bigger effect. Methane is a more powerful greenhouse gas, but there is 200 times more carbon dioxide than methane, so carbon dioxide is still the most important agent.[ 13] Every other alternative has been looked at and can be ruled out. The only clear-cut relationship is between human-caused carbon dioxide increase and global warming. \* "The climate records since 1995 (or 1998) show cooling." That's simply untrue. The only way to support this argument is to cherry-pick the data.[ 14] Over the short term, there was a slight cooling trend from 1998-2000, but only because 1998 was a record-breaking El Nino year, so the next few years look cooler by comparison (Fig. 4). But since 2002, the overall long-term trend of warming is unequivocal. All of the 16 hottest years ever recorded on a global scale have occurred in the last 20 years. They are (in order of hottest first): 2010, 2009, 1998, 2005, 2003, 2002, 2004, 2006, 2007, 2001, 1997, 2008, 1995, 1999, 1990, and 2000.[ 15] In other words, every year since 2000 has been on the Top Ten hottest years list. The rest of the top 16 include 1995, 1997, 1998, 1999, and 2000. Only 1996 failed to make the list (because of the short-term cooling mentioned already). \* "We had record snows in the winter of 2009-2010, and also in 2010-2011." So what? This is nothing more than the difference between weather (short-term seasonal changes) and climate (the long-term average of weather over decades and centuries and longer). Our local weather tells us nothing about another continent, or the global average; it is only a local effect, determined by short-term atmospheric and oceano-graphic conditions.[ 16] In fact, warmer global temperatures mean more moisture in the atmosphere, which increases the intensity of normal winter snowstorms. In this particular case, the climate change critics forget that the early winter of November-December 2009 was actually very mild and warm, and then only later in January and February did it get cold and snow heavily. That warm spell in early winter helped bring more moisture into the system, so that when cold weather occurred, the snows were worse. In addition, the snows were unusually heavy only in North America; the rest of the world had different weather, and the global climate was warmer than average. Also, the summer of 2010 was the hottest on record, breaking the previous record set in 2009. \* "Carbon dioxide is good for plants, so the world will be better off." Who do they think they're kidding? The Competitive Enterprise Institute (funded by oil and coal companies and conservative foundations[ 17]) has run a series of shockingly stupid ads concluding with the tag line "Carbon dioxide: they call it pollution, we call it life." Anyone who knows the basic science of earth's atmosphere can spot the gross inaccuracies in this ad.[ 18] True, plants take in carbon dioxide that animals exhale, as they have for millions of years. But the whole point of the global warming evidence (as shown from ice cores) is that the delicate natural balance of carbon dioxide has been thrown off balance by our production of too much of it, way in excess of what plants or the oceans can handle. As a consequence, the oceans are warming[ 19, 20] and absorbing excess carbon dioxide making them more acidic. Already we are seeing a shocking decline in coral reefs ("bleaching") and extinctions in many marine ecosystems that can't handle too much of a good thing. Meanwhile, humans are busy cutting down huge areas of temperate and tropical forests, which not only means there are fewer plants to absorb the gas, but the slash and burn practices are releasing more carbon dioxide than plants can keep up with. There is much debate as to whether increased carbon dioxide might help agriculture in some parts of the world, but that has to be measured against the fact that other traditional "breadbasket" regions (such as the American Great Plains) are expected to get too hot to be as productive as they are today. The latest research[ 21] actually shows that increased carbon dioxide inhibits the absorption of nitrogen into plants, so plants (at least those that we depend upon today) are not going to flourish in a greenhouse world. It is difficult to know if those who tell the public otherwise are ignorant of basic atmospheric science and global geochemistry, or if they are being cynically disingenuous. \* "I agree that climate is changing, but I'm skeptical that humans are the main cause, so we shouldn't do anything." This is just fence sitting. A lot of reasonable skeptics deplore the right wing's rejection of the reality of climate change, but still want to be skeptical about the cause. If they want proof, they can examine the huge array of data that points directly to human caused global warming.[ 22] We can directly measure the amount of carbon dioxide humans are producing, and it tracks exactly with the amount of increase in atmospheric carbon dioxide. Through carbon isotope analysis, we can show that this carbon dioxide in the atmosphere is coming directly from our burning of fossil fuels, not from natural sources. We can also measure the drop in oxygen as it combines with the increased carbon levels to produce carbon dioxide. We have satellites in space that are measuring the heat released from the planet and can actually see the atmosphere getting warmer. The most crucial evidence emerged only within the past few years: climate models of the greenhouse effect predict that there should be cooling in the stratosphere (the upper layer of the atmosphere above 10 km or 6 miles in elevation), but warming in the troposphere (the bottom layer below 10 km or 6 miles), and that's exactly what our space probes have measured. Finally, we can rule out any other suspects (see above): solar heat is decreasing since 1940, not increasing, and there are no measurable increases in cosmic rays, methane, volcanic gases, or any other potential cause. Face it -- it's our problem. Why Do People Continue to Question the Reality of Climate Change? Thanks to all the noise and confusion over climate change, the general public has only a vague idea of what the debate is really about, and only about half of Americans think global warming is real or that we are to blame.[ 23] As in the evolution/creationism debate, the scientific community is virtually unanimous on what the data demonstrate about anthropogenic global warming. This has been true for over a decade. When science historian Naomi Oreskes[ 24] surveyed all peer-reviewed papers on climate change published between 1993 and 2003 in the world's leading scientific journal, Science, she found that there were 980 supporting the idea of human-induced global warming and none opposing it. In 2009, Doran and Kendall Zimmerman[ 25] surveyed all the climate scientists who were familiar with the data. They found that 95-99% agreed that global warming is real and human caused. In 2010, the prestigious Proceedings of the National Academy of Sciences published a study that showed that 98% of the scientists who actually do research in climate change are in agreement over anthropogenic global warming.[ 26] Every major scientific organization in the world has endorsed the conclusion of anthropogenic climate change as well. This is a rare degree of agreement within such an independent and cantankerous group as the world's top scientists. This is the same degree of scientific consensus that scientists have achieved over most major ideas, including gravity, evolution, and relativity. These and only a few other topics in science can claim this degree of agreement among nearly all the world's leading scientists, especially among everyone who is close to the scientific data and knows the problem intimately. If it were not such a controversial topic politically, there would be almost no interest in debating it since the evidence is so clear-cut. If the climate science community speaks with one voice (as in the 2007 IPCC report, and every report since then), why is there still any debate at all? The answer has been revealed by a number of investigations by diligent reporters who got past the PR machinery denying global warming, and uncovered the money trail. Originally, there were no real "dissenters" to the idea of global warming by scientists who are actually involved with climate research. Instead, the forces with vested interests in denying global climate change (the energy companies, and the "free-market" advocates) followed the strategy of tobacco companies: create a smokescreen of confusion and prevent the American public from recognizing scientific consensus. As the famous memo[ 27] from the tobacco lobbyists said "Doubt is our product." The denialists generated an anti-science movement entirely out of thin air and PR. The evidence for this PR conspiracy has been well documented in numerous sources. For example, Oreskes and Conway revealed from memos leaked to the press that in April 1998 the right-wing Marshall Institute, SEPP (Fred Seitz's lobby that aids tobacco companies and polluters), and ExxonMobil, met in secret at the American Petroleum Institute's headquarters in Washington, D.C. There they planned a $20 million campaign to get "respected scientists" to cast doubt on climate change, get major PR efforts going, and lobby Congress that global warming isn't real and is not a threat. The right-wing institutes and the energy lobby beat the bushes to find scientists -- any scientists -- who might disagree with the scientific consensus. As investigative journalists and scientists have documented over and over again,[ 28] the denialist conspiracy essentially paid for the testimony of anyone who could be useful to them. The day that the 2007 IPCC report was released (Feb. 2, 2007), the British newspaper The Guardian reported that the conservative American Enterprise Institute (funded largely by oil companies and conservative think tanks) had offered $10,000 plus travel expenses to scientists who would write negatively about the IPCC report.[ 29] In February 2012, leaks of documents from the denialist Heartland Institute revealed that they were trying to influence science education, suppress the work of scientists, and had paid off many prominent climate deniers, such as Anthony Watts, all in an effort to circumvent the scientific consensus by doing an "end run" of PR and political pressure. Other leaks have shown 9 out of 10 major climate deniers are paid by ExxonMobil.[ 30] We are accustomed to hired-gun "experts" paid by lawyers to muddy up the evidence in the case they are fighting, but this is extraordinary -- buying scientists outright to act as shills for organizations trying to deny scientific reality. With this kind of money, however, you can always find a fringe scientist or crank or someone with no relevant credentials who will do what they're paid to do. Fishing around to find anyone with some science background who will agree with you and dispute a scientific consensus is a tactic employed by the creationists to sound "scientific". The NCSE created a satirical "Project Steve,"[ 31] which demonstrated that there were more scientists who accept evolution named "Steve" than the total number of "scientists who dispute evolution". It may generate lots of PR and a smokescreen to confuse the public, but it doesn't change the fact that scientists who actually do research in climate change are unanimous in their insistence that anthropogenic global warming is a real threat. Most scientists I know and respect work very hard for little pay, yet they still cannot be paid to endorse some scientific idea they know to be false. The climate deniers have a lot of other things in common with creationists and other anti-science movements. They too like to quote someone out of context ("quote mining"), finding a short phrase in the work of legitimate scientists that seems to support their position. But when you read the full quote in context, it is obvious that they have used the quote inappropriately. The original author meant something that does not support their goals. The "Climategate scandal" is a classic case of this. It started with a few stolen emails from the Climate Research Unit of the University of East Anglia. If you read the complete text of the actual emails[ 32] and comprehend the scientific shorthand of climate scientists who are talking casually to each other, it is clear that there was no great "conspiracy" or that they were faking data. All six subsequent investigations have cleared Philip Jones and the other scientists of the University of East Anglia of any wrongdoing or conspiracy.[ 33] Even if there had been some conspiracy on the part of these few scientists, there is no reason to believe that the entire climate science community is secretly working together to generate false information and mislead the public. If there's one thing that is clear about science, it's about competition and criticism, not conspiracy and collusion. Most labs are competing with each other, not conspiring together. If one lab publishes a result that is not clearly defensible, other labs will quickly correct it. As James Lawrence Powell wrote: Scientists…show no evidence of being more interested in politics or ideology than the average American. Does it make sense to believe that tens of thousands of scientists would be so deeply and secretly committed to bringing down capitalism and the American way of life that they would spend years beyond their undergraduate degrees working to receive master's and Ph.D. degrees, then go to work in a government laboratory or university, plying the deep oceans, forbidding deserts, icy poles, and torrid jungles, all for far less money than they could have made in industry, all the while biding their time like a Russian sleeper agent in an old spy novel? Scientists tend to be independent and resist authority. That is why you are apt to find them in the laboratory or in the field, as far as possible from the prying eyes of a supervisor. Anyone who believes he could organize thousands of scientists into a conspiracy has never attended a single faculty meeting.[ 34] There are many more traits that the climate deniers share with the creationists and Holocaust deniers and others who distort the truth. They pick on small disagreements between different labs as if scientists can't get their story straight, when in reality there is always a fair amount of give and take between competing labs as they try to get the answer right before the other lab can do so. The key point here is that when all these competing labs around the world have reached a consensus and get the same answer, there is no longer any reason to doubt their common conclusion. The anti-scientists of climate denialism will also point to small errors by individuals in an effort to argue that the entire enterprise cannot be trusted. It is true that scientists are human, and do make mistakes, but the great power of the scientific method is that peer review weeds these out, so that when scientists speak with consensus, there is no doubt that their data are checked carefully Finally, a powerful line of evidence that this is a purely political controversy, rather than a scientific debate, is that the membership lists of the creationists and the climate deniers are highly overlapping. Both anti-scientific dogmas are fed to their overlapping audiences through right-wing media such as Fox News, Glenn Beck, and Rush Limbaugh. Just take a look at the "intelligent-design" cre-ationism website for the Discovery Institute. Most of the daily news items lately have nothing to do with creationism at all, but are focused on climate denial and other right-wing causes.[ 35] If the data about global climate change are indeed valid and robust, any qualified scientist should be able to look at them and see if the prevailing scientific interpretation holds up. Indeed, such a test took place. Starting in 2010, a group led by U.C. Berkeley physicist Richard Muller re-examined all the temperature data from the NOAA, East Anglia Hadley Climate Research Unit, and the Goddard Institute of Space Science sources. Even though Muller started out as a skeptic of the temperature data, and was funded by the Koch brothers and other oil company sources, he carefully checked and re-checked the research himself. When the GOP leaders called him to testify before the House Science and Technology Committee in spring 2011, they were expecting him to discredit the temperature data. Instead, Muller shocked his GOP sponsors by demonstrating his scientific integrity and telling the truth: the temperature increase is real, and the scientists who have demonstrated that the climate is changing are right (Fig. 5). In the fall of 2011, his study was published, and the conclusions were clear: global warming is real, even to a right-wing skeptical scientist. Unlike the hired-gun scientists who play political games, Muller did what a true scientist should do: if the data go against your biases and preconceptions, then do the right thing and admit it -- even if you've been paid by sponsors who want to discredit global warming. Muller is a shining example of a scientist whose integrity and honesty came first, and did not sell out to the highest bidder.[ 36] \* Science and Anti-Science The conclusion is clear: there's science, and then there's the anti-science of global warming denial. As we have seen, there is a nearly unanimous consensus among climate scientists that anthropogenic global warming is real and that we must do something about it. Yet the smokescreen, bluster and lies of the deniers has created enough doubt so that only half of the American public is convinced the problem requires action. Ironically, the U.S. is almost alone in questioning its scientific reality. International polls taken of 33,000 people in 33 nations in 2006 and 2007 show that 90% of their citizens regard climate change as a serious problem[ 37] and 80% realize that humans are the cause of it.[ 38] Just as in the case of creationism, the U.S. is out of step with much of the rest of the world in accepting scientific reality. It is not just the liberals and environmentalists who are taking climate change seriously. Historically conservative institutions (big corporations such as General Electric and many others such as insurance companies and the military) are already planning on how to deal with global warming. Many of my friends high in the oil companies tell me of the efforts by those companies to get into other forms of energy, because they know that cheap oil will be running out soon and that the effects of burning oil will make their business less popular. BP officially stands for "British Petroleum," but in one of their ad campaigns about 5 years ago, it stood for "Beyond Petroleum."[ 39] Although they still spend relatively little of their total budgets on alternative forms of energy, the oil companies still see the handwriting on the wall about the eventual exhaustion of oil -- and they are acting like any company that wants to survive by getting into a new business when the old one is dying. The Pentagon (normally not a left-wing institution) is also making contingency plans for how to fight wars in an era of global climate change, and analyzing what kinds of strategic threats might occur when climate change alters the kinds of enemies we might be fighting, and water becomes a scarce commodity. The New York Times reported[ 40] that in December 2008, the National Defense University outlined plans for military strategy in a greenhouse world. To the Pentagon, the big issue is global chaos and the potential of even nuclear conflict. The world must "prepare for the inevitable effects of abrupt climate change -- which will likely come [the only question is when] regardless of human activity." Insurance companies have no political axe to grind. If anything, they tend to be on the conservative side. They are simply in the business of assessing risk in a realistic fashion so they can accurately gauge their future insurance policies and what to charge for them. Yet they are all investing heavily in research on the disasters and risks posed by climatic change. In 2005, a study commissioned by the re-insurer Swiss Re said, "Climate change will significantly affect the health of humans and ecosystems and these impacts will have economic consequences."[ 41] Some people may still try to deny scientific reality, but big businesses like oil and insurance and conservative institutions like the military cannot afford to be blinded or deluded by ideology. They must plan for the real world that we will be seeing in the next few decades. They do not want to be caught unprepared and harmed by global climatic change when it threatens their survival. Neither can we as a society.

#### The plan solves for global emissions

Kammen 7 – Professor of Public Policy @ UC Berkeley (Daniel, "Green Jobs Created by Global Warming Initiative," September 25th, http://www.unep.org/civil\_society/GCSF9/pdfs/karmen-senate.pdf)

In addition to supporting domestic job creation, clean energy is an important and fastest growing international sector, and one where overseas policy can be used to support poor developing regions – such as Africa (Jacobsen and Kammen, 2007) and Central America – as well as regaining market share in solar, fuel cell and wind technologies, where European nations and Japan have invested heavily and are reaping the benefits of month to year backlogs in clean energy orders. Some of those orders are for U. S. installations, but many more could be if we choose to make clean and green energy a national priority for both domestic installation and overseas export. Technology exports have impacts well beyond domestic job creation. In fact, if properly managed, the development of a thriving ‘cleantech’ sector can address a vital global issues, namely the emissions trajectories of major developing nations. China and India are often singled out for attention as major, emerging global emitters. China, in fact, will become the world’s largest greenhouse emitter in the near future, if it has not already. This fact, is often used – mistakenly in my view – to argue against unilateral climate protection efforts by nations such as the United States.  This view is shortsighted in two vital respects. First, China is demonstrably already suffering from the impacts of fossil fuel use. Crop yields in many parts of China are significantly lower than they would be without the significant sulfur and particulate burden that results from domestic coal combustion. (In fact, coal combustions emissions from China have significant air quality impacts on Japan, and can be measured in the U. S. as well.) Crop losses of over 20% have been reported in part of China, with the decrease unambiguously linked to air pollution. China also experiences significant human health impacts from this pollution burden as well. Second, China has committed, on paper, to a ‘circular economy’ where waste is reduced and overall productivity is enhanced. If the United States were to become a major exporter, or even a partner, in the production of low-emissions technologies – from truly carbon-capture coal-fired power plants, to increased numbers of solar, wind, and biofuel technologies – China would be an eager trading partner, so that they could install increasing numbers of low-emissions technologies. This would directly help the Chinese economy and their environmental and public health situation. On both of these grounds, U. S. domestic expansion of the clean energy sector will likely positively impact the ability and the actions of a number of emerging economies to ‘go green’.

#### It is not too late to reverse warming – taking action now is critical – the alternative to reducing emissions is mass death

Nuccitelli 12 – Dana, environmental scientist at a private environmental consulting firm in Sacramento and has a Bachelor's Degree in astrophysics from the University of California at Berkeley, and a Master's Degree in physics from the University of California at Davis, 2012, “Realistically What Might The Future Climate Look Like?”, http://thinkprogress.org/climate/2012/09/01/784931/realistically-what-might-the-future-climate-look-like/

This is Why Reducing Emissions is Critical¶ We’re not yet committed to surpassing 2°C global warming, but as Watson noted, we are quickly running out of time to realistically give ourselves a chance to stay below that ‘danger limit’. However, 2°C is not a do-or-die threshold. Every bit of CO2 emissions we can reduce means that much avoided future warming, which means that much avoided climate change impacts. As Lonnie Thompson noted, the more global warming we manage to mitigate, the less adaption and suffering we will be forced to cope with in the future.¶ Realistically, based on the current political climate (which we will explore in another post next week), limiting global warming to 2°C is probably the best we can do. However, there is a big difference between 2°C and 3°C, between 3°C and 4°C, and anything greater than 4°C can probably accurately be described as catastrophic, since various tipping points are expected to be triggered at this level. Right now, we are on track for the catastrophic consequences (widespread coral mortality, mass extinctions, hundreds of millions of people adversely impacted by droughts, floods, heat waves, etc.). But we’re not stuck on that track just yet, and we need to move ourselves as far off of it as possible by reducing our greenhouse gas emissions as soon and as much as possible.¶ There are of course many people who believe that the planet will not warm as much, or that the impacts of the associated climate change will be as bad as the body of scientific evidence suggests. That is certainly a possiblity, and we very much hope that their optimistic view is correct. However, what we have presented here is the best summary of scientific evidence available, and it paints a very bleak picture if we fail to rapidly reduce our greenhouse gas emissions.¶ If we continue forward on our current path, catastrophe is not just a possible outcome, it is the most probable outcome. And an intelligent risk management approach would involve taking steps to prevent a catastrophic scenario if it were a mere possibility, let alone the most probable outcome. This is especially true since the most important component of the solution – carbon pricing – can be implemented at a relatively low cost, and a far lower cost than trying to adapt to the climate change consequences we have discussed here (Figure 4).¶ Climate contrarians will often mock ‘CAGW’ (catastrophic anthropogenic global warming), but the sad reality is that CAGW is looking more and more likely every day. But it’s critical that we don’t give up, that we keep doing everything we can do to reduce our emissions as much as possible in order to avoid as many catastrophic consequences as possible, for the sake of future generations and all species on Earth. The future climate will probably be much more challenging for life on Earth than today’s, but we still can and must limit the damage.

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

Zelman 11 Joanna, The Huffington Post, "Power Plant Air Pollution Kills 13,000 People Per Year, Coal-Fired Are Most Hazardous: ALA Report", 3/15, www.huffingtonpost.com/2011/03/14/power-plant-air-pollution-coal-kills\_n\_833385.html

The American Lung Association (ALA) recently released a new report on the dramatic health hazards surrounding coal-fired power plants.¶ The report, “Toxic Air: The Case For Cleaning Up Coal-Fired Power Plants,” reveals the dangers of air pollution emitted by coal plants.¶ One of the starkest findings in the report claims, “Particle pollution from power plants is estimated to kill approximately 13,000 people a year.”¶ So what's the biggest culprit?¶ “Coal-fired power plants that sell electricity to the grid produce more hazardous air pollution in the U.S. than any other industrial pollution sources.” According to the report details, over 386,000 tons of air pollutants are emitted from over 400 plants in the U.S. per year. Interestingly, while most of the power plants are located in the Midwest and Southeast, the entire nation is threatened by their toxic emissions.¶ An ALA graph shows that while pollutants such as acid gases stay in the local area, metals such as lead and arsenic travel beyond state lines, and fine particulate matter has a global impact. In other words, while for some workers the pollution may be a tradeoff for employment at a plant, other regions don’t reap the same benefits, but still pay for the costs to their health.¶ The report connected specific pollutants with their health effects. According to the ALA, 76% of U.S. acid gas emissions, which are known to irritate breathing passages, come from coal-fired power plants. Out of all industrial sources, these plants are also the biggest emitter of airborne mercury, which can become part of the human food chain through fish and wildlife -- high mercury levels are linked to brain damage, birth defects, and damage to the nervous system. Overall, air pollutants from coal plants can cause heart attacks, strokes, lung cancer, birth defects, and premature death.¶ The American Lung Association isn’t the only group to connect coal plants with death and illness. A recent study released in the Annals of the New York Academy of Sciences found that, due in large part to health problems, coal costs the U.S. $500 billion per year. Specifically, the study found that the health costs of cancer, lung disease, and respiratory illnesses connected to pollutant emissions totaled over $185 billion per year.

### Contention Two is Advocacy

#### Debating energy policy joins members of different fields and philosophies to create a consciousness shift towards sustainable environmental policy – how students are trained matters immensely to public policy

Crist 4 (Eileen, Professor at Virginia Tech in the Department of Science and Technology, “Against the social construction of nature and wilderness”, Environmental Ethics 26;1, p 13-6, http://www.sts.vt.edu/faculty/crist/againstsocialconstruction.pdf)

Yet, constructivist analyses of "nature" favor remaining in the comfort zone of zestless agnosticism and noncommittal meta-discourse. As David Kidner suggests, this intellectual stance may function as a mechanism against facing the devastation of the biosphere—an undertaking long underway but gathering momentum with the imminent bottlenecking of a triumphant global consumerism and unprecedented population levels. Human-driven extinction—in the ballpark of Wilson's estimated 27,000 species per year—is so unthinkable a fact that choosing to ignore it may well be the psychologically risk-free option.¶ Nevertheless, this is the opportune historical moment for intellectuals in the humanities and social sciences to join forces with conservation scientists in order to help create the consciousness shift and policy changes to stop this irreversible destruction. Given this outlook, how students in the human sciences are trained to regard scientific knowledge, and what kind of messages percolate to the public from the academy about the nature of scientific findings, matter immensely. The "agnostic stance" of constructivism toward "scientific claims" about the environment—a stance supposedly mandatory for discerning how scientific knowledge is "socially assembled"[32]—is, to borrow a legendary one-liner, striving to interpret the world at an hour that is pressingly calling us to change it.

#### Debate empirically inculcates portable skills that lead to better energy policy – it gives voice to buried arguments and challenges bias and institutional affiliations

Mitchell 10 (Gordon R, Associate Professor and Director of Graduate Studies in the Department of Communication at the University of Pittsburgh, where he also directs the William Pitt Debating Union, “SWITCH-SIDE DEBATING MEETS DEMAND-DRIVEN RHETORIC OF SCIENCE”, <http://www.pitt.edu/~gordonm/JPubs/Mitchell2010.pdf>)

An additional dimension of nuance emerging from this avenue of analysis pertains to the precise nature of the deliberative goals set by bridge. Program descriptions notably eschew Kettering-style references to democratic citizen empowerment, yet feature deliberation prominently as a key ingredient of strong intelligence tradecraft. This caveat is especially salient to consider when it comes to the second category of rhetorically informed critical work invited by the contingent aspect of specific debate initiatives. To grasp this layer it is useful to appreciate how the name of the bridge project constitutes an invitation for those outside the intelligence community to participate in the analytic outreach effort. According to Doney, bridge “provides an environment for Analytic Outreach—a place where IC analysts can reach out to expertise elsewhere in federal, state, and local government, in academia, and industry. New communities of interest can form quickly in bridge through the ‘web of trust’ access control model—access to minds outside the intelligence community creates an analytic force multiplier.”48 This presents a moment of choice for academic scholars in a position to respond to Doney’s invitation; it is an opportunity to convert scholarly expertise into an “analytic force multiplier.”¶ In reflexively pondering this invitation, it may be valuable for scholars to read Greene and Hicks’s proposition that switch-side debating should be viewed as a cultural technology in light of Langdon Winner’s maxim that “technological artifacts have politics.”49 In the case of bridge, politics are informed by the history of intelligence community policies and practices. Commenter Thomas Lord puts this point in high relief in a post offered in response to a news story on the topic: “[W]hy should this thing (‘bridge’) be? . . . [The intelligence community] on the one hand sometimes provides useful information to the military or to the civilian branches and on the other hand it is a dangerous, out of control, relic that by all external appearances is not the slightest bit reformed, other than superficially, from such excesses as became exposed in the cointelpro and mkultra hearings of the 1970s.”50 A debate scholar need not agree with Lord’s full-throated criticism of the intelligence community (he goes on to observe that it bears an alarming resemblance to organized crime) to understand that participation in the community’s Analytic Outreach program may serve the ends of deliberation, but not necessarily democracy, or even a defensible politics. Demand-driven rhetoric of science necessarily raises questions about what’s driving the demand, questions that scholars with relevant expertise would do well to ponder carefully before embracing invitations to contribute their argumentative expertise to deliberative projects. By the same token, it would be prudent to bear in mind that the technological determinism about switch-side debate endorsed by Greene and Hicks may tend to flatten reflexive assessments regarding the wisdom of supporting a given debate initiative—as the next section illustrates, manifest differences among initiatives warrant context-sensitive judgments regarding the normative political dimensions featured in each case.¶ Public Debates in the EPA Policy Process¶ The preceding analysis of U.S. intelligence community debating initiatives highlighted how analysts are challenged to navigate discursively the heteroglossia of vast amounts of different kinds of data flowing through intelligence streams. Public policy planners are tested in like manner when they attempt to stitch together institutional arguments from various and sundry inputs ranging from expert testimony, to historical precedent, to public comment. Just as intelligence managers find that algorithmic, formal methods of analysis often don’t work when it comes to the task of interpreting and synthesizing copious amounts of disparate data, public-policy planners encounter similar challenges.¶ In fact, the argumentative turn in public-policy planning elaborates an approach to public-policy analysis that foregrounds deliberative interchange and critical thinking as alternatives to “decisionism,” the formulaic application of “objective” decision algorithms to the public policy process. Stating the matter plainly, Majone suggests, “whether in written or oral form, argument is central in all stages of the policy process.” Accordingly, he notes, “we miss a great deal if we try to understand policy-making solely in terms of power, influence, and bargaining, to the exclusion of debate and argument.”51 One can see similar rationales driving Goodwin and Davis’s EPA debating project, where debaters are invited to conduct on-site public debates covering resolutions crafted to reflect key points of stasis in the EPA decision-making process. For example, in the 2008 Water Wars debates held at EPA headquarters in Washington, D.C., resolutions were crafted to focus attention on the topic of water pollution, with one resolution focusing on downstream states’ authority to control upstream states’ discharges and sources of pollutants, and a second resolution exploring the policy merits of bottled water and toilet paper taxes as revenue sources to fund water infrastructure projects. In the first debate on interstate river pollution, the team of Seth Gannon and Seungwon Chung from Wake Forest University argued in favor of downstream state control, with the Michigan State University team of Carly Wunderlich and Garrett Abelkop providing opposition. In the second debate on taxation policy, Kevin Kallmyer and Matthew Struth from University of Mary Washington defended taxes on bottled water and toilet paper, while their opponents from Howard University, Dominique Scott and Jarred McKee, argued against this proposal. Reflecting on the project, Goodwin noted how the intercollegiate debaters’ ability to act as “honest brokers” in the policy arguments contributed positively to internal EPA deliberation on both issues.52 Davis observed that since the invited debaters “didn’t have a dog in the fight,” they were able to give voice to previously buried arguments that some EPA subject matter experts felt reticent to elucidate because of their institutional affiliations.53¶ Such findings are consistent with the views of policy analysts advocating the argumentative turn in policy planning. As Majone claims, “Dialectical confrontation between generalists and experts often succeeds in bringing out unstated assumptions, conflicting interpretations of the facts, and the risks posed by new projects.”54 Frank Fischer goes even further in this context, explicitly appropriating rhetorical scholar Charles Willard’s concept of argumentative “epistemics” to flesh out his vision for policy studies: Uncovering the epistemic dynamics of public controversies would allow for a more enlightened understanding of what is at stake in a particular dispute, making possible a sophisticated evaluation of the various viewpoints and merits of different policy options. In so doing, the differing, often tacitly held contextual perspectives and values could be juxtaposed; the viewpoints and demands of experts, special interest groups, and the wider public could be directly compared; and the dynamics among the participants could be scrutizined. This would by no means sideline or even exclude scientific assessment; it would only situate it within the framework of a more comprehensive evaluation.55¶ As Davis notes, institutional constraints present within the EPA communicative milieu can complicate efforts to provide a full airing of all relevant arguments pertaining to a given regulatory issue. Thus, intercollegiate debaters can play key roles in retrieving and amplifying positions that might otherwise remain sedimented in the policy process. The dynamics entailed in this symbiotic relationship are underscored by deliberative planner John Forester, who observes, “If planners and public administrators are to make democratic political debate and argument possible, they will need strategically located allies to avoid being fully thwarted by the characteristic self-protecting behaviors of the planning organizations and bureaucracies within which they work.”56 Here, an institution’s need for “strategically located allies” to support deliberative practice constitutes the demand for rhetorically informed expertise, setting up what can be considered a demand-driven rhetoric of science. As an instance of rhetoric of science scholarship, this type of “switch-side public debate”57 differs both from insular contest tournament debating, where the main focus is on the pedagogical benefit for student participants, and first-generation rhetoric of science scholarship, where critics concentrated on unmasking the rhetoricity of scientific artifacts circulating in what many perceived to be purely technical spheres of knowledge production.58 As a form of demand-driven rhetoric of science, switch-side debating connects directly with the communication field’s performative tradition of argumentative engagement in public controversy—a different route of theoretical grounding than rhetorical criticism’s tendency to locate its foundations in the English field’s tradition of literary criticism and textual analysis.59¶ Given this genealogy, it is not surprising to learn how Davis’s response to the EPA’s institutional need for rhetorical expertise took the form of a public debate proposal, shaped by Davis’s dual background as a practitioner and historian of intercollegiate debate. Davis competed as an undergraduate policy debater for Howard University in the 1970s, and then went on to enjoy substantial success as coach of the Howard team in the new millennium. In an essay reviewing the broad sweep of debating history, Davis notes, “Academic debate began at least 2,400 years ago when the scholar Protagoras of Abdera (481–411 bc), known as the father of debate, conducted debates among his students in Athens.”60 As John Poulakos points out, “older” Sophists such as Protagoras taught Greek students the value of dissoi logoi, or pulling apart complex questions by debating two sides of an issue.61 The few surviving fragments of Protagoras’s work suggest that his notion of dissoi logoi stood for the principle that “two accounts [logoi] are present about every ‘thing,’ opposed to each other,” and further, that humans could “measure” the relative soundness of knowledge claims by engaging in give-and-take where parties would make the “weaker argument stronger” to activate the generative aspect of rhetorical practice, a key element of the Sophistical tradition.62¶ Following in Protagoras’s wake, Isocrates would complement this centrifugal push with the pull of synerchésthé, a centripetal exercise of “coming together” deliberatively to listen, respond, and form common social bonds.63 Isocrates incorporated Protagorean dissoi logoi into synerchésthé, a broader concept that he used flexibly to express interlocking senses of (1) inquiry, as in groups convening to search for answers to common questions through discussion;64 (2) deliberation, with interlocutors gathering in a political setting to deliberate about proposed courses of action;65 and (3) alliance formation, a form of collective action typical at festivals,66 or in the exchange of pledges that deepen social ties.67¶ Returning once again to the Kettering-informed sharp distinction between debate and deliberation, one sees in Isocratic synerchésthé, as well as in the EPA debating initiative, a fusion of debate with deliberative functions. Echoing a theme raised in this essay’s earlier discussion of intelligence tradecraft , such a fusion troubles categorical attempts to classify debate and deliberation as fundamentally opposed activities. The significance of such a finding is amplified by the frequency of attempts in the deliberative democracy literature to insist on the theoretical bifurcation of debate and deliberation as an article of theoretical faith.¶ Tandem analysis of the EPA and intelligence community debating initiatives also brings to light dimensions of contrast at the third level of Isocratic synerchésthé, alliance formation. The intelligence community’s Analytic Outreach initiative invites largely one-way communication flowing from outside experts into the black box of classified intelligence analysis. On the contrary, the EPA debating program gestures toward a more expansive project of deliberative alliance building. In this vein, Howard University’s participation in the 2008 EPA Water Wars debates can be seen as the harbinger of a trend by historically black colleges and universities (hbcus) to catalyze their debate programs in a strategy that evinces Davis’s dual-focus vision. On the one hand, Davis aims to recuperate Wiley College’s tradition of competitive excellence in intercollegiate debate, depicted so powerfully in the feature film The Great Debaters, by starting a wave of new debate programs housed in hbcus across the nation.68 On the other hand, Davis sees potential for these new programs to complement their competitive debate programming with participation in the EPA’s public debating initiative.¶ This dual-focus vision recalls Douglas Ehninger’s and Wayne Brockriede’s vision of “total” debate programs that blend switch-side intercollegiate tournament debating with forms of public debate designed to contribute to wider communities beyond the tournament setting.69 Whereas the political telos animating Davis’s dual-focus vision certainly embraces background assumptions that Greene and Hicks would find disconcerting—notions of liberal political agency, the idea of debate using “words as weapons”70—there is little doubt that the project of pursuing environmental protection by tapping the creative energy of hbcu-leveraged dissoi logoi diff ers significantly from the intelligence community’s effort to improve its tradecraft through online digital debate programming. Such difference is especially evident in light of the EPA’s commitment to extend debates to public realms, with the attendant possible benefits unpacked by Jane Munksgaard and Damien Pfister:¶ Having a public debater argue against their convictions, or confess their indecision on a subject and subsequent embrace of argument as a way to seek clarity, could shake up the prevailing view of debate as a war of words. Public uptake of the possibility of switch-sides debate may help lessen the polarization of issues inherent in prevailing debate formats because students are no longer seen as wedded to their arguments. This could transform public debate from a tussle between advocates, with each public debater trying to convince the audience in a Manichean struggle about the truth of their side, to a more inviting exchange focused on the content of the other’s argumentation and the process of deliberative exchange.71¶ Reflection on the EPA debating initiative reveals a striking convergence among (1) the expressed need for dissoi logoi by government agency officials wrestling with the challenges of inverted rhetorical situations, (2) theoretical claims by scholars regarding the centrality of argumentation in the public policy process, and (3) the practical wherewithal of intercollegiate debaters to tailor public switch-side debating performances in specific ways requested by agency collaborators. These points of convergence both underscore previously articulated theoretical assertions regarding the relationship of debate to deliberation, as well as deepen understanding of the political role of deliberation in institutional decision making. But they also suggest how decisions by rhetorical scholars about whether to contribute switch-side debating acumen to meet demand-driven rhetoric of science initiatives ought to involve careful reflection. Such an approach mirrors the way policy planning in the “argumentative turn” is designed to respond to the weaknesses of formal, decisionistic paradigms of policy planning with situated, contingent judgments informed by reflective deliberation.

#### Debate over energy policy is a reflexive forum that facilitates effective decision-making and deliberation

Mitchell 10 (Gordon R, Associate Professor and Director of Graduate Studies in the Department of Communication at the University of Pittsburgh, where he also directs the William Pitt Debating Union, “SWITCH-SIDE DEBATING MEETS DEMAND-DRIVEN RHETORIC OF SCIENCE”, <http://www.pitt.edu/~gordonm/JPubs/Mitchell2010.pdf>)

Yet the picture grows more complex when one considers what is happening over at the Environmental Protection Agency (EPA), where environmental scientist Ibrahim Goodwin is collaborating with John W. Davis on a project that uses switch-side debating to clean up air and water. In April 2008, that initiative brought top intercollegiate debaters from four universities to Washington, D.C., for a series of debates on the topic of water quality, held for an audience of EPA subject matter experts working on interstate river pollution and bottled water issues. An April 2009 follow-up event in Huntington Beach, California, featured another debate weighing the relative merits of monitoring versus remediation as beach pollution strategies. “We use nationally ranked intercollegiate debate programs to research and present the arguments, both pro and con, devoid of special interest in the outcome,” explains Davis. “In doing so, agency representatives now remain squarely within the decision-making role thereby neutralizing overzealous advocacy that can inhibit learned discourse.”7¶ The intelligence community and EPA debating initiatives vary quite a bit simply by virtue of the contrasting policy objectives pursued by their sponsoring agencies (foreign policy versus environmental protection). Significant process-level differences mark off the respective initiatives as well; the former project entails largely one-way interactions designed to sluice insight from “open sources” to intelligence analysts working in classified environments and producing largely secret assessments. In contrast, the EPA’s debating initiative is conducted through public forums in a policy process required by law to be transparent. This granularity troubles Greene and Hicks’s deterministic framing of switch-side debate as an ideologically smooth and consistent cultural technology. In an alternative approach, this essay positions debate as a malleable method of decision making, one utilized by different actors in myriad ways to pursue various purposes. By bringing forth the texture inherent in the associated messy “mangle of practice,”8 such an approach has potential to deepen our understanding of debate as a dynamic and contingent, rather than static, form of rhetorical performance.¶ Juxtaposition of the intelligence community and EPA debating initiatives illuminates additional avenues of inquiry that take overlapping elements of the two projects as points of departure. Both tackle complex, multifaceted, and technical topics that do not lend themselves to reductionist, formal analysis, and both tap into the creative energy latent in what Protagoras of Abdera called dissoi logoi, the process of learning about a controversial or unresolved issue by airing opposing viewpoints.9 In short, these institutions are employing debate as a tool of deliberation, seeking outside expertise to help accomplish their aims. Such trends provide an occasion to revisit a presumption commonly held among theorists of deliberative democracy—that debate and deliberation are fundamentally opposed practices—as the intelligence community’s Analytic Outreach program and the EPA’s debating initiatives represent examples where debating exercises are designed to facilitate, not frustrate, deliberative goals.

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

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

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

#### The discourse of environmental action must be attached to the state garner public support and lead to policy action

[Note: EM = ecological modernization]

Doran and Barry 6 – worked at all levels in the environment and sustainable development policy arena - at the United Nations, at the Northern Ireland Assembly and Dáil Éireann, and in the Irish NGO sector. PhD--AND-- Reader in Politics, Queen's University School of Politics, International Studies, and Philosophy. PhD Glasgow (Peter and John, Refining Green Political Economy: From Ecological Modernisation to Economic Security and Sufficiency, Analyse & Kritik 28/2006, p. 250–275, http://www.analyse-und-kritik.net/2006-2/AK\_Barry\_Doran\_2006.pdf)

Viewed in isolation EM can be painted as a reformist and limited strategy for achieving a more sustainable economy and society, and indeed questions could be legitimately asked as to whether the development of a recognisably ‘green’ political economy for sustainable development can be based on it. In this paper, it is contended that there are strategic advantages in seeking to build upon and radicalise EM. There are indications in the UK that the debate on sustainable consumption may lead to new deliberative fora for a re-negotiation of the meaning and ends of consumption. Could it be that ‘suﬃciency’ will emerge as the logical complement (on the consumer side) of the early production-side debate on EM on the limits of ‘eﬃciency’ without an ecological context? ¶ While there are various reasons one can give for this, in this conclusion we focus on two—one normative/principled the other strategic.¶ From a strategic point of view, it is clear that, as Dryzek and his colleagues have shown, if green and sustainability goals, aims and objectives are to be integrated within state policy, these need to attach themselves to one of the core state imperatives—accumulation/economic growth or legitimacy (Dryzek et al. 2003; Barry 2003b). It is clear that the discourse of EM allows (some) green objectives to be integrated/translated into a policy language and framework which complements and does not undermine the state’s core imperative of pursuing orthodox economic growth. Therefore if (in the absence of a Green Party forming a government or being part of a ruling coalition, or even more unlikely of one of the main traditional parties initiating policies consistent with a radical understanding of sustainable development), the best that can be hoped for under current political conditions is the ‘greening of growth and capitalism’ i. e. a narrow, ‘business as usual’ version of EM. Or as Jonathan Porritt has put it, “We need more emphasis about the inherent unsustainability of our dominant economic model, even as we seek to improve the delivery of that model in the short to medium term” (Porritt 2004, 5). 23 ¶ On a more principled note, the adoption of EM as a starting point for the development of a model/theory of green political economy does carry with it the not inconsiderable beneﬁt of removing the ‘anti-growth’ and ‘limits to growth’ legacy which has (in our view) held back the theoretical development of a positive, attractive, modern conceptualisation of green political economy and radical conceptualisations of sustainable development. Here the technological innovation, the role of regulation driving innovation and eﬃciency, the promise that the transition to a more sustainable economy and society does not necessarily mean completely abandoning currently lifestyles and aspirations—strategically important in generating democratic support for sustainable development, and as indicated above, importance if the vision of a green sustainable economy is one which promotes diversity and tolerance in lifestyles and does not demand everyone conform to a putative ‘green’ lifestyle. Equally, this approach does not completely reject the positive role/s of a regulated market within sustainable development. However, it does demand a clear shift towards making the promotion of economic security (and quality of life) central to economic (and other) policy. Only when this happens can we say we have begun the transition to implementing the principles of sustainable development rather than fruitlessly seeking for some ‘greenprint’ of an abstract and utopian vision of the ‘sustainable society’.

#### Public advocacy is key to effective action on climate change

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

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

#### Taking action against warming represents an opportunity to rebuild progressive politics for a better society – we must set aside differences based on identity in favor of a broad-based coalition

Smith 10 Brendan, co-founder of Labor Network for Sustainability, 11-23, “Fighting Doom: The New Politics of Climate Change,” Common Dreams, http://www.commondreams.org/view/2010/11/23-1

I admit I have arrived late to the party. Only recently have I begun to realize what others have known for decades: The climate crisis is not, at its core, an environmental issue. In fact it is not an "issue" at all; it is an existential threat to every human and community on the planet. It threatens every job, every economy in the world. It threatens the health of our children. It threatens our food and water supply. Climate change will continue to alter the world our species has known for the past three thousand years. As an oyster farmer and longtime political activist, the effects of climate change on my life will be neither distant nor impersonal. Rising greenhouse gases and ocean temperatures may well force me to abandon my 60-acre farm within the next forty years. From France to Washington state, oystermen are already seeing massive die-offs of seed oysters and the thinning shells science has long predicted. I can see the storm clouds and they are foretelling doom. But my political alter ego is oddly less pessimistic. Rather than triggering gloom, the climate crisis has surprisingly stirred up more hope than I have felt in twenty years as a progressive activist. After decades of progressive retreat it is a strange feeling. But I am haunted by the suspicion that this coming crisis may be the first opportunity we have had in generations to radically re-shape the political landscape and build a more just and sustainable society. The Power of Doom The modern progressive movement in the U.S. has traditionally grounded its organizing in the politics of identity and altruism. Organize an affected group -- minorities, gays, janitors or women -- and then ask the public at large to support the cause -- prison reform, gay marriage, labor rights, or abortion -- based on some cocktail of good will, liberal guilt, and moral persuasion. This strategy has been effective at times. But we have failed to bring these mini-movements together into a force powerful enough to enact broad-based social reform. It takes a lot of people to change society and our current strategy has left us small in numbers and weak in power. The highlights of my political life -- as opposed to oystering -- have been marked by winning narrow, often temporary, battles, but perennially losing the larger war. I see the results in every direction I look: growing poverty and unemployment, two wars, the rise of the right, declining unionization, the failure of the Senate's climate legislation and of Copenhagen, the wholesale domination of corporate interests. The list goes on and on. We have lost; it's time to admit our strategy has been too tepid and begin charting anew. This time can be different. What is so promising about the climate crisis is that because it is not an "issue" experienced by one disenfranchised segment of the population, it opens the opportunity for a new organizing calculus for progressives. Except for nuclear annihilation, humanity has never faced so universal a threat where all our futures are bound inextricably together. This universality provides the mortar of common interest required for movement building. We could literally knock on every door on the planet and find someone -- whether they know it or not -- who has a vital self-interest in averting the climate crisis by joining a movement for sustainability. With all of humanity facing doom, we can finally gather under one banner and count our future members not in the thousands but in the millions, even billions. But as former White House "Green Jobs Czar" Van Jones told the New Yorker in 2009, "The challenge is making this an everybody movement, so your main icons are Joe Six-Pack, Joe the Plumber, becoming Joe the Solar Guy, or that kid on the street corner putting down his handgun, picking up a caulk gun." The climate crisis is carrying us into uncharted waters and our political strategy needs to be directed toward making the climate movement an "everybody movement." Let me use a personal example. As an oysterman on Long Island Sound my way of life is threatened by rising greenhouse gases and ocean temperatures. If the climate crisis is not averted my oysters will die and my farm will be shuttered. Saving my livelihood requires that I politically engage at some level. Normally I would gather together my fellow oyster farmers to lobby state and federal officials and hold a protest or two. Maybe I would find a few coalitions to join. But we would remain small in number, wield little power, and our complaints about job loss would fall on largely unsympathetic ears in the face of so many suffering in so many ways. And what would we even petition our government to do about the problem? Buyouts and unemployment benefits? Re-training classes? Our oysters will still die and we will still lose our farms. To save our lives and livelihood we need to burrow down to the root of the problem: halting greenhouse gas emissions. And halting emissions requires joining a movement with the requisite power to dismantle the fossil fuel economy while building a green economy. To tackle such a large target requires my support for every nook and cranny effort to halt greenhouse gases and transition to a green economy. I need to gather up my fellow oyster farmers and link arms with students blocking new coal-fired power plants while fighting for just transition for coal workers; I need to join forces with other green workers around the country to demand government funding for green energy jobs, not more bank and corporate bailouts; I need to support labor movement efforts in China and elsewhere to climb out of poverty by going "green not dirty." I have a stake in these disparate battles not out of political altruism, but because my livelihood and community depend on stopping greenhouse gases and climate change. In other words, the hidden jewel of the climate crisis is that I need others and others need me. We are bound together by the same story of crisis and struggle. Some in the sustainability movement have been taking advantage of the "power of doom" by weaving together novel narratives and alliances around climate change. Groups in Kentucky are complementing their anti-mountain top removal efforts by organizing members of rural electrical co-ops into "New Power" campaigns to force a transition from fossil fuels to renewable power -- and create jobs in the process. Police unions in Canada, recognizing their members will be first responders as climate disasters hit, have reached out to unions in New Orleans to ensure the tragedies that followed Katrina are not repeated. Artists, chefs, farmers, bike mechanics, designers, and others are coalescing into a "green artisan movement" focused on building vibrant sustainable communities. Immigrant organizers, worried about the very real possibility of ever-worsening racial tensions triggered by millions of environmental refugees flooding in from neighboring countries, are educating their membership about why the climate crisis matters. My hope is that over the coming years we will be able to catalog increasing numbers of these tributaries of the climate crisis. Our power will not stem from a long list of issue concerns or sponsors at events -- we have tried that as recently as the October 2nd Washington D.C. "One Nation Working Together" march with little impact. Nor, with the rise of do-it-yourself organizing, will our power spring from top-down political parties of decades past. Instead oystermen like me, driven by the need to save our lives and livelihood, will storm the barricades with others facing the effects of the climate crisis. We will merge our mini-movements under a banner of common crisis, common vision and common struggle. We will be in this fight together and emerge as force not to be trifled with. This Time We Have an Alternative I am also guardedly optimistic because this time we have an alternative. My generation came of age after the fall of communism, and as a result, we have been raised in the midst of one-sided debate. We recognize that neoliberalism has ravaged society, but besides nostalgic calls for socialism, what has been the alternative? As globalization swept the globe, we demanded livable wages and better housing for the poorest in our communities; we fought sweatshops in China; we lobbied for new campaign finance and corporate governance laws. But these are mere patchwork reforms that fail to add up to a full-blown alternative to our current anti-government, free-market system. Never being able to fully picture the progressive alternative left me not fully trusting that progressive answers were viable solutions. But when I hear the proposed solutions to the climate crisis, the fog lifts. I can track the logic and envision the machinery of our alternative. And it sounds surprisingly like a common sense rebuttal to the current free-market mayhem: We face a global emergency of catastrophic proportions. Market fundamentalism will worsen rather than solve the crisis. Instead we need to re-direct our institutions and economic resources toward solving the crisis by replacing our carbon-based economy with a green sustainable economy. And by definition, for an economy to be sustainable it must addresses the longstanding suffering ordinary people face in their lives, ranging from unemployment and poverty to housing and healthcare. For years I have tossed from campaign to campaign, but the framework of our new progressive answer to the climate crisis now provides a roadmap for my political strategy. It helps chart my opponents -- coal companies and their political minions, for example -- as well as my diverse range of allies. It lays out my policy agenda, ranging from creating millions of new green jobs to building affordable green housing in low-income communities. I finally feel confident enough in my bearings to set sail. The Era of Crisis Politics While building a new green economy makes sense on paper, it is hard to imagine our entrenched political system yielding even modest progressive reform, let alone the wholesale re-formatting of the carbon economy. But I suspect this will change in the coming years, with our future governed by cascading political crises, rather than political stasis. We are likely entering an era of crisis politics whereby each escalating environmental disaster -- ranging from water shortages and hurricanes to wildfires and disease outbreaks -- will expose the impotence of our existing political institutions and economic system. In the next 40 years alone, scientists predict a state of permanent drought throughout the Southwest US and climate-linked disease deaths to double. As Danny Thompson, secretary-treasurer of the Nevada AFL-CIO, told the Las Vegas Review Journal, the ever-worsening water crisis could be "the end of the world" that could "turn us upside down, and I don't know how you recover from that." As if that is not enough, these crises will be played out in the context of a global economy spiraling out of control. Each hurricane, drought or recession will send opinion polls and politicians lurching from right to left and vice versa. Think of how quickly, however momentarily, the political debate pivoted in the wake of Katrina, the BP disaster, and the financial crisis. As White House chief of staff Rahm Emanuel famously said "Never let a serious crisis go to waste...It's an opportunity to do things you couldn't do before." While addressing the climate crisis requires radical solutions that cannot be broached in today's political climate, each disaster opens an opportunity to advance alternative agendas -- both for the left and right. While politicians debate modest technical fixes, ordinary people left desperate by floods, fires, droughts and other disasters will increasingly -- and angrily -- demand more fundamental reforms. While our current policy choices appear limited by polls and election results, in an era of crisis politics what appears unrealistic and radical before a storm may well appear as common sense reform in its wake. My generation has been raised in the politics of eternal dusk. Except for a passing ray of hope during the Obama campaign, our years have been marked by the failure of every political force in society -- whether it be political elites or social movement leaders -- to address the problems we face as a nation and world. They have left us spinning towards disaster. We can forge a better future. Climate-generated disasters will bring our doomed future into focus. The failure of political elites to adequately respond to these cascading crises will transform our political landscape and seed the ground for social movements. And if we prepare for the chaos and long battle ahead, our alternative vision will become a necessity rather than an impossibility. As a friend recently said to me, "God help us, I hope you're right."

#### Engagement within the existing system of market mechanisms is necessary to avoid reproducing the status quo

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

However, pointing this out and deriding market based solutions doesn’t get us very far. In fact, such a response to proposed market-based solutions is downright dangerous and irresponsible. The fact of the matter is that 1) we currently live in a market based world, 2) there is not, in the foreseeable future an alternative system on the horizon, and 3), above all, we need to do something now. We can’t afford to reject interventions simply **because they don’t meet our ideal conceptions** of how things should be. We have to work with the world that is here, not the one that we would like to be here. And here it’s crucial to note that pointing this out does not entail that we shouldn’t work for producing that other world. It just means that we have to grapple with the world that is actually there before us.¶ It pains me to write this post because I remember, with great bitterness, the diatribes hardcore Obama supporters leveled against legitimate leftist criticisms on the grounds that these critics were completely unrealistic idealists who, in their demand for “purity”, were asking for “ponies and unicorns”. This rejoinder always seemed to ignore that words have power and that Obama, through his profound power of rhetoric, had, at least the power to shift public debates and frames, opening a path to making new forms of policy and new priorities possible. The tragedy was that he didn’t use that power, though he has gotten better.¶ I do not wish to denounce others and dismiss their claims on these sorts of grounds. As a Marxist anarchists, I do believe that we should fight for the creation of an alternative hominid ecology or social world. I think that the call to commit and fight, to put alternatives on the table, has been one of the most powerful contributions of thinkers like Zizek and Badiou. If we don’t commit and fight for alternatives those alternatives will never appear in the world. Nonetheless, we still have to grapple with the world we find ourselves in. And it is here, in my encounters with some Militant Marxists, that I sometimes find it difficult to avoid the conclusion that they are unintentionally aiding and abetting the very things they claim to be fighting. In their refusal to become impure, to work with situations or assemblages as we find them, to sully their hands, they end up reproducing the very system they wish to topple and change. Narcissistically they get to sit there, smug in their superiority and purity, while everything continues as it did before because they’ve refused to become politicians or engage in the difficult concrete work of assembling human and nonhuman actors to render another world possible. As a consequence, they occupy the position of Hegel’s beautiful soul that denounces the horrors of the world, celebrate the beauty of their soul, while depending on those horrors of the world to sustain their own position. ¶ To engage in politics is to engage in networks or ecologies of relations between humans and nonhumans. To engage in ecologies is to descend into networks of causal relations and feedback loops that you cannot completely master and that will modify your own commitments and actions. But there’s no other way, there’s no way around this, and we do need to act now.

#### Simulation and institutional deliberation motivate effective responses to climate risks

Marx et al. 7 (Sabine M, Center for Research on Environmental Decisions (CRED) @ Columbia University, Elke U. Weber, Graduate School of Business and Department of Psychology @ Columbia University, Benjamin S. Orlovea, Department of Environmental Science and Policy @ University of California Davis, Anthony Leiserowitz, Decision Research, David H. Krantz, Department of Psychology @ Columbia University, Carla Roncolia, South East Climate Consortium (SECC), Department of Biological and Agricultural Engineering @ University of Georgia and Jennifer Phillips, Bard Centre for Environmental Policy @ Bard College, “Communication and mental processes: Experiential and analytic processing of uncertain climate information”, 2007, http://climate.columbia.edu/sitefiles/file/Marx\_GEC\_2007.pdf)

Based on the observation that experiential and analytic processing systems compete and that personal experience and vivid descriptions are often favored over statistical information, we suggest the following research and policy implications.¶ Communications designed to create, recall and highlight relevant personal experience and to elicit affective responses can lead to more public attention to, processing of, and engagement with forecasts of climate variability and climate change. Vicarious experiential information in the form of scenarios, narratives, and analogies can help the public and policy makers imagine the potential consequences of climate variability and change, amplify or attenuate risk perceptions, and influence both individual behavioral intentions and public policy preferences. Likewise, as illustrated by the example of retranslation in the Uganda studies, the translation of statistical information into concrete experience with simulated forecasts, decisionmaking and its outcomes can greatly facilitate an intuitive understanding of both probabilities and the consequences of incremental change and extreme events, and motivate contingency planning.¶ Yet, while the engagement of experience-based, affective decision-making can make risk communications more salient and motivate behavior, experiential processing is also subject to its own biases, limitations and distortions, such as the finite pool of worry and single action bias. Experiential processing works best with easily imaginable, emotionally laden material, yet many aspects of climate variability and change are relatively abstract and require a certain level of analytical understanding (e.g., long-term trends in mean temperatures or precipitation). Ideally, communication of climate forecasts should encourage the interactive engagement of both analytic and experiential processing systems in the course of making concrete decisions about climate, ranging from individual choices about what crops to plant in a particular season to broad social choices about how to mitigate or adapt to global climate change.¶ One way to facilitate this interaction is through group and participatory decision-making. As the Uganda example suggests, group processes allow individuals with a range of knowledge, skills and personal experience to share diverse information and perspectives and work together on a problem. Ideally, groups should include at least one member trained to understand statistical forecast information to ensure that all sources of information—both experiential and analytic—are considered as part of the decision-making process. Communications to groups should also try to translate statistical information into formats readily understood in the language, personal and cultural experience of group members. In a somewhat iterative or cyclical process, the shared concrete information can then be re-abstracted to an analytic level that leads to action.¶ Risk and uncertainty are inherent dimensions of all climate forecasts and related decisions. Analytic products like trend analysis, forecast probabilities, and ranges of uncertainty ought to be valuable contributions to stakeholder decision-making. Yet decision makers also listen to the inner and communal voices of personal and collective experience, affect and emotion, and cultural values. Both systems—analytic and experiential—should be considered in the design of climate forecasts and risk communications. If not, many analytic products will fall on deaf ears as decision makers continue to rely heavily on personal experience and affective cues to make plans for an uncertain future. The challenge is to find innovative and creative ways to engage both systems in the process of individual and group decision-making.

#### Science is a process – it subjects itself to constant refinement based on empirical evidence – we can make sufficient contingent claims about the world

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

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

# 2AC

## Topicality

### 2AC “In the US” T

#### We meet---we procure energy produced IN the US---we only incentivize what is topical

#### We meet---rectennas would be in the US

Snead 8 – James Michael Snead, senior member of the American Institute of Aeronautics and Astronautics, past chair of the Space Logistics Technical Committee, published in Aerospace America, the Air Force Air and Space Power Journal, the International Society of Logistics’ Logistics Spectrum magazine, the Journal of AstroPolitics, and the online Space Review, graduate of the Air Force Institute of Technology with Master's Degrees in Aerospace Engineering, November 19th, 2008, “The End of Easy Energy and What to Do About It,” National Space Society, <http://mikesnead.net/resources/spacefaring/white_paper_the_end_of_easy_energy_and_what_to_do_about_it.pdf>

Possible rectenna locations in the United States 2.45/5.8 GHz SSP During the initial SSP studies, Rice University conducted a preliminary assessment of the continental United States to determine where the rectennas could be located. The initial assessment concluded that about 40% of the continental United States could be used to locate rectennas. Fifteen exclusion variables were used: inland waters, metropolitan areas, other populated areas, marshlands, perennially flooded lands, military reservations, waterways, designated habitats of endangered species, topography unacceptable, atomic energy commission lands, and lands excluded by three dimensions of electromagnetic compatibility problems. Further refinement of these criteria reduced the initial 40% estimate to about 17% or about 530,000 sq. mi.209 Noting that a rectangular area enclosing the elliptical rectenna and safety zone comprises about 100 sq. mi.,210 the suitable land in the United States could, therefore, support over **5,000 rectennas,** substantially greater than the approximately 250 SSP platforms that would likely be used.211

#### Counter-interpretation---energy production is creation of electricity for final consumption

DOCC 9 the Department of Climate Change on behalf of the Council of Australian Governments (COAG) Expert Group on Streamlining Greenhouse and Energy Reporting. "National Greenhouse and Energy Reporting Streamlining Protocol" www.climatechange.gov.au/~/media/publications/greenhouse-report/nger-streamlining-protocol.pdf

7.1 Energy production¶ Under the NGER Act corporations are required to report on all energy produced by facilities.¶ ‘Energy production’ is defined in NGER Regulation 2.23: Production of energy, in relation to a facility, means any one of the following:¶ (a) the extraction or capture of energy from natural sources for final consumption by or from the operation of the facility or for use other than in operation of the facility;¶ (b) the manufacture of energy by the conversion of energy from one form to another form for final consumption by or from the operation of the facility or for use other than in the operation of the facility.

Appendix C provides a list of reportable fuels and energy commodities under Schedule 1 of the NGER Regulations.

\*National Greenhouse and Energy Reporting System (NGER) is a 2007 Australian GHG reporting scheme

#### **This takes place at rectennas in the US**

URSI 5 – International Union of Radio Science (URSI), November 2005, "Supporting Document for the URSI White Paper on Solar Power Satellite Systems," [www.ss.ncu.edu.tw/~ursi/record/WP\_SPS\_supdoc\_051129.pdf](http://www.ss.ncu.edu.tw/~ursi/record/WP_SPS_supdoc_051129.pdf)

The rectenna is extremely efficient in the energy conversion. The 82% of **the energy received** at the ground **is converted to** usable electricity. The microwave beam averages 8% of the power of full sunlight. The maximum energy rate at the center of the radio beam is ¼ of the maximum sunlight energy rate, as measured at high noon in the desert. Thus the total SPS energy arriving at the rectenna site would be a fraction of the solar energy that arrives at each square meter of the site. However, unlike the sunlight, most of this SPS energy will be recoverable, and will be available 24 hours per day. This results in an average output of almost 1500 Wh/day/m2 for a rectenna at the equator 19 compared to only 600 Wh/day/m2 for terrestrial photovoltaics.5

#### **SPS collects solar, rectennas convert it to electricity**

Powersat 12 – Powersat Corporation, 2012, "Energy market drivers behind Space Solar Power (SSP)" [www.powersat.com](http://www.powersat.com)

Space-based solar power is a method of collecting solar energy so that it can be distributed for use all over the earth. With this amazing technology, space-based solar power is the future of power generation.

#### Counter-interp---“in the US” includes possessions

Department of Defense 5(Dictionary of Military and Associated Terms. US Department of Defense 2005., <http://www.thefreedictionary.com/United+States>)

UNITED STATES: Includes the land area, internal waters, territorial sea, and airspace of the United States, including the following: a. US territories, possessions, and commonwealths; and b. Other areas over which the US Government has complete jurisdiction and control or has exclusive authority or defense responsibility.

#### We meet---SPS is in GSO slots that the USFG owns

Smith 8 – PhD Student @ University of Reading M.V., Lt. Col, PhD student in the strategic studies program under Professor Colin Gray at the University of Reading in the UK, winner of the National Space Society’s 2008 Space Pioneer Award, Chief of Future Concepts (Dream Works) the Pentagon, http://spacesolarpower.wordpress.com/2008/08/31/parking-slots-and-frequencies/

How does a company obtain a geostationary parking slot for a SBSP satellite?**¶** Parking slots are allotted internationally, by the International Telecommunications Union (ITU).¶ However, the ITU only allocates orbital slots to countries, and not to private sector companies.¶ Companies must negotiate with countries who hold the rights to orbital slots of interest. They must establish an agreement whereby space-based solar power satellites can thereafter occupy the countries’ allocated orbital slot(s).

#### Counter-interpretation---of means from a source

Dictionary.com 13 “of” accessed 3-27, http://dictionary.reference.com/browse/of

preposition**¶** 1.¶ (used to indicate distance or direction from, separation, deprivation, etc.): within a mile of the church; south of Omaha; to be robbed of one's money.¶ 2.¶ (used to indicate derivation, origin, or source): a man of good family; the plays of Shakespeare; a piece of cake.

#### Prefer it

#### Grammar---key to precision and predictability---only we give the whole resolution meaning

#### Aff and Neg ground---“extraction” allows affs that mine a little more uranium without creating electricity---that kills link ground

#### We internal link turn limits---extraction is limitless

Natural Gas.org No Date – “Processing Natural Gas" [www.naturalgas.org/naturalgas/processing\_ng.asp](http://www.naturalgas.org/naturalgas/processing_ng.asp)

**Natural gas, as it is used by consumers, is much different from the natural gas that is brought from underground up to the wellhead.** Although the processing of natural gas is in many respects less complicated than the processing and refining of crude oil, it is equally as necessary before its use by end users.¶ The natural gas used by consumers is composed almost entirely of methane. However, natural gas found at the wellhead, although still composed primarily of methane, is by no means as pure. Raw natural gas comes from three types of wells: oil wells, gas wells, and condensate wells. Natural gas that comes from oil wells is typically termed 'associated gas'. This gas can exist separate from oil in the formation (free gas), or dissolved in the crude oil (dissolved gas). Natural gas from gas and condensate wells, in which there is little or no crude oil, is termed 'nonassociated gas'. Gas wells typically produce raw natural gas by itself, while condensate wells produce free natural gas along with a semi-liquid hydrocarbon condensate. Whatever the source of the natural gas, once separated from crude oil (if present) it commonly exists in mixtures with other hydrocarbons; principally ethane, propane, butane, and pentanes. In addition, raw natural gas contains water vapor, hydrogen sulfide (H2S), carbon dioxide, helium, nitrogen, and other compounds. To learn about the basics of natural gas, including its composition, click here.¶ Natural gas processing consists of separating all of the various hydrocarbons and fluids from the pure natural gas, to produce what is known as 'pipeline quality' dry natural gas. Major transportation pipelines usually impose restrictions on the make-up of the natural gas that is allowed into the pipeline. That means that before the natural gas can be transported it must be purified. While the ethane, propane, butane, and pentanes must be removed from natural gas, this does not mean that they are all 'waste products'.¶ In fact, associated hydrocarbons, known as 'natural gas liquids' (NGLs) can be very valuable by-products of natural gas processing. NGLs include ethane, propane, butane, iso-butane, and natural gasoline. These NGLs are sold separately and have a variety of different uses; including enhancing oil recovery in oil wells, providing raw materials for oil refineries or petrochemical plants, and as sources of energy**.**

#### Reasonability---competing interpretations are a race to the bottom to arbitrary exclude the aff

## Warming

### Coal Impact

#### Coal fired power plants perpetuate eco-racism all across our communities in Chicago---speaking out is key

Arriaga ‘11 – Greenpeace Volunteer and Local Chicagoan

Faces of Chicago's coal fight, August 5, 2011, This is a guest blog by Luis Arriaga, a Greenpeace volunteer leader in Chicago

http://www.greenpeace.org/usa/en/news-and-blogs/campaign-blog/faces-of-chicagos-coal-fight/blog/36253/

Growing up next to a state park was a blessing. I got to experience nature first hand, but there is something off about Silver Springs State Park. Giant power line towers went up through the park sometime in my childhood. Power lines that can most likely be traced back to one of Chicago's two coal power plants. While I got the benefit of relatively clean air, the children who live around where those power lines start didn't.¶ My name is Luis Arriaga. I grew up in the far southwest suburbs of Chicago. I am a 23-year-old journalism student at Columbia College entering my last semester. I chose to get involved with Greenpeace in Chicago to actively engage others in the fight against the dirty air every Chicagoan breathes. It's one thing to write about the battle for clean air and another to actually be at the forefront speaking to people one on one about the root causes of the dangerous quality of air entire communities in Chicago are forced to bear.¶ Being a first time volunteer for Greenpeace at such a crucial moment in the history of Chicago has left me thankful. Thankful for Greenpeace and the grassroots organizations in Chicago that have fought the Crawford and Fisk power plants for so long.¶ Last week, sitting through a city hall meeting with 150 people in support of the Clean Power Ordinance was inspiring. People in green tee shirts showed up in droves to show support for shutting down these dirty old coal plants and build a healthier future in Chicago.¶ I was inspired by people my age like Stephanie Dunn, who has committed to a five-day hunger strike for the ordinance. She was on day three of her strike in Chicago's Daley Plaza when I spoke with her for the first time.¶ She isn't out there representing any one organization; she's out on her own terms. She has set her own agenda. Dunn has lived in both Pilsen and Little Village; the two neighborhoods home to Chicago's Crawford and Fisk coal power plants. She knows just how severe the health consequences of having two coal-powered plants are for the communities they inhabit. She believes that allowing them to continue at full capacity would be to continue a form of eco-racism.

### Warming Impact

#### Warming perpetuates racist inequalities

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

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

### AT: Apocalyptic

#### Apocalyptic rhetoric motivates action on climate change – it causes emancipation, not climate fatigue

Beck 10 (Ulrich, Professor of Sociology at University of Munich, the British Journal of Sociology Visiting Centennial Professor at the London School of Economics and Political Sciences, and, since 2009, Senior Loeb Fellow at the Harvard Design School, “Climate for Change, or How to Create a Green Modernity?”, Theory Culture Society 2010 27: 254)

Sixth thesis: The political explosiveness of global risks is largely a function of their (re-)presentation in the mass media. When staged in the media, global risks can become 'cosmopolitan events'. The presentation and visualization of manufactured risk makes the invisible visible. It creates simultaneity, shared involvement and shared suffering, and thereby creates the relevance for a global public. Thus cosmopolitan events are highly mediatized, highly selective, highly variable, highly symbolic local and global, public and private, material and communicative, reflexive experiences and blows of fate.¶ To understand this, we have to draw upon the picture of 'Mediapolis' so minutely and sensitively painted by Silverstone (2006) and the picture sketched much earlier by Dewey (1946). There Dewey defends the thesis that it is not actions but their consequences which lie at the heart of politics. Although he was not thinking of global warming, BSE or terrorist attacks, his theory can be applied perfectly to world risk society. A global public discourse does not arise out of a consensus on decisions, but rather out of disagreement over the consequences of decisions. Modern risk crises are constructed out of just such controversies over consequences. Although some insist on seeing an overreaction to risk, risk conflicts do indeed have an enlightening function. They destabilize the existing order but can also be seen as a vital step towards the construction of new institutions. Global risk has the power to confuse the mechanisms of organized irresponsibility and even to open them up for political action.¶ This view of 'enforced enlightenment' and 'cosmopolitan realism' opens up the possibility that the 'manufactured uncertainties' and 'manufactured insecurities' produced by world risk society prompt transnational reflexivity, global cooperation, coordinated responses against the background of 'cosmopolitan communities of risk', so the same processes may also prompt much else besides. My emphasis on staging follows from the fact that my central concept is not 'crisis' but 'new global risk'. Risks are, essentially, man-made, incalculable, uninsurable threats and catastrophes which are anticipated but which often remain invisible and therefore depend on how they become defined and contested in 'knowledge'. As a result their 'reality' can be dramatized or minimized, transformed or simply denied, according to the norms which decide what is known and what is not. They are, to repeat myself, products of struggles and conflicts over definitions within the context of specific relations of definitional power and the (in varying degrees successful) results of staging. If this is the core understanding of risk, then this means that we must attach major significance to media staging and acknowledge the potential political explosiveness of the media.¶ How does this correspond to empirical facts? As Cottle (2009) argues, the release in early 2007 of the latest International Panel on Climate Change report proved to be a transformative moment in the news career of climate change (IPCC, 2007). At first climate change featured relatively infrequently in scientifically framed news reports, then it was contested by a small group of news-privileged climate change sceptics, and finally it came of age as a widely recognized 'global risk' demanding responses from all the world's nations. If IPCC predictions and those of more recent scientific modelling come to pass over the next couple of decades, then climate change may yet prove to be the most powerful of forces summoning a civilizational community of fate into existence.¶ The Western news media's spectacular visualization of climate change, presenting dramatic and symbolic scenes collected from around the world, has undoubtedly helped to establish the latter's status as a widely recognized global challenge and serves to illuminate a third-generational modernity staged as global spectacle. Here the news media do not only function in terms of a global focusing of events; rather, the news media adopt a more performative stand, actively enacting certain issues as 'global risks'. Images which function in a more indexical sense to stand in for global processes of climate change now regularly feature across the news landscape. And here some sections of the news media have sought to champion climate change awareness, often through visually arresting images which aim to register the full force and threat produced by global warming around the world. In images such as these, the abstract science of climate change is rendered culturally meaningful and politically consequential; geographically remote spaces become literally perceptible, 'knowable' places of possible concern and action. This performative use of visual environmental rhetoric is not confined to selected newspapers; interestingly enough, it has become mainstream. In this way the threat and reality of global climate change has been 'brought home', especially in the West, as possibly 'the' global risk of the age.¶ On the other hand, the continuing pull of the national within the world's news formations and discourses cannot be underestimated. This is, of course, true in the case of wars. Wars continue to be reported through spectacles tinted by national interests. However, as climate change moves into a new phase of national and international contention, countries, corporations and citizens are also negotiating their respective roles and responsibilities, whether in respect of national policies of mitigation and adoption, or through governmental support of developing countries confronting the worst effects of global warming. Here, too, actions and reactions are often reported in and through national news prisms and frames of reference.¶ However, the narrative of global risk is misinterpreted as a narrative of the Western 'emergency imaginary' (Calhoun, 2004). It is not a 'singing into the apocalypse', and it is not simply a 'wake-up call to reality'. Rather it is about expectation and anticipation, it is about a narrative to dream differently. 'Emancipation' is the key word. Either the ecological concern manages to be at least as powerful as this hunger for modernization or it is condemned to repeated failure.

### No Solvency

#### No CO2 turn

**Asakura**, Professor @ Azabu University, **2k** (Asakura, Keiichiro, Collins, Patrick, Nomura, Koji, Hayami, Hitoshi, and Yoshioka, Kanji, Department of Environmental Policy @ Azabu University, " CO2 Emission from Solar Power Satellite through its Life Cycle: Comparison of Power Generation Systems using Japanese Input-Output Tables," July, http://policy.rutgers.edu/cupr/iioa/AsakuraCollinsNomuraHayami&Yoshioka\_LifeCycleCO2.pdf, EMM)

In this paper we have analyzed the CO2 emission likely to be produced by a system of Solar Power Satellites in as much detail as possible, based on the DOE/NASA Reference System. Based on this analysis, in order to satisfy Japan's present electricity supply, some 18 SPSs of 5 GW output would be needed, which we have estimated would release some 470 million tons of CO2. Japan currently releases some 1.2 billion tons of CO2 per year, so it is clear that a large amount of CO2 is released when the SPS system is constructed. However, the overall CO2 output is of the same order as nuclear power stations at 20 kg per kWh. This is about 1/60 of the output of coal- red power stations, and 1/30 of the CO2 output of LNG- red power stations. Furthermore, the SPS-Breeder scenario shows signifcant improvement in CO2 emissions at only 11g per kWh. Of course SPS is a future technological system, and potential problems concerning various parts and components remain to be resolved, but our result suggests that the SPS is one of the most effective alternative technology for further CO2 reduction in electric power generation. One of the ways to solve Earth-wide environmental problems is to generate electric power in environmentally clean ways. The SPS system may give us the opportunity to solve this problem and to initiative the escape from a 'closed-Earth' industrial-economic system.

#### Yes solvency---doesn’t assume SPS-ALPHA---new modularized module

Garretson 12 – Lt Col Peter Garretson is an airpower strategist currently serving on the CSAF’s Strategic Studies Group (HAF/CK). His previous assignment was at the Institute for Defence Studies and Analyses in New Delhi as an Air Force Fellow examining Indo–US long-term space collaboration under the sponsorship of the Council on Foreign Relations. Prior to that he was the chief of future science and technology exploration for the HQ USAF Directorate of Strategic Planning (AF/A8XC), Spring 2012, "Solar Power in Space?" Strategic Studies Quarterly Spring, <http://www.au.af.mil/au/ssq/2012/spring/garretson.pdf>

As of 2010, the fundamental research to achieve technical feasibility for the SPS [solar-power satellites] was already accomplished. Whether it requires 5–10 years or 20–30 years to mature the technologies for economically viable SPS now depends more on the development of appropriate platform systems concepts and the availability of adequate budgets. —International Academy of Astronautics (IAA), 2011 The world needs a constant supply of uninterrupted electrical power to enable and sustain economic growth; power its cities, factories, and vehicles; and provide energy for heating, cooling, lighting, cooking, and desalination. Long term, it is desirable to transition from an energy system based on fossil fuels—an exhaustible resource which alters the composition of our atmosphere with unknown long-term effects on our climate— to a system based upon renewable sources. Many see solar power as the answer, because the resource is so vast and available. However, traditional solar power has limitations that make it less than a perfect match for our society. It is highly intermittent (only a 20-percent duty cycle) due to weather effects (clouds, rain, dust), and its low density requires vast tracks of land. Worst of all, it is not available at night, requiring vast storage or nonrenewable backup systems. Space-based solar is an innovation designed to retain[s] the advantages of traditional solar power while sidestepping the disadvantages. The basics of the idea are quite simple. Rather than cope with the unpredictability and intermittency of solar power on the ground, go where the sun always shines. In geostationary orbit (GEO), the sun shines constantly and is 36 percent stronger, allowing a solar array to collect almost 10 times the amount of energy as the same array installed at mid latitude on the ground (see fig.1). Power can then be transferred (beamed) directly to where it is needed. The technologies to do this are not magic or unfamiliar—they are the same elements used every day to emplace, power, and communicate with every existing satellite. Building the SBSP system would rely on the same familiar solar cells, radio transceivers, and rockets to propel them to GEO, only assembled on a grand different scale. In a mature system-of-systems, multiple solar-power satellites would reside in geostationary orbit, each collecting vast amounts of power and transmitting it through active electronic beam steering, like routers in a vast orbiting power internet. While appearing to hover above a particular location, each SPS could service multiple markets, providing power on demand to urban centers or remote locations. For example, a single satellite south of Baja California could service markets across most of North and South America; a satellite over the Indian Ocean could service markets as far apart as Africa and Indonesia, and from Diego Garcia to as far north as Russia. 1 Power in this system-of-systems would be transmitted using a technique called retrodirective phased array, where an encrypted pilot signal from the ground handshakes with the satellite’s active electronic beam-steering system to link transmitter and receiver. The beam itself would be in the ISM band (typically 2.45 or 5.8 GHz), so that it passes nearly full strength through the atmosphere, clouds, and rain. Because of low atmospheric losses (<2 percent), extremely efficient reconversion (>80 percent), and most of all, constant illumination, the beam can be safely kept at an amazingly low intensity (only one-sixth the intensity of sunlight) and yet be significantly more energy productive than a comparably sized terrestrial solar plant. The location and diameter of the beam are predictable and well confined. Unlike communications satellites—which, because of their small-aperture antennas, cast continent-sized footprints and must be separated by degrees (and thousands of miles) on orbit to deconflict signals—SPSs have very large apertures and therefore can send very narrow beams, allowing them to be spaced much closer together. The beam itself terminates on a receiver called a rectenna, with peak intensity in its center and tapering to nearly nothing at the periphery. The rectenna, about the size of a municipal airport, is a mesh of dipole antennas that capture all the incident energy from the beam. It is nevertheless 80 percent transparent to sunlight, allowing the land beneath to remain available for agricultural uses.

### AT: Negative Feedbacks

#### No negative feedbacks

**They’re net positive – five more reasons**

**Ghotge and Gambhir 7** [Sanjeev, Senior Fellow at the World Institute of Sustainable Energy, and Ashwin, October 5, “Global Climate Change: Threat To Nature And Human Society”, http://www.countercurrents.org/gambhir051007.htm]

As if the story uncovered thus far by the scientists were not sufficiently dismal, there is worse to follow in terms of webs of consequences that may follow from the processes unleashed by global warming. In the language of scientists, these are referred to as "positive feedbacks". In simple terms, when the consequence of a particular change in a system tends to bring about a further change in the system orientation in the magnitude and direction of the original change, the scientists refer to it as "positive feedback" i.e. change leading to further acceleration of change. A simple analogy may serve to clarify. Most of us are familiar with the automobile. When the steering wheel of an automobile in motion is turned in a particular direction, the steering linkage is designed in such a way that it will automatically revert to the straight position – this would correspond to "negative feedback", restoring the system to stability. Suppose, on the contrary, that the steering linkage was designed such that a small turn of the steering wheel kept on turning the whole automobile further in the direction of the initial turn of the steering wheel – that would correspond to "positive feedback", and an accident would result. The scientific community is deeply concerned that global warming may initiate a chain reaction due to several identified mechanism of "positive feedback", driving the entire climate system towards further instability. The identified feedback mechanisms are :§ global warming leads to **polar ice melt**, replacing ice with water; whereas ice reflects incoming solar radiation back into space, water tends to absorb and retain incoming solar radiation, thereby increasing the warming effect; § atmospheric warming increases evaporation of water, adding **water vapour** into the atmosphere and this water vapour is itself a contributor to the greenhouse effect, trapping heat in the atmosphere; § atmospheric warming leading to drying out of forests and grasslands, leading to **spontaneous fires** over large areas which will contribute large volumes of carbon dioxide into the atmosphere § shorter winters leading to earlier melting of **ice on land**, opening the land to greater absorption of solar radiation and contributing further to atmospheric heating § atmospheric warming leading to warming of **ocean surface layer**, causing it to release dissolved carbon dioxide back into the atmosphere, increasing the greenhouse effect § atmospheric warming causing pools of water to form on polar ice surfaces; these warming pools of water tunnel through the polar ice caps to land surfaces below, lubricating the interface between land and ice cap and causing ice shelves to disintegrate rapidly into the surrounding seas, decreasing the ice areas which reflect solar radiation back into space § atmospheric warming leading to heating of permafrost areas in high northern latitudes; these permafrost areas release huge quantities of trapped methane gas, accelerating atmospheric heating These seven "positive feedback" cycles, many scientists feel, will start becoming operational at a stabilized atmospheric carbon dioxide concentration level of 450 ppm. Today, we are already at a CO2 equivalent level of 430 ppm, and increasing at the rate of about 2 ppm per year. It does not take any great mathematical skill to arrive at the conclusion that we have at most 10 years time to stabilize concentration at 450 ppm, which corresponds to a stabilized global temperature increase of 2º C. However, even the 2º C limit to prevent "positive feedbacks" from getting triggered is, at best, an educated guess by scientists. The simple truth is that nobody knows the exact limit, beyond which an irreversible ecological chain reaction would be set into motion. Moreover, the meaning of a 2º C average rise in temperature needs to be understood within the overall context of the climate system. In climate terms, the difference between the last ice age and present average temperature is 6º C, so that a 2º C temperature is very significant.

## Advocacy

### AT: Prior Questions

#### Action with policy relevance is key when survival is at stake---ontology and epistemology are irrelevant

Norton 5 (Bryan G, professor of philosophy at the Georgia Institute of Technology, “Sustainability: A Philosophy of Adaptive Ecosystem Management”, University of Chicago Press, November 1, 2005, pp. 151-154)

Pragmatists pay attention to the particularities of unique situations. In action-forcing situations, it is often possible to provide helpful, if context- sensitive, guidance to decide what to accept as certain enough to guide action and what is not so certain and therefore requires further study. These decisions, which occur within a value-laden context, allow us to use agreements about values—however limited and situation-specific—to accept certain goals as consensus goals. Then we can pursue observations and management experiments to reduce debilitating uncertainty regarding techniques to achieve those goals. Shared values and goals can, in this way, sometimes serve as the solid ground on which to stand to undertake experimentation with means to achieve the goals, thereby reducing uncertainty about system functioning. At other times, of course, beliefs about the system and its behavior seem undeniable, and we can stand on these planks to deliberate about realistic and wise goals. The epistemology of adaptive management thus provides for gradual progress and improvement of both our belief system and our preferences and values, by using experience to triangulate between temporarily accepted beliefs and values. The most controversial aspect of this knowledge- seeking strategy, perhaps, is the idea that in concrete situations shared values can sometimes serve as a solid basis upon which to pursue mission-oriented science to reduce uncertainty about outcomes of our choices. To explore this idea, it is essential that we understand environmental values in such a way that through successive applications of our method, values can be improved over time. In this and the remaining chapters in part 2,1 provide such a context-sensitive approach that can serve to bootstrap both our values and our factual understanding of management situations simultaneously.¶ Likening our epistemological problem to a ride on Neuraths boat, which is required to stay afloat indefinitely while repairs are made, we can understand our problem as one of deciding which of our beliefs to accept as strong enough and which should be submitted to immediate and critical review and testing. Sailors on the boat are motivated by their desire to survive, and so they undertake the repairs on the boat with great deliberation and care. They must not only make important technical judgments regarding which planks are becoming weak with age and rot, but they must also make judicious choices regarding which planks must, given the importance of their function, be given priority. Analogously, as adaptive managers, we are driven by the desire to stay afloat and to prosper as a community, and we must similarly decide carefully what beliefs to accept as given, which should be doubted, and which points of uncertainty are of highest priority, given the shared goals of the community. Like Neuraths sailors, we must make such epistemological judgments under pressure; if we guess wrong and stand on a weak board to fix a stronger one, we face danger, if we stand on a strong board and fix a weak one, we could still face danger if, for example, we choose to fix weak boards of no direct importance to the seaworthiness of the vessel and ignore others that might fail catastrophically. We must, like Justice Holmes's judge, act in a way that fulfills several social demands, including the demand that the present decision be both consistent with precedent and legal tradition and also responsive to the new demands of a new situation.¶ The particular context of a real management dilemma—a context always suffused with value—can be very important for pragmatists in determining which beliefs should be accepted, however provisionally, and which should be submitted to more intense scrutiny by observation and experiment. The necessity of acting—and refraining from action is itself an action—enforces a kind of discipline, a discipline felt in a particular situation with real values at stake. In some situations, for example when the very existence of the community is threatened, decisions can be seen against a backdrop of unquestioned values (community survival); in these situations consensus on values may be far stronger than consensus on science. Epistemological decisions, in situations where decisions are forced and important values are at stake, thus involve judgments of importance as well as truth. We can only examine our whole belief system and try to find some beliefs we can temporarily place beyond doubt. Given the goal of management, we first concentrate on beliefs that are most important to the ongoing voyage, postponing examination of others until later: we keep our ship afloat, gradually transforming it plank by plank. Similarly, adaptive managers sometimes, by hypothesis, help themselves to a platform of beliefs in order to question the goals that should be pursued; and at other times we assume our goals are worthy ones and proceed to test appropriate scientific hypotheses related to the attainment of those goals. Optimistically, the adaptive manager believes that this platform, which shifts over time and in the process of many trials, yields improved understanding and improved goals through an alternation between action and reflection. This may be the only effective way to respond to wicked problems as they arise in a community with diverse and sometimes competing values.¶ Of course one might object that this whole process is circular and that no "true" justification of goals or actions takes place. We assume facts to support values, and we then stand on the values to support the importance of scientific research to reduce uncertainty and to allow actions to support those values. Now we play our epistemological trump card—the ability of diverse communities, if they operate in an open, democratic mode—to focus attention on weak assumptions and unjustifiable principles. In open public debate and open public processes, when well-informed stakeholders have free access to information and to political institutions, diverse members of a community will have an incentive to identify weaknesses—scientific, economic, and moral—in policies proposed by competing groups. If a process can be created that mimics the process the repairmen on Neuraths boat must develop if they are to survive, then we can give up the dry dock of a priori, self-evident truths and trust science and the observational method, especially if empowered by a strong sense of shared community values, to identify weak planks and keep the boat afloat. So a reasonable way to proceed, in an adaptive management framework, is to inspire stakeholders and participants to challenge and question both the beliefs of science and the proposed goals and values. Democracy, in this sense, can be a powerful engine of truth-seeking. A diverse population, in adaptive management as well as in Darwinian evolution, increases adaptability, by exploring a variety of available options, winnowing out the weak assumptions, and pursuing the most justifiable goals within a particular situation.¶ Provided Neuraths analogy is apt, we can proceed with our analysis, having established a crucial role for values in our epistemological choices; now we turn our attention to improving our understanding of, and language for describing, environmental values. We want to understand environmental values theoretically. As adaptive managers, however, we are also interested in the way they function in a process of local, community-based experimental management. So far I have emphasized the practical costs of not having at our disposal a coherent and intelligible language, and an associated explanatory theory, for discussing environmental values and policy. These practical difficulties were symbolized by the crooked corridors at EPA; and none of EPA's corridors of communication are more crooked and blocked than those through which information about environmental values and goals should flow.¶ One important requirement of straightened corridors of communication is the creation of an integrative language that allows cross-disciplinary and cross-interest-group communication. So one task is to develop some clearer ways of talking about environmental values, relating them to the statements of disciplinary and integrative sciences, and—most importantly and most practically—creating an enlightening, integrative discourse about environmental science, values, and policy goals. If we are to go beyond simply improving communication, however, and move toward substantive agreements about what to do to protect resources and live sustainably, we must also provide a theoretical structure that connects the ideal of sustainability to justifiable environmental policy goals that can be operationalized, goals that can be stated and pursued in real-life communities with real-life problems. The purpose of this part of the book is two-fold: to improve our linguistic tools for communication about environmental values and to offer the broad outlines of a positive theory of environmental values.¶ Pragmatists, from Peirce to Leopold, and adaptive managers are not anti-theory; they are; however, very wary of theory cut loose from possible observation. No beliefs are ultimately immune from revision in the face of experience; all theory must sooner or later stand the test of experience, which helps us to separate truth from falsehood and nonsense. This generalization applies to theories of environmental value no less than to empirical hypotheses about causal factors. The goal of such a process is to create theory as a general reflection of experience and to avoid a priori theory invoked to dictate the general shape of any environmental values. By testing proposed theories against their performance in articulating, clarifying, and justifying real environmental goals of real communities, we gradually hone a language that will help communities in the future to ask the right questions and to improve their chances of achieving meaningful improvements in their policies.

### AT: Identity Politics

#### Coalitions are key---Smith 10

#### Global warming movements are coming now thanks to a decline in identity politics --- their strategy crushes those movements --- causes extinction

George Monbiot, English Writer and Environmental and Political Activist, 9-4-2008, “Identity Politics in Climate Change Hell,” http://www.celsias.com/article/identity-politics-climate-change-hell/

If you want a glimpse of how the movement against climate change could crumble faster than a summer snowflake, read Ewa Jasiewicz’s article , published on the Guardian’s Comment is Free site. It is a fine example of the identity politics that plagued direct action movements during the 1990s, and from which the new generation of activists has so far been mercifully free. Ewa rightly celebrates the leaderless, autonomous model of organising that has made this movement so effective. The two climate camps I have attended – this year and last – were among the most inspiring events I’ve ever witnessed. I am awed by the people who organised them, who managed to create, under extraordinary pressure, safe, functioning, delightful spaces in which we could debate the issues and plan the actions which thrust Heathrow and Kingsnorth into the public eye. Climate camp is a tribute to the anarchist politics that Jasiewicz supports. But in seeking to extrapolate from this experience to a wider social plan, she makes two grave errors. The first is to confuse ends and means. She claims to want to stop global warming, but she makes that task 100 times harder by rejecting all state and corporate solutions. It seems to me that what she really wants to do is to create an anarchist utopia, and use climate change as an excuse to engineer it. Stopping runaway climate change must take precedence over every other aim. Everyone in this movement knows that there is very little time: the window of opportunity in which we can prevent two degrees of warming is closing fast. We have to use all the resources we can lay hands on, and these must include both governments and corporations. Or perhaps she intends to build the installations required to turn the energy economy around - wind farms, wave machines, solar thermal plants in the Sahara, new grid connections and public transport systems - herself? Her article is a terryifying example of the ability some people have to put politics first and facts second when confronting the greatest challenge humanity now faces. The facts are as follows. Runaway climate change is bearing down on us fast. We require a massive political and economic response to prevent it. Governments and corporations, whether we like it or not, currently control both money and power. Unless we manage to mobilise them, we stand a snowball’s chance in climate hell of stopping the collapse of the biosphere. Jasiewicz would ignore all these inconvenient truths because they conflict with her politics. “Changing our sources of energy without changing our sources of economic and political power”, she asserts, “will not make a difference. Neither coal nor nuclear are the “solution”, we need a revolution.” So before we are allowed to begin cutting greenhouse gas emissions, we must first overthrow all political structures and replace them with autonomous communities of happy campers. All this must take place within a couple of months, as there is so little time in which we could prevent two degrees of warming. This is magical thinking of the most desperate kind. If I were an executive of E.On or Exxon, I would be delighted by this political posturing, as it provides a marvellous distraction from our real aims. To support her argument, Jasiewicz misrepresents what I said at climate camp. She claims that I “confessed not knowing where to turn next to solve the issues of how to generate the changes necessary to shift our sources of energy, production and consumption”. I confessed nothing of the kind. In my book Heat I spell out what is required to bring about a 90% cut in emissions by 2030. Instead I confessed that I don’t know how to solve the problem of capitalism without resorting to totalitarianism. The issue is that capitalism involves lending money at interest. If you lend at 5%, then one of two things must happen. Either the money supply must increase by 5% or the velocity of circulation must increase by 5%. In either case, if this growth is not met by a concomitant increase in the supply of goods and services, it becomes inflationary and the system collapses. But a perpetual increase in the supply of goods and services will eventually destroy the biosphere. So how do we stall this process? Even when usurers were put to death and condemned to perpetual damnation, the practice couldn’t be stamped out. Only the communist states managed it, through the extreme use of the state control Ewa professes to hate. I don’t yet have an answer to this conundrum. Does she? Yes, let us fight both corporate power and the undemocratic tendencies of the state. Yes, let us try to crack the problem of capitalism and then fight for a different system. But let us not confuse this task with the immediate need to stop two degrees of warming, or allow it to interfere with the carbon cuts that have to begin now. Ewa’s second grave error is to imagine that society could be turned into a giant climate camp. Anarchism is a great means of organising a self-elected community of like-minded people. It is a disastrous means of organising a planet. Most anarchists envisage their system as the means by which the oppressed can free themselves from persecution. But if everyone is to be free from the coercive power of the state, this must apply to the oppressors as well as the oppressed. The richest and most powerful communities on earth - be they geographical communities or communities of interest - will be as unrestrained by external forces as the poorest and weakest. As a friend of mine put it, “when the anarchist utopia arrives, the first thing that will happen is that every Daily Mail reader in the country will pick up a gun and go and kill the nearest hippy.” This is why, though both sides furiously deny it, the outcome of both market fundamentalism and anarchism, if applied universally, is identical. The anarchists associate with the oppressed, the market fundamentalists with the oppressors. But by eliminating the state, both remove such restraints as prevent the strong from crushing the weak. Ours is not a choice between government and no government. It is a choice between government and the mafia. Over the past year I have been working with groups of climate protesters who have changed my view of what could be achieved. Most of them are under 30, and they bring to this issue a clear-headedness and pragmatism that I have never encountered in direct action movements before. They are prepared to take extraordinary risks to try to defend the biosphere from the corporations, governments and social trends which threaten to make it uninhabitable. They do so for one reason only: that they love the world and fear for its future. It would be a tragedy if, through the efforts of people like Ewa, they were to be diverted from this urgent task into the identity politics that have wrecked so many movements.

### AT: Communication Theory

#### The exclusions of liberalism are a reason to reform it via refining democratic decision-making

Amanda Anderson 6, Andrew W. Mellon Professor of Humanities and English at Brown University, Spring 2006, “Reply to My Critic(s),” Criticism, Vol. 48, No. 2, p. 281-290

In closing, I'd like to speak briefly to the question of proceduralism's relevance to democratic vitality. One important way of extending the proceduralist arguments put forth by Habeimas is to work on how institutions and practices might better promote participation in democratic life. The apathy and nonparticipation plaguing democratic institutions in the United States is a serious problem, and can be separated from the more romantic theoretical investments in a refusal to accept the terms of what counts as argument, or in assertions of inassimilable difference. With respect to the latter, which is often glorified precisely as the moment when politics or democracy is truly occurring, I would say, on the contrary democracy is not happening then-rather, the limits or deficiencies of an actually existing democracy are making themselves felt. Acknowledging struggle, conflict, and exclusion is vital to democracy, but insisting that exclusion is not so much a persistent challenge for modern liberal democracies but rather inherent to the modern liberal-democratic political form as such seems to me precisely to remain stalled in a romantic critique of Enlightenment. It all comes down to a question of whether one wants to work with the ideals of democracy or see them as essentially normative in a negative sense: this has been the legacy of a certain critique of Enlightenment, and it is astonishingly persistent in the left quarters in the academy. One hears it clearly when Robbins makes confident reference to liberalisms tendency to ignore "the founding acts of violence on which a social order is based." One encounters it in the current vogue for the work of Giorgio Agamben and Carl Schmitt. Saying that a state of exception defines modernity or is internal to the law itself may help to sharpen your diagnoses of certain historical conditions, but if absolutized as it is in these accounts, it gives you nothing but a negative diagnostic and a compensatory flight to a realm entirely other-the kind of mystical, Utopian impulse that flees from these conditions rather than confronts and fights them on terms that derive from the settled-if constantly evolving-normative basis of democratic modernity. If one is outraged by the flagrant disregard of democratic procedures in the current U.S. political regime, then one needs to be able to coherently say why democratic procedures matter, what principles underwrite them, and what historical movements and institutions have helped us to secure and support them. Argument as a critical practice and as a key component of democratic institutions and public debate has a vital role to play in such a task.

### AT: Sustainability

#### Doesn’t assume the aff

#### Innovation and adaptation make growth sustainable---green tech investment solves

Harte and Harte 12 John, Professor of Ecosystem Sciences at the University of California, Berkeley and Mary Ellen, biologist and columnist who writes on climate change and population, “Alarmism Is Justified”, Foreign Affairs, 00157120, Sep/Oct 2012, Vol. 91, Issue 5

The Limits to Growth predicted catastrophe: humanity would deplete natural resources and pollute itself to death. Its solution was less economic growth, more recycling, and organic farming. My essay documented how the book's predictions were wildly off, mainly because its authors ignored how innovation would help people overcome environmental challenges.¶ Because the book's goal was so dramatic -- averting the end of the world -- its recommendation was for society to simultaneously do everything in its power to forestall that outcome. Today, much of the environmental movement continues to evince such alarmism and, consequently, is unable to prioritize. Developed countries focus as much on recycling, which achieves precious little at a high cost, as they do on attaining the much larger benefits from tackling air pollution, a massive, if declining, threat. Meanwhile, some environmentalists' demands are simply counterproductive. Avoiding pesticides, for example, means farming more land less efficiently, which leads to higher prices, more hunger, more disease (because of a lower intake of fruits and vegetables), and less biodiversity.¶ My essay argued that although the The Limits to Growth's analysis has been proved wrong, much of its doomsaying and policy advice still pervades the environmental debate 40 years later. These four critiques, instead of refuting my argument, in fact vindicate it.¶ First, only Dennis Meadows really tries to defend The Limits to Growth's predictions of collapse, and he does so with little conviction. Second, at least some of the responses accept in principle that society needs to prioritize among its different environmental goals and that economic growth will make achieving them easier -- in Frances Beinecke's words, "prosperity often leads to greater environmental protection." Third, all four of the critiques of my essay rely on the language of doom to motivate action, which, to the detriment of the environment, convinces society that it must pursue all its environmental goals at once, regardless of the costs and benefits. Finally, by focusing on the threats of economic growth to the environment, the authors generally neglect that growth has lifted billions of people out of grinding poverty and that others may remain poor because of the developed world's environmental concerns, real or imagined.¶ WRONG AGAIN¶ Defending The Limits to Growth, Meadows curiously complains that I address only the original book, which is "long out of print." He then posits that my case rests on one table from that book, on resource depletion, which he says I misrepresent. That is incorrect on several counts.¶ First, it is patently false to claim, as Meadows does by way of a quotation from Matthew Simmons, that "nowhere in the book was there any mention about running out of anything by 2000." (Jørgen Randers makes a similar point.) The Limits to Growth quoted approvingly the first annual report by the U.S. government's Council on Environmental Quality, in 1970: "It would appear at present that the quantities of platinum, gold, zinc and lead are not sufficient to meet demands. At the present rate of expansion … silver, tin and uranium may be in short supply even at higher prices by the turn of the century." Meadows' own table publicized "the number of years known global reserves will last at current global consumption," showing that gold, lead, mercury, silver, tin, and zinc would not last to the year 2000. The instances go on.¶ According to the book's model, the main driver of the global system's so-called collapse would be the depletion of resources, and averting that outcome was the book's widely publicized rallying cry. So focusing on that aspect of the book can hardly be called a misrepresentation. What is more, claiming that this is my only critique ignores that I also showed how the book got pollution wrong and how its analysis of collapse simply did not follow.¶ Meadows and Randers both claim that in their model, pollution consisted of long-lived toxics, not air pollution. In fact, they were much more vague on this question in 1972. In the best case for their predictions of deadly pollution, they meant air pollution, which today accounts for about 62 percent of all environmental deaths, according to the World Bank and the World Health Organization. But if they indeed meant long-lived toxics, their prediction that "pollution rises very rapidly, causing an immediate increase in the death rate" has been clearly disproven by the declining global death rate and the massive reductions in persistent pollutants.¶ John Harte and Mary Ellen Harte put forth a similarly weak defense of The Limits to Growth, as they do not challenge my data. They quote an article by the ecologists Charles Hall and John Day to say that The Limits to Growth's results were "almost exactly on course some 35 years later in 2008." This is simply wrong when it comes to resource levels, as the data in my original article shows, and indeed the cited article contains not a single reference for its claims about oil and copper resource reductions.¶ Harte and Harte further argue that the increase in the cost of resources during the last ten years is evidence of "the limitations on the human enterprise." Meadows claims that this uptick may "herald a permanent shift in the trend." Yet neither carries through the argument, because the empirical data from the past 150 years overwhelmingly undermine it. The reason is that a temporary increase in the scarcity of a resource causes its price to rise, which in turn encourages more exploration, substitution, and innovation across the entire chain of production, thereby negating any increase in scarcity.¶ Harte and Harte demonstrate the unpleasant arrogance that accompanies the true faith, claiming that I "deny" knowledge, promote "scientific misconceptions," and display "scientific ignorance." They take particular issue with my assertion that DDT is a cheap solution to malaria, stating that I overlooked the issue of biological resistance. In fact, all malarial treatments face this problem, but DDT less so than the others. Whereas many malarial treatments, such as dieldrin, work only by killing insects, DDT also repels and irritates them. Dieldrin strongly selects for resistance, whereas DDT works in three ways and even repels 60 percent of DDT-resistant mosquitoes.¶ FALSE ALARM¶ All four critiques contain grand dollops of doom. Beinecke invokes "alarming" environmental problems from overfishing to the destruction of the rain forests and global warming. These are real issues, but they, too, deserve practical thinking and careful prioritization. Fish and rain forests, like other resources subject to political control, tend to be overused. By contrast, when resources are controlled by individuals and private groups, their owners are forced to weigh long-term sustainability.¶ Indeed, Beinecke's response reflects the most unfortunate legacy of The Limits to Growth: because of its persistent belief that the planet is in crisis, the environmental movement suggests tackling all environmental problems at once. This is impossible, of course, so society ends up focusing mainly on what catches the public's attention. Beinecke acknowledges that campaigns to enact environmental policy "emerged from what people saw with their own eyes: raw sewage in the Great Lakes, smog so thick that it obscured the George Washington Bridge, oil despoiling Santa Barbara's pristine beaches." Yet the smog killed more than 300,000 Americans annually, whereas the effects of the oil spills, although serious, were of a much lower order of magnitude.¶ She claims that the U.S. Clean Air Act somehow contradicts my argument, when I in fact emphasized that society should have focused much more on cleaner air. Today, roughly 135,000 Americans still die from outdoor air pollution each year, and two million people, mostly in the developing world, die from indoor air pollution. Instead of focusing on the many negligible environmental problems that catch the public's attention, as the U.S. Environmental Protection Agency did when it focused so heavily on pesticides in the 1970s and 1980s, government should tackle the most important environmental problems, air quality chief among them. Beinecke misses this tradeoff entirely.¶ Harte and Harte demonstrate a similar lack of proportion and priority. In response to my claim that a slightly larger portion of the world's arable land -- roughly five percent -- will need to be tapped in order to feed humanity, they offer an unsubstantiated fear that such an expansion would undermine "giant planetary ecosystems." Yet when they fret about pesticides, they seem impervious to the fact that eschewing them would require society to increase the acreage of land it farms by more than ten times that amount.¶ COOL DOWN¶ If The Limits to Growth erred in some of its quantitative projections, then perhaps, as Harte and Harte put it, its "qualitative insights [are] still valid today." Randers cites global warming as the new reason the book was right. Discussing his predictions for high carbon dioxide emissions, Randers writes, "This future is unpleasantly similar to the 'persistent pollution scenario' from The Limits to Growth."¶ But the comparison is unfounded and leads to poor judgment. In The Limits to Growth's, original formulation, pollution led to civilizational decline and death. Although many environmentalists discuss global warming in similarly cataclysmic terms, the scenarios from the Intergovernmental Panel on Climate Change project instead a gradually worsening drag on development. Standard analyses show a reduction of zero to five percent of global GDP by 2100, in a world where the average person in the developing world will be 23 times as rich as he or she is today.¶ Moreover, although the responses to my essay invoke global warming as a new rallying cry for environmental activism, they fail to suggest specific actions to avert it. Harte and Harte claim that "the scientific community knows how to transition to renewable clean energy." Sure, developed countries have the technical know-how to adopt clean energy, but they have not done so because it would still be phenomenally expensive. Policies aimed at stopping climate change have failed for the last two decades because much of the environmental movement, clutching dearly to The Limits to Growth's alarmism and confident sense of purpose, has refused to weigh the costs and benefits and has demanded that countries immediately abandon all polluting sources of energy.¶ Many economists, including the 27 climate economists involved in the 2009 Copenhagen Consensus on Climate conference, have pointed out smarter ways forward. The best means of tackling global warming would be to make substantial investments in green energy research and development, in order to find a way to produce clean energy at a lower cost than fossil fuels. As one of the leading advocates of this approach, I cannot comprehend how Harte and Harte could claim that I do not support clean-energy innovation.¶ Unfortunately, the world will be hard-pressed to focus on smarter environmental policies until it has expunged the dreadful doom of The Limits to Growth. And unless the environmental movement can overcome its fear of economic growth, it will also too easily forget the plight of the billions of poor people who require, above all, more and faster growth.

## Kritik

### Perm Text

#### Perm do both

#### Perm do the plan and the alternative in every other instance

#### Perm do the plan, then abolish the state after warming has been solved

### Perm Solvency

#### Inclusion of pragmatic, reformist coalitions is the only way to make radical critiques of white supremacy politically effective---the alt alone fails and generates backlash

Winant 97 – Howard Winant, Professor of Sociology and Director of the Center for New racial Studies at UC Santa Barbara, September-October 1997, “Behind Blue Eyes: Contemporary White Racial Politics,” online: http://www.soc.ucsb.edu/faculty/winant/whitness.html

Although the differences and indeed the hostility -- between the neoliberal and abolitionist projects, between the reform-oriented and radical conceptions of whiteness -- are quite severe, we consider it vital that adherents of each project recognize that they hold part of the key to challenging white supremacy in the contemporary US, and that their counterpart project holds the other part of the key. Neoliberals rightfully argue that a pragmatic approach to transracial politics is vital if the momentum of racial reaction is to be halted or reversed. Abolitionists properly emphasize challenging the ongoing commitment to white supremacy on the part of many whites.

Both of these positions need to draw on each other, not only in strategic terms, but in theoretical ones as well. The recognition that racial identities -- all racial identities, including whiteness -- have become implacably dualistic, could be far more liberating on the left than it has thus far been. For neoliberals, it could permit and indeed justify an acceptance of race-consciousness and even nationalism among racially-defined minorities as a necessary but partial response to disenfranchisement, disempowerment, and superexploitation. There is no inherent reason why such a political position could not coexist with a strategic awareness of the need for strong, class-conscious, transracial coalitions. We have seen many such examples in the past: in the anti-slavery movement, the communist movement of the 1930s (Kelley 1994), and in the 1988 presidential bid of Jesse Jackson, to name but a few. This is not to say that all would be peace and harmony if such alliances could come more permanently into being. But there is no excuse for not attempting to find the pragmatic "common ground" necessary to create them.

Abolitionists could also benefit from a recognition that on a pragmatic basis, whites can ally with racially-defined minorities without renouncing their whiteness. If they truly agree that race is a socially constructed concept, as they claim, abolitionists should also be able to recognize that racial identities are not either-or matters, not closed concepts that must be upheld in a reactionary fashion or disavowed in a comprehensive act of renunciation. To use a postmodern language I dislike: racial identities are deeply "hybridized"; they are not "sutured," but remain open to rearticulation. "To be white in America is to be very black. If you don't know how black you are, you don't know how American you are" (Thompson 1995, 429).v

#### Broad-based coalitions are key---any alternative gets coopted by the right

Clark 95—Professor of Law, Catholic University Law School. (Leroy, A Critique of Professor Derrick A. Bell's Thesis of the Permanence of Racism and His Strategy of Confrontation, 73 Denv. U.L. Rev. 23)

Lessons from the Movement: Broad Based Coalitions The civil rights movement, however, may provide some insights. The genius of that movement was its openness to involvement by as broad a spectrum of the black and white public as wished to make a contribution. Its message of mutually beneficial racial harmony changed public attitudes and the way institutions functioned. The labor movement of the 1920s and 1930s also had this character. The New Deal, which realized many labor union goals, eventually was accepted by a broad base of the public, so much so that Franklin Roosevelt was re-elected more times than any president who was not constitutionally limited to two terms. The task is more formidable today because issues are more complex and multifaceted than the straight forward propositions that blacks were entitled to equal treatment under the law, or that unions should have had a right to organize. But broad, mass-based organizing and public acceptance are the main elements needed today, and they must be revived before any significant reform is possible. This perspective renders Professor Bell's implicit endorsement of "Black Power"--the "Nobody will save us but ourselves" philosophy--particularly dysfunctional, given the current character of problems facing blacks and American society as a whole. Believing that blacks alone must free themselves is a sure route to Professor Bell's despair. n131 Solving the massive economic dislocation described above requires enlisting allegiance and support from a broad spectrum of the public. Too much emphasis on the interests of one's own group disrupts the ability to draw the American people into a sense of its true collective interests. We, as blacks, have, for many understandable reasons, contributed to the over-emphasis on black nationalism in the recent past. The Civil Rights Movement, for example, had to throw off condescending, paternalistic white leadership. However, excessive trumpeting of "Black Power," without supporting resources or strategy, destroyed some organizations, like the Student NonViolent Coordinating Committee. n132 Many whites found better things to do with their time and money when they were repeatedly told that they were not needed and that all of them were, irretrievably, the enemy. We must reverse that theme, because the right wing has profited--particularly in electoral politics--from playing out a kind of group counter-attack of "we the hard-working, family-oriented, (white) Americans" against all those irresponsible, taxeating "others." n133 Economic anxiety reinforces racial hoarding of opportunities and benefits; black progress is keyed to progress in society as a whole toward economic security.

### Impact Defense

#### **White supremacy isn’t a monolithic root cause---proximate causes determined through empirics are more likely---and their arg shuts off productive debate over solutions**

Shelby 7 – Tommie Shelby, Professor of African and African American Studies and of Philosophy at Harvard, 2007, We Who Are Dark: The Philosophical Foundations of Black Solidarity

Others might challenge the distinction between ideological and structural causes of black disadvantage, on the grounds that we are rarely, if ever, able to so neatly separate these factors, an epistemic situation that is only made worse by the fact that these causes interact in complex ways with behavioral factors. These distinctions, while perhaps straightforward in the abstract, are difficult to employ in practice. For example, it would be difficult, if not impossible, for the members of a poor black community to determine with any accuracy whether their impoverished condition is due primarily to institutional racism, the impact of past racial injustice, the increasing technological basis of the economy, shrinking state budgets, the vicissitudes of world trade, the ascendancy of conservative ideology, poorly funded schools, lack of personal initiative, a violent drug trade that deters business investment, some combination of these factors, or some other explanation altogether. Moreover, it is notoriously difficult to determine when the formulation of putatively race-neutral policies has been motivated by racism or when such policies are unfairly applied by racially biased public officials.

There are very real empirical difficulties in determining the specific causal significance of the factors that create and perpetuate black disadvantage; nonetheless, it is clear that these factors exist and that justice will demand different practical remedies according to each factor's relative impact on blacks' life chances. We must acknowledge that our social world is complicated and not immediately transparent to common sense, and thus that systematic empirical inquiry, historical studies, and rigorous social analysis are required to reveal its systemic structure and sociocultural dynamics. There is, moreover, no mechanical or infallible procedure for determining which analyses are the soundest ones. In addition, given the inevitable bias that attends social inquiry, legislators and those they represent cannot simply defer to social-scientific experts. We must instead rely on open public debate—among politicians, scholars, policy makers, intellectuals, and ordinary citizens—with the aim of garnering rationally motivated and informed consensus. And even if our practical decision procedures rest on critical deliberative discourse and thus live up to our highest democratic ideals, some trial and error through actual practice is unavoidable.

These difficulties and complications notwithstanding, a general recognition of the distinctions among the ideological and structural causes of black disadvantage could help blacks refocus their political energies and self-help strategies. Attention to these distinctions might help expose the superficiality of theories that seek to reduce all the social obstacles that blacks face to contemporary forms of racism or white supremacy. A more penetrating, subtle, and empirically grounded analysis is needed to comprehend the causes of racial inequality and black disadvantage. Indeed, these distinctions highlight the necessity to probe deeper to find the causes of contemporary forms of racism, as some racial conflict may be a symptom of broader problems or recent social developments (such as immigration policy or reduced federal funding for higher education).

#### Whiteness isn’t a monolithic root cause---they shut off productive debate over solutions – means the alt fails

Shelby 7 – Tommie Shelby, Professor of African and African American Studies and of Philosophy at Harvard, 2007, We Who Are Dark: The Philosophical Foundations of Black Solidarity

Others might challenge the distinction between ideological and structural causes of black disadvantage, on the grounds that we are rarely, if ever, able to so neatly separate these factors, an epistemic situation that is only made worse by the fact that these causes interact in complex ways with behavioral factors. These distinctions, while perhaps straightforward in the abstract, are difficult to employ in practice. For example, it would be difficult, if not impossible, for the members of a poor black community to determine with any accuracy whether their impoverished condition is due primarily to institutional racism, the impact of past racial injustice, the increasing technological basis of the economy, shrinking state budgets, the vicissitudes of world trade, the ascendancy of conservative ideology, poorly funded schools, lack of personal initiative, a violent drug trade that deters business investment, some combination of these factors, or some other explanation altogether. Moreover, it is notoriously difficult to determine when the formulation of putatively race-neutral policies has been motivated by racism or when such policies are unfairly applied by racially biased public officials.¶ There are very real empirical difficulties in determining the specific causal significance of the factors that create and perpetuate black disadvantage; nonetheless, it is clear that these factors exist and that justice will demand different practical remedies according to each factor's relative impact on blacks' life chances. We must acknowledge that our social world is complicated and not immediately transparent to common sense, and thus that systematic empirical inquiry, historical studies, and rigorous social analysis are required to reveal its systemic structure and sociocultural dynamics. There is, moreover, no mechanical or infallible procedure for determining which analyses are the soundest ones. In addition, given the inevitable bias that attends social inquiry, legislators and those they represent cannot simply defer to social-scientific experts. We must instead rely on open public debate—among politicians, scholars, policy makers, intellectuals, and ordinary citizens—with the aim of garnering rationally motivated and informed consensus. And even if our practical decision procedures rest on critical deliberative discourse and thus live up to our highest democratic ideals, some trial and error through actual practice is unavoidable.¶ These difficulties and complications notwithstanding, a general recognition of the distinctions among the ideological and structural causes of black disadvantage could help blacks refocus their political energies and self-help strategies. Attention to these distinctions might help expose the superficiality of theories that seek to reduce all the social obstacles that blacks face to contemporary forms of racism or white supremacy. A more penetrating, subtle, and empirically grounded analysis is needed to comprehend the causes of racial inequality and black disadvantage. Indeed, these distinctions highlight the necessity to probe deeper to find the causes of contemporary forms of racism, as some racial conflict may be a symptom of broader problems or recent social developments (such as immigration policy or reduced federal funding for higher education).

### Atl Fails/Backlash

#### Political systems historically constituted by white supremacy are not inevitably oppressive and don’t require abolishing America---setting the goal of the alternative as ending America and white supremacy entirely is politically ineffective---reforming whiteness to resolve the impacts of oppression is better

Sullivan 8 – Shannon Sullivan, Head of Philosophy and Professor of Philosophy, Women's Studies, and African and African American Studies at Pennsylvania State University, Spring 2008, “Whiteness as Wise Provincialism: Royce and the Rehabilitation of a Racial Category,” Transactions of the Charles S. Peirce Society: A Quarterly Journal in American Philosophy, Vol. 44, No. 2

It is commonly acknowledged today, at least in academic circles, that racial essences do not exist. Racial categories, including whiteness, are historical and political products of human activity, and for that reason the human racial landscape has changed [End Page 236] over time and likely will continue to change in the future. In the wake of this acknowledgement, critical race theorists and philosophers of race debate whether whiteness must be eliminated for racial oppression to be ended. Given whiteness’s history as a category of violent racial exclusion, eliminativists and “new abolitionists” have argued that it must be abolished. If “whiteness is one pole of an unequal relationship, which can no more exist without oppression than slavery could exist without slaves,” then as long as whiteness endures, so does racial oppression.2 In contrast, critical conservationists have claimed even though it has an oppressive past, whiteness could entail something other than racism and oppression. Moreover, since lived existential categories like whiteness cannot be merely or quickly eliminated, white people should work to transform whiteness into an anti-racist category.

I count myself as a critical conservationist, but I also acknowledge the force of eliminativist arguments. If whiteness necessarily involves racist oppression, then attempting to transform whiteness into an anti-racist category would be a fool’s game at best, and a covert continuance of white supremacy at worst. My goal here is not to rehearse the disagreement between new abolitionists and critical conservationists; excellent work explaining the details of their positions already exists.3 I instead approach that disagreement by asking the pragmatic question of whether a rehabilitated version of whiteness can be worked out concretely. What would a non-oppressive, anti-racist whiteness look like? What difference would or could it make to the lives of white and non-white people? If the question of how to transform whiteness cannot be answered in some practical detail—if it’s not a difference that makes a difference—then critical conservatism would amount to a hopeful, but ultimately harmful abstraction that makes no difference in lived experience and that damages anti-racist movements. In that case, abolitionism would appear to be the only alternative to ongoing white supremacy and privilege.

I propose turning to Josiah Royce for help with these issues, more specifically to his essay on “Provincialism.”4 This turn is not as surprising as it might initially seem given that Royce wrote explicitly about race in “Race Questions and Prejudices.”5 In that essay, Royce issued an anti-racist, anti-essentialist challenge to then-current scientific studies of race, especially anthropology and ethnology, which claim to prove the superiority of white people, and he even briefly but explicitly names whiteness a possible threat to the future of humanity. 6 I focus here on “Provincialism,” however, because even though the essay never explicitly discusses race, it can help explain the ongoing need for the category of whiteness and implicitly offers a wealth of useful suggestions for how to transform it. “Provincialism” is an exercise in critical conservation of the concept of provincialism, and while not identical, provincialism and whiteness share enough in common that “wise” provincialism can serve [End Page 237] as a model for developing “wise” whiteness.7 Royce’s essay thus can be of great help to critical philosophers of race wrestling with questions of whether and how to transformatively conserve whiteness. Exploring similarities and differences between wise provincialism and wise whiteness, I use Royce’s analyses of provincialism to shed light on why whiteness should be rehabilitated rather than discarded and how white people today might begin living whiteness as an anti-racist category.

Militantly oppositional black resistance generates backlash from the right and the left---it materially reverses efforts towards racial justice

Shelby 7 – Tommie Shelby, Professor of African and African American Studies and of Philosophy at Harvard, 2007, We Who Are Dark: The Philosophical Foundations of Black Solidarity

Even if it were possible to effectively mobilize a multicorporatist Black Power program without running afoul of democratic values or compromising broader egalitarian concerns, this form of black solidarity may not be pragmatically desirable because of factors that are exogenous to black communities. Thus far I have discussed this program without much consideration for how other ethnoracial groups would be likely to respond to its institutional realization. It is reasonable to assume that Black Power politics would engender a countermobilization on the part of nonblacks, and not just whites, seeking to protect their own interests. Indeed, if Carmichael and Hamilton were correct about the essentially ethnic basis of American politics, we should fully expect this kind of resistance. With increased political centralization and organizational autonomy, openly aimed at advancing black interests, we would also likely see a rise in white nationalism, where some whites increase their collective power through greater group self-organization and solidarity, as they have often done in the past and, to some extent, continue to do even now.51

Such resistance would not come solely from racists, however. Some potential allies would also be alienated by this nationalist program and may consequently become (further) disillusioned with the ideal of racial integration, indifferent to black problems, or disaffected from black people. Nonblacks would naturally view their relegation to "supporting roles" within black political organizations as a sign that their help in the struggle for racial justice is unneeded or unwanted; that their commitment to racial justice is in question; that blacks are more concerned with advancing their group interests than with fighting injustice; or that blacks do not seek a racially integrated society. Moreover, because those who have status and exercise power within institutions generally have a stake in preserving these institutional structures, even if they no longer serve the goals for which they were initially established, nonblacks have well-founded reasons to worry that black political organizations may, through sheer inertia or opportunism, become ends in themselves. Thus, although institutional autonomy might increase the organizational independence of blacks, the overall power of the group could be reduced because of isolation from other progressive forces. This situation would be particularly disastrous for blacks who live in minority-black electoral districts, for they cannot elect effective political representation without the support of like-minded nonblack citizens.

### AT: Social Death/Afropessimism

#### No social death – history proves

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

THE PREMISE OF ORLANDO PATTERSON’S MAJOR WORK, that enslaved Africans were natally alienated and culturally isolated, was challenged even before he published his influential thesis, primarily by scholars concerned with “survivals” or “retentions” of African culture and by historians of slave resistance. In the early to mid-twentieth century, when Robert Park’s view of “the Negro” predominated among scholars, it was generally assumed that the slave trade and slavery had denuded black people of any ancestral heritage from Africa. The historians Carter G. Woodson and W. E. B. Du Bois and the anthropologist Melville J. Herskovits argued the opposite. Their research supported the conclusion that while enslaved Africans could not have brought intact social, political, and religious institutions with them to the Americas, they did maintain significant aspects of their cultural backgrounds.32 Herskovits ex- amined “Africanisms”—any practices that seemed to be identifiably African—as useful symbols of cultural survival that would help him to analyze change and continuity in African American culture.33 He engaged in one of his most heated scholarly disputes with the sociologist E. Franklin Frazier, a student of Park’s, who empha- sized the damage wrought by slavery on black families and folkways.34 More recently, a number of scholars have built on Herskovits’s line of thought, enhancing our understanding of African history during the era of the slave trade. Their studies have evolved productively from assertions about general cultural heritage into more precise demonstrations of the continuity of worldviews, categories of belonging, and social practices from Africa to America. For these scholars, the preservation of distinctive cultural forms has served as an index both of a resilient social personhood, or identity, and of resistance to slavery itself. 35¶ Scholars of slave resistance have never had much use for the concept of social death. The early efforts of writers such as Herbert Aptheker aimed to derail the popular notion that American slavery had been a civilizing institution threatened by “slave crime.”36 Soon after, studies of slave revolts and conspiracies advocated the idea that resistance demonstrated the basic humanity and intractable will of the enslaved—indeed, they often equated acts of will with humanity itself. As these writ- ers turned toward more detailed analyses of the causes, strategies, and tactics of slave revolts in the context of the social relations of slavery, they had trouble squaring abstract characterizations of “the slave” with what they were learning about the en- slaved.37 Michael Craton, who authored Testing the Chains: Resistance to Slavery in the British West Indies, was an early critic of Slavery and Social Death, protesting that what was known about chattel bondage in the Americas did not confirm Patterson’s definition of slavery. “If slaves were in fact ‘generally dishonored,’ ” Craton asked, “how does he explain the degrees of rank found among all groups of slaves—that is, the scale of ‘reputation’ and authority accorded, or at least acknowledged, by slave and master alike?” How could they have formed the fragile families documented by social historians if they had been “natally alienated” by definition? Finally, and per- haps most tellingly, if slaves had been uniformly subjected to “permanent violent domination,” they could not have revolted as often as they did or shown the “varied manifestations of their resistance” that so frustrated masters and compromised their power, sometimes “fatally.”38 The dynamics of social control and slave resistance falsified Patterson’s description of slavery even as the tenacity of African culture showed that enslaved men, women, and children had arrived in the Americas bearing much more than their “tropical temperament.”¶ The cultural continuity and resistance schools of thought come together pow- erfully in an important book by Walter C. Rucker, The River Flows On: Black Re- sistance, Culture, and Identity Formation in Early America. In Rucker’s analysis of slave revolts, conspiracies, and daily recalcitrance, African concepts, values, and cul- tural metaphors play the central role. Unlike Smallwood and Hartman, for whom “the rupture was the story” of slavery, Rucker aims to reveal the “perseverance of African culture even among second, third, and fourth generation creoles.”39 He looks again at some familiar events in North America—New York City’s 1712 Coromantee revolt and 1741 conspiracy, the 1739 Stono rebellion in South Carolina, as well as the plots, schemes, and insurgencies of Gabriel Prosser, Denmark Vesey, and Nat Turner—deftly teasing out the African origins of many of the attitudes and actions of the black rebels. Rucker outlines how the transformation of a “shared cultural heritage” that shaped collective action against slavery corresponded to the “various steps Africans made in the process of becoming ‘African American’ in culture, orientation, and identity.”40

#### Afro-pessimism is inaccurate and is used to justify white supremacism

Patterson 98—Jamaican-born American historical and cultural sociologist known for his work regarding issues of race in the United States, as well as the sociology of development (Orlando, The Ordeal Of Integration: Progress And Resentment In America's "Racial" Crisis)

In the attempt to understand and come to terms with the problems of Afro-Americans and of their interethnic relations, the country has been ill served by its intellectuals, policy advocates, and leaders in recent years. At present, dogmatic ethnic advocates and extremists appear to dominate discourse on the subject, drowning out both moderate and other dissenting voices. A strange convergence has emerged between these extremists. On the left, the nation is misled by an endless stream of tracts and studies that deny any meaningful change in America's "Two Nations," decry "The Myth of Black Progress," mourn "The Dream Deferred," dismiss AfroAmerican middle-class status as "Volunteer Slavery," pronounce AfroAmerican men an "Endangered Species," and apocalyptically announce "The Coming Race War." On the right is complete agreement with this dismal portrait in which we are fast "Losing Ground," except that the road to "racial" hell, according to conservatives, has been paved by the very pQlicies intended to help solve the problem, abetted by "The Dream and the Nightmare" of cultural changes in the sixties and by the overbreeding and educational integration of inferior Afro-Americans and very policies intended to help solve the problem, abetted by "The Dream and the Nightmare" of cultural changes in the sixties and by the overbreeding and educational integration of inferior Afro-Americans and lower-class Euro-Americans genetically situated on the wrong tail of the IQ "Bell Curve." If it is true that a "racial crisis" persists in America, this crisis is as much one of perception and interpretation as of actual socioeconomic and interethnic realities. By any measure, the record of the past half century has been one of great achievement, thanks in good part to the suecess of the government policies now being maligned by the left for not having gone far enough and by the right for having both failed and gone too far. At the same time, there is still no room for complacency: because our starting point half a century ago was so deplorably backward, we still have some way to go before approaching anything like a resolution.

#### They ontologize race in the same way that racists do

Gilroy 00—chaired prof of Social Theory at the London School of Economics (Paul, Against Race: Imagining Political Culture beyond the Color Line, 218-20)

In Britain, the United States, South Africa, Bosnia, and elsewhere, politi-cally opposed purity-seekers have been prepared to bury their differences and become partners in the dismal dance of absolutism. It is therefore im-portant to repeat that contemporary conflicts over the status of racialized difference have taken shape in an area far beyond the grasp of simplistic distinctions between the Left and the Right, radical and conservative. I would suggest that at root, these confluences are manifestations not of political ideology at all but of something anterior to it that challenges the rules and assumptions of modern politics by exalting particularistic ontol-ogy and primordial kinship above the distinctive blend of solidarity and autonomy for which the word modernity has long been emblematic. However much melanin is present in their cells, these purists voice a distinctive understanding of culture, tradition, self, kinship, ethnicity, nation, and "race" that blurs the lines between views formerly located at opposite ends of the spectrum of modern political ideologies. To recognize this is not to capitulate to the old—and in my view misguided—liberal assertion that intolerant and antidemocratic extremes merge readily into one another to found an anti-ideological or pragmatic totalitarianism. This is not an organic blending of ideologies or some inevitable closing of the narrow circuits of human frailty, imagination, and evil. For politically opposed groups to discover common cause, things have to happen—meetings must be conducted, language adjusted, objectives redefined, and purpose and solidarity reconfigured. I am asking you to venture into the unstable location where white supremacists and black nationalists, Klansmen, Nazis, neo-Nazis and ethnic absolutists, Zionists and anti-semites have been able to encounter each other as potential allies rather than sworn foes. In the words of Primo Levi, it "is a grey zone, with ill defined outlines which both separate and join the two camps of masters and servants. It possesses an incredibly complicated internal structure, and contains within itself enough to confuse our need to judge."10 Understanding the forms of complicity that arise there is not only a matter of recognizing the possibility that enemies can, in exceptional circumstances, acquire a common political interest.11 It involves accepting the possibility that, interests apart, they may share parallel ways of understanding the meaning of their own particularity, of responding to the idea of transgressive contact between groups and of conceptualizing ethnicity and "race" as general, even necessary, principles of human differentiation. For example, the common investment in the idea of segregation that marks many of these encounters should not then be read as some spontaneous eruption of fundamental human antipathy toward otherness. It is better understood as a negotiated political outcome that has been produced through regimes of seeing and knowing the world that have a history. I would like to recognize the existence of these gray and ambiguous zones in order to assess the value of linking a variety of different historical and cultural phenomena that are not normally associated. The common features of the political forces that join hands secretly there are overlooked because the groups involved in this tacit contact appear, from one angle of vision, to be politically opposed. This overly narrow conceptualization of their politics can be misleading. The situation is compounded when racial, religious, or cultural differences are invoked as a reason to place similar ac-tions or attitudes in different moral categories. For example, it has some-times been argued that only white people can be judged racist because racism is a defining attribute of whiteness or an intrinsic property of the power it holds. Racism can only be a consequence of power and so, the ar-gument runs, since blacks have no power—as a "race"—they cannot, bv definition, be racist. The tautology passes unnoticed and the jump between individual action and societal patterning is glossed over. I would argue that it might be better to interpret these and other similar statements as a means to solicit racial identification and endorse the principle of racialized difference as a valid means to classify and divide human beings. Attempting to adjust the scale upon which human interests are calculated so that it is no longer compatible with raciology reveals disturbing patterns that demand a reassessment of where the lines between revolutionary and conservative, modern and antimodern are deemed to fall. This situation becomes even more difficult when a favored group seeks or is endowed with a special or unique ethical status because of past experiences of victimage. On these historical grounds, normal standards of judgment can be suspended as restitution or reparation for past suffering. The idea that victims of racism are immunized against the appeal of racism precisely be-cause they have been victims, or the idea that prior victimage renders victims and their descendants exempt from normal standards of conduct and judgment, are typical of these types of argument. This kind of reasoning was reduced to nonsense in the vulgar formula that suggested racism could be defined as the simple sum of prejudice and power. The proposition that only white people could be racist became confused with the different notion that black people could not be racist. The slippage between these two interlinked propositions is a symptom that should alert us to the pernicious power of racializing categories to reassert themselves even in the moment of their supposed erasure. The capacity to do the wrong thing is an omnipresent possibility for which modernity afforded unprecedented opportunities. Exploring the linkage between various modern forms of authoritarianism, absolutism, masculinism, belligerence, intolerance, and genocidal hatred is important now because it has become abundantly clear that the fascisms of the past have not exhausted the palette of barbarity and the syntax of evil. Those histories of suffering can be used to bring a counteranthropological, strategic universalism into view.

# 1AR

## Advocacy

### Consumption I/E

#### Consumption mindset is inevitable---using responsible investment and working through existing institutions create sustainable development---the alt’s totalizing rejection fails

Doran and Barry 6 – worked at all levels in the environment and sustainable development policy arena - at the United Nations, at the Northern Ireland Assembly and Dáil Éireann, and in the Irish NGO sector. PhD--AND-- Reader in Politics, Queen's University School of Politics, International Studies, and Philosophy. PhD Glasgow (Peter and John, Refining Green Political Economy: From Ecological Modernisation to Economic Security and Sufficiency, Analyse & Kritik 28/2006, p. 250–275, http://www.analyse-und-kritik.net/2006-2/AK\_Barry\_Doran\_2006.pdf)

The aim of this article is to offer a draft of a realistic, but critical, version of green political economy to underpin the economic dimensions of radical views of sustainable development. It is written explicitly with a view to encouraging others to respond to it in the necessary collaborative effort to think through this aspect of sustainable development. Our position is informed by two important observations. As a sign of our times, the crises that we are addressing under the banner of sustainable development (however inadequately) render the distinction between what is ‘realistic’ and ‘radical’ problematic. It seems to us that the only realistic course is to revisit the most basic assumptions embedded within the dominant model of development and economics. Realistically the only longterm option available is radical. Secondly, we cannot build or seek to create a sustainable economy ab nihilo, but must begin—in an agonistic fashion—**from where we are, with the structures, institutions, modes of production, laws, regulations and so on that we have**. We make this point in Ireland with a story about the motorist who stops at the side of the road to ask directions, only to be told: “Now Ma’m, I wouldn’t start from here if I were you.”

This does not mean simply accepting these as immutable or set in stone— after all, some of the current institutions, principles and structures underpinning the dominant economic model are the very causes of unsustainable development— but we do need to recognise that we must work with (and ‘through’—in the terms of the original German Green Party’s slogan of “marching through the institutions”) these existing structures as well as changing and reforming and in some cases abandoning them as either unnecessary or positively harmful to the creation and maintenance of a sustainable economy and society. Moreover, we have a particular responsibility under the current dominant economic trends to name the neo-liberal project as the hegemonic influence on economic thinking and practice. In the words of Bourdieu/Wacquant (2001), neoliberalism is the new ‘planetary vulgate’, which provides the global context for much of the contemporary political and academic debate on sustainable development. For example, there is a clear hierarchy of trade (WTO) over the environment (Multilateral Environmental Agreements) in the international rules-based systems. At the boundaries or limits of the sustainable development debate in both the UK and the European Union it is also evident that the objectives of competitiveness and trade policy are sacrosanct. As Tim Luke (1999) has observed, the relative success or failure of national economies in head-to-head global competition is taken by ‘geo-economics’ as the definitive register of any one nation-state’s waxing or waning international power, as well as its rising or falling industrial competitiveness, technological vitality and economic prowess. In this context, many believe ecological considerations can, at best, be given only meaningless symbolic responses, in the continuing quest to mobilise the Earth’s material resources.

Our realism is rooted in the demos. The realism with which this paper is concerned to promote recognises that the path to an alternative economy and society must begin with a recognition of the reality that most people (in the West) will not democratically vote (or be given the opportunity to vote) for a completely different type of society and economy overnight. This is true even as the merits of a ‘green economy’ are increasingly recognised and accepted by most people as the logical basis for safeguards and guarantees for their basic needs and aspirations (within limits). The realistic character of the thinking behind this article accepts that **consumption and materialistic lifestyles are here to stay**. (The most we can probably aspire to is a widening and deepening of popular movements towards ethical consumption, responsible investment, and fair trade.) And indeed **there is** little to be gained **by proposing alternative economic systems which start from a** complete rejection of consumption **and materialism.** The appeal to realism is in part an attempt to correct the common misperception (and self-perception) of green politics and economics requiring an excessive degree of self-denial and a puritanical asceticism (see Goodin 1992, 18; Allison 1991, 170– 78). While rejecting the claim that green political theory calls for the complete disavowal of materialistic lifestyles, it is true that green politics does require the collective re-assessment of such lifestyles, and does require new economic signals and pedagogical attempts to encourage a delinking—in the minds of the general populus—of the ‘good life’ and the ‘goods life’. This does not mean that we need necessarily require the complete and across the board rejection of materialistic lifestyles. It must be the case that there is room and tolerance in a green economy for people to choose to live diverse lifestyles—some more sustainable than others—so long as these do not ‘harm’ others, threaten long-term ecological sustainability or create unjust levels of socio-economic inequalities. Thus, realism in this context is in part another name for the acceptance of a broadly ‘liberal’ or ‘post-liberal’ (but certainly not anti-liberal) green perspective.2

1. Setting Out

At the same time, while critical of the ‘abstract’ and ‘unrealistic’ utopianism that peppers green and radical thinking in this area, we do not intend to reject utopianism. Indeed, with Oscar Wilde we agree that a map of the world that does not have utopia on it, isn’t worth looking at. The spirit in which this article is written is more in keeping with framing green and sustainability concerns within a **‘concrete utopian’ perspective** or what the Marxist geographer David Harvey (1996, 433–435) calls a “utopianism of process”, to be distinguished from “closed”, blueprint-like and abstract utopian visions. Accordingly, the model of green political economy outlined here is in keeping with Steven Lukes’ suggestion that a concrete utopianism depends on the ‘knowledge of a self-transforming present, not an ideal future’ (Lukes 1984, 158).

It accepts the current dominance of one particular model of green political economy—namely ‘ecological modernisation’ (hereafter referred to EM)—as the preferred ‘political economy’ underpinning contemporary state and market forms of sustainable development, and further **accepts the necessity for green politics to positively engage in the** debates **and policies around EM** from a strategic (as well as a normative) point of view. However, it is also conscious of the limits and problems with ecological modernisation, particularly in terms of its technocratic, supply-side and reformist ‘business as usual’ approach, and seeks to explore the potential to radicalise EM or use it as a ‘jumping off’ point for more radical views of greening the economy. **Ecological modernisation is a work in progress; and that’s the point**.

The article begins by outlining EM in theory and practice, specifically in relation to the British state’s ‘sustainable development’ policy agenda under New Labour.3 While EM as currently practised by the British state is ‘weak’ and largely turns on the centrality of ‘innovation’ and ‘eco-efficiency’, the paper then goes on to investigate in more detail the role of the market within current conceptualisations of EM and other models of green political economy. In particular, a potentially powerful distinction (both conceptually and in policy debates) between ‘the market’ and ‘capitalism’ has yet to be sufficiently explored and exploited as a starting point for the development of radical, viable and attractive conceptions of green political economy as alternatives to both EM and the orthodox economic paradigm. We contend that **there is a role for the market in innovation and as part of the ‘governance’ for sustainable development** in which eco-efficiency and EM of the economy is linked to non-ecological demands of green politics and sustainable development such as social and global justice, egalitarianism, democratic regulation of the market and the conceptual (and policy) expansion of the ‘economy’ to include social, informal and noncash economic activity and a progressive role for the state (especially at the local/municipal level). Here we suggest that the ‘environmental’ argument or basis of green political economy in terms of the need for the economy to become more resource efficient, minimise pollution and waste and so on, has largely been won. What that means is that no one is disputing the need for greater resource productivity, energy and eco-efficiency. Both state and corporate/business actors have accepted the environmental ‘bottom line’ (often rhetorically, but nonetheless important) as a conditioning factor in the pursuit of the economic ‘bottom line’.

However, what has been less remarked upon is the social ‘bottom line’ and the centrality of this non-environmental set of principles and policy objectives to green political economy. In particular, the argument for lessening socio-economic inequality, and redistributive policies to do this, have not been as prominent within green political economy and models of sustainable development as they perhaps should be. One of the reasons for focusing on the ‘social bottom line’ is to suggest that the distinctiveness and critical relevance of a distinctly ‘green’ (as opposed to ‘environmental’ or ‘ecological’) political economy will increasingly depend on **developing a political agenda** around these non-environmental/non- resource policy areas as states, businesses and other political parties converge around the EM agenda of reconciling the environmental and economic bottom lines, through an almost exclusive focus on the environmental bottom line. It is on developing a radical political and economic agenda around the social and economic bottom lines that green political economy needs to focus.

## Warming

### Gas 🡪 Warming

#### Rising natural gas prices are making coal competitive in electricity generation

Erich Schwartzel 13, reporter, according to Michigan is an expert on fracking apparently because he visited some class of Pappas’s, 1/9/13, “U.S. report predicts rising natural gas prices in 2013-14,” http://www.post-gazette.com/stories/business/news/us-report-predicts-rising-natural-gas-prices-in-2013-14-669602/#ixzz2K06tC9CS

Marcellus Shale drillers who have had to cut costs and disassemble rigs because of recent record-low natural gas prices should expect a reprieve over the next two years, according to the latest projections from the U.S. Energy Information Administration.¶ The average price of natural gas is expected to increase by almost a dollar in 2013, hitting $3.74 per million British thermal units.¶ That's a significant jump from the $2.75 average seen last year, when accelerated drilling created a glut in supply that caused prices to drop and made drilling in many places unprofitable. Increases are expected to continue into 2014, when prices are predicted to hit $3.90.¶ The EIA report released Tuesday is the first look into 2014 for the domestic and international energy scene, and it includes projections that could affect gas and coal activity in Pennsylvania and surrounding states.¶ Higher gas prices would send reverberations across multiple sectors, helping coal become competitive with natural gas again as an electricity source and allowing drillers to broaden their focus beyond shale formations that are rich in oil. In addition, the federal energy agency projects increased domestic oil production will break new records over the next couple of years and eventually lead to lower prices at the gasoline station.

### Yes T/O All

#### SPS facilitates transition away from fossil fuels

Flournoy 12 – Don Flournoy, PhD and MA from the University of Texas, Former Dean of the University College at Ohio University, Former Associate Dean at State University of New York and Case Institute of Technology, Project Manager for University/Industry Experiments for the NASA ACTS Satellite, Currently Professor of Telecommunications at Scripps College of Communications at Ohio University, "Solar Power Satellites," January, Springer Briefs in Space Development, Book

One of the obvious opportunities for solar power satellites is to become an **on-demand source of electric power for terrestrial utilities.** Once Sunsat providers can demonstrate the capability to direct continuous radio or light frequency power beams to production sites, the owners of coal-fired generation stations will quickly discover the value of this service. The same will also be true of **nuclear, gas-fired, biomass** and other such plants. With electrical power production ratings of 1 gw or more, solar satellite systems can be designed to meet the short- and long-term **needs of the terrestrial power plants at their** existing locations, at first to complement but eventually to replace their current fuel feedstocks. An attractive feature of this approach for space solar power investors is that the utilities have a predictable need for energy in great quantities. Since the power utilities are already connected to an electrical power grid, often covering regions larger than a single state or nation, the Sunsat people won’t have to also be in the terrestrial distribution business. Whether producing power from coal, nuclear, gas, biomass or other sources, **power utilities can be expected to step forward as early users** of this new space asset to begin reducing their mining and transportation costs. The use of scrubbers and filters will be greatly reduced, if needed at all. Problems related to spent fuel disposal and toxic waste management should be fewer. But mainly the utilities will become clients (and possibly investors) in the Sunsat business to guarantee a **sustainable night-and-day fuel source.**

### Apocalypse Good

#### Apocalyptic warming rhetoric changes disbelief and mobilizes effective public responses

Romm 12 (Joe, Fellow at American Progress and is the editor of Climate Progress, which New York Times columnist Tom Friedman called "the indispensable blog" and Time magazine named one of the 25 “Best Blogs of 2010.″ In 2009, Rolling Stone put Romm #88 on its list of 100 “people who are reinventing America.” Time named him a “Hero of the Environment″ and “The Web’s most influential climate-change blogger.” Romm was acting assistant secretary of energy for energy efficiency and renewable energy in 1997, where he oversaw $1 billion in R&D, demonstration, and deployment of low-carbon technology. He is a Senior Fellow at American Progress and holds a Ph.D. in physics from MIT, 2/26, “Apocalypse Not: The Oscars, The Media And The Myth of ‘Constant Repetition of Doomsday Messages’ on Climate”, <http://thinkprogress.org/romm/2012/02/26/432546/apocalypse-not-oscars-media-myth-of-repetition-of-doomsday-messages-on-climate/#more-432546>)

The two greatest myths about global warming communications are 1) constant repetition of doomsday messages has been a major, ongoing strategy and 2) that strategy doesn’t work and indeed is actually counterproductive!

These myths are so deeply ingrained in the environmental and progressive political community that when we finally had a serious shot at a climate bill, the powers that be decided not to focus on the threat posed by climate change in any serious fashion in their $200 million communications effort (see my 6/10 post “Can you solve global warming without talking about global warming?”). These myths are so deeply ingrained in the mainstream media that such messaging, when it is tried, is routinely attacked and denounced — **and the flimsiest studies are interpreted exactly backwards to drive the erroneous message** home (see “Dire straits: Media blows the story of UC Berkeley study on climate messaging”)

The only time anything approximating this kind of messaging — not “doomsday” but what I’d call blunt, science-based messaging that also makes clear the problem is solvable — was in 2006 and 2007 with the release of An Inconvenient Truth (and the 4 assessment reports of the Intergovernmental Panel on Climate Change and media coverage like the April 2006 cover of Time). The data suggest that strategy measurably moved the public to become more concerned about the threat posed by global warming (see recent study here).

You’d think it would be pretty obvious that the public is not going to be concerned about an issue unless one explains why they should be concerned about an issue. And the social science literature, including the vast literature on advertising and marketing, could not be clearer that only repeated messages have any chance of sinking in and moving the needle.

Because I doubt any serious movement of public opinion or mobilization of political action could possibly occur until these myths are shattered, I’ll do a multipart series on this subject, featuring public opinion analysis, quotes by leading experts, and the latest social science research.

Since this is Oscar night, though, it seems appropriate to start by looking at what messages the public are exposed to in popular culture and the media. It ain’t doomsday. Quite the reverse, climate change has been mostly an invisible issue for several years and the message of conspicuous consumption and business-as-usual reigns supreme.

The motivation for this post actually came up because I received an e-mail from a journalist commenting that the “constant repetition of doomsday messages” doesn’t work as a messaging strategy. I had to demur, for the reasons noted above.

But it did get me thinking about what messages the public are exposed to, especially as I’ve been rushing to see the movies nominated for Best Picture this year. I am a huge movie buff, but as parents of 5-year-olds know, it isn’t easy to stay up with the latest movies.

That said, good luck finding a popular movie in recent years that even touches on climate change, let alone one a popular one that would pass for doomsday messaging. Best Picture nominee The Tree of Life has been billed as an environmental movie — and even shown at environmental film festivals — but while it is certainly depressing, climate-related it ain’t. In fact, if that is truly someone’s idea of environmental movie, count me out.

The closest to a genuine popular climate movie was the dreadfully unscientific The Day After Tomorrow, which is from 2004 (and arguably set back the messaging effort by putting the absurd “global cooling” notion in people’s heads! Even Avatar, the most successful movie of all time and “the most epic piece of environmental advocacy ever captured on celluloid,” as one producer put it, omits the climate doomsday message. One of my favorite eco-movies, “Wall-E, is an eco-dystopian gem and an anti-consumption movie,” but it isn’t a climate movie.

I will be interested to see The Hunger Games, but I’ve read all 3 of the bestselling post-apocalyptic young adult novels — hey, that’s my job! — and they don’t qualify as climate change doomsday messaging (more on that later). So, no, the movies certainly don’t expose the public to constant doomsday messages on climate.

Here are the key points about what repeated messages the American public is exposed to:

The broad American public is exposed to virtually no doomsday messages, let alone constant ones, on climate change in popular culture (TV and the movies and even online). There is not one single TV show on any network devoted to this subject, which is, arguably, more consequential than any other preventable issue we face.

The same goes for the news media, whose coverage of climate change has collapsed (see “Network News Coverage of Climate Change Collapsed in 2011“). When the media do cover climate change in recent years, the overwhelming majority of coverage is devoid of any doomsday messages — and many outlets still feature hard-core deniers. Just imagine what the public’s view of climate would be if it got the same coverage as, say, unemployment, the housing crisis or even the deficit? When was the last time you saw an “employment denier” quoted on TV or in a newspaper?

The public is exposed to constant messages promoting business as usual and indeed idolizing conspicuous consumption. See, for instance, “Breaking: The earth is breaking … but how about that Royal Wedding?

Our political elite and intelligentsia, including MSM pundits and the supposedly “liberal media” like, say, MSNBC, hardly even talk about climate change and when they do, it isn’t doomsday. Indeed, there isn’t even a single national columnist for a major media outlet who writes primarily on climate. Most “liberal” columnists rarely mention it.

At least a quarter of the public chooses media that devote a vast amount of time to the notion that global warming is a hoax and that environmentalists are extremists and that clean energy is a joke. In the MSM, conservative pundits routinely trash climate science and mock clean energy. Just listen to, say, Joe Scarborough on MSNBC’s Morning Joe mock clean energy sometime.

The major energy companies bombard the airwaves with millions and millions of dollars of repetitious pro-fossil-fuel ads. The environmentalists spend far, far less money. As noted above, the one time they did run a major campaign to push a climate bill, they and their political allies including the president explicitly did NOT talk much about climate change, particularly doomsday messaging

Environmentalists when they do appear in popular culture, especially TV, are routinely mocked.

There is very little mass communication of doomsday messages online. Check out the most popular websites. General silence on the subject, and again, what coverage there is ain’t doomsday messaging. Go to the front page of the (moderately trafficked) environmental websites. Where is the doomsday?

If you want to find anything approximating even modest, blunt, science-based messaging built around the scientific literature, interviews with actual climate scientists and a clear statement that we can solve this problem — well, you’ve all found it, of course, but the only people who see it are those who go looking for it.

Of course, this blog is not even aimed at the general public. Probably 99% of Americans haven’t even seen one of my headlines and 99.7% haven’t read one of my climate science posts. And Climate Progress is probably the most widely read, quoted, and reposted climate science blog in the world.

Anyone dropping into America from another country or another planet who started following popular culture and the news the way the overwhelming majority of Americans do would get the distinct impression that nobody who matters is terribly worried about climate change. And, of course, they’d be right — see “The failed presidency of Barack Obama, Part 2.

**It is total BS that somehow the American public has been scared and overwhelmed by repeated doomsday messaging into some sort of climate fatigue**. If the public’s concern has dropped — and public opinion analysis suggests it has dropped several percent (though is bouncing back a tad) — that is primarily due to the conservative media’s disinformation campaign impact on Tea Party conservatives and to the treatment of this as a nonissue by most of the rest of the media, intelligentsia and popular culture.

### Solvency

#### SPS is resilient, cost-effective, and efficient

Reed & Willenberg 4 – Head of the Welsom Space Consortium, and Harvey, PhD, Independent Review Team Leader for Space Power Research for NASA, Former Chief Scientist of the ISS (Kevin and Harvey, , "Early commercial demonstration of space solar power using ultra-lightweight arrays,” Acta Astronautica, Volume 65, Issues 9-10, accessed on Science Direct)

Future systems will be even more sensitive to specific power. A number of conceptual design architecture studies have been performed that offer promise for terrestrial electrical power generation by [SSP] space solar power, i.e. a constellation of large Earth-orbiting spacecraft that collect solar power, convert it to laser or microwave beams, and beam that power to terrestrial collectors that, in turn, convert that power to electricity.[1-3] To make this concept economically attractive, they must compete with current large power plants by economically generating Gigawatts (GW) of power. At 100 W/kg, such a power station must weigh 2-5 ∙ 107 kg or more – a tall order for launch vehicles that currently place no more than 2-3 ∙ 103 kg into geosynchronous orbit. Recent technology advances in the area of thin film photovoltaic arrays offer a solution to the mass limitations of high power arrays. Thin film arrays, while the efficiency is only around 9-12%, are so lightweight that they offer specific powers in excess of 1,000 W/kg - a factor of ten or more above the current state of the art. Since these arrays are deployable, they can be packaged with minimum mass and volume, and readily deployed in space with **near-term demonstrable technologies**. This section provides an introduction to this possibility. The next section will discuss the specific advantages of lightweight arrays. Section 3 will describe near-term applications in the 50-500 kWe power range, both in space and in the high altitude atmosphere, as well as future directions for space power satellites and high-power electric thrusters. Section 4 discusses recent and ongoing plans for prototype testing of thin-film arrays in civil and military applications as well as commercial "NewSpace" applications. In Section 5, we discuss some key process steps required for commercial development of space solar power and wireless power transmission, with specific focus on the development pathway for these solar arrays. A development Roadmap is described in Section 6. A short summary is presented in Section 7, followed by references. 2. ADVANTAGES OF ULTRALIGHTWEIGHT ARRAYS Since the beginning of Earth-orbiting satellites, solar array technology has gone through two or three generations, and is on the verge of a new generation. Most early satellites were powered with crystalline silicon arrays, with power levels generally below about 6 kilowatts (kWe). These silicon arrays were heavy and operated at low efficiency, i.e. the amount of power produced per unit area of solar array started around 10-12% at beginning of life. These crystalline silicon arrays also degraded rapidly, dropping to 8-10% efficiencies after several years in space, as a result of radiation-induced degradation of the photovoltaic silicon and atomic oxygen-induced discoloration of the cover glass which protects the silicon from these environmental factors. In the 1990s, the technology for many, if not most, satellite solar arrays converted from these original silicon arrays to compound semiconductors, which generally used gallium arsenide plus a second or third semiconductor to capture a greater share of the solar spectrum and convert it to electricity. These compound dual-junction and triple-junction semiconductors are much more resistant to radiation and more efficient, with efficiencies of 20-24%. More recently, the ability to separate different wavelengths of the solar spectrum and tailor the incident light onto a stretched lens of selected semiconductors (separating red, yellow, green, and blue wavelengths) has shown indications of efficiencies as high as 40-50%.[4-5] Yet even at this nearly theoretical limit of efficiency, the power density level will reach only 300 W/kg. Until recently, the focus of most solar array technology development has been toward more efficient, more radiation-resistant arrays. This focus has been driven primarily by the challenge of deployment of large arrays. This challenge has limited the total array area that can be launched into space, and therefore the way to higher power arrays has been higher efficiencies. These rigid, higher efficiency solar arrays come at the cost, however, of relatively high mass - with the best rigid arrays able to produce about 80-100 Watts per kilogram (W/kg) at 30% efficiency, and the stretched lens arrays promising about 150 W/kg but limited to a total of around 10 kW by deployment considerations. Two dominant performance metrics in the selection of solar array technologies are this power/mass ratio (i.e. the amount of power that can be produced for each kilogram of total mass) and the volume of the stowed array as it is launched. These are important because of the mass and volume limitations on the launch vehicle that places the array into space, and the high cost of launching this limited mass and volume. Using launch vehicles available today, these limit the total power available to satellites in geostationary orbit to about 18 kWe. Higher powers will be highly desirable as the user demands for communications services continue to increase. Recent advances in the ability to place photovoltaic materials on very thin film substrates have produced a new generation of solar arrays. These advances allow arrays to be stowed in the launch vehicle in very compact configurations, and easily deployed to much larger arrays than have heretofore been achievable. These new, thin film arrays are much lighter - around 1200 W/kg, including the deployment systems. Laboratory test cells have been produced by Institut de Microtechnique at the University of Neuchatel, Switzerland using LaRCTM-CP1 thin-film substrates produced by SRS Technologies in Huntsville, AL that have the highest power/mass ratio on record - 4300 W/kg![6] These thin film arrays can be stowed in a rolled or folded configuration in the launch vehicle and deployed in space by simple boom extension or roller mechanisms. A well-designed 50 kW space solar array and deployment system using rolled mechanisms with this specific power would weigh 32 kg with a payload volume the size of a suitcase. This low mass and payload volume, combined with high power density, can provide 50 kW+ space solar arrays at 25% of the cost of current rigid solar arrays. There are two approaches to thin film arrays: amorphous silicon (a-Si:H) and polycrystalline Cu(Ga,In)Se2 (CIGS). The Neuchatel partners have developed an array configuration that deposits amorphous silicon on SRS 6 µm-thick CP1TM polymer films, referred to as CP1/a-Si:H arrays. CIGS cells are generally deposited on 30 µm-thick metal foil substrates, a fact that assures that CIGS cells will be heavier than CP1/a-Si:H cells. Some basic comparisons between these solar arrays are summarized in Table 1. Using deployable thin-film arrays with specific powers in excess of 1,000 W/kg opens opportunities for large power levels in space. With current launch vehicles, this means that communications satellites can have 200 kWe or more in geosynchronous orbit, or that commercial platforms such as manufacturing sites or tourist destinations, can approach a MWe. With such possibilities, **this technology might drive the economics of [SSP] space solar power satellites into the profitable arena**, thereby contributing greatly to a non-petroleum-based worldwide electrical power grid. 3. APPLICATIONS Deployable thin-film arrays would have immediate applications with communications satellites and with high altitude aircraft. A 60 kWe array which can be rolled out in 20 kWe segments would greatly extend the useful lifetime of communications satellites – essentially tripling the array lifetime by rolling out 20 kWe of beginning-of-life (BOL) arrays at the end of the array's useful lifetime. An alternative application would be for much higher-power communications satellites, from 50 to 200 kWe, for higher data rates or power. A unique application may also be realized for recharging mobile batteries. Such an orbiting power platform may provide a source of electrical power for very distributed demands, such as for cellular phones and laptop computers. A 200 kWe solar array would have a mass of less than 200 kg. This would make a thin-film array attractive for still higher-power commercial applications, such as orbiting hotels – with expected demands in the 250 kWe to 1 MWe – and manufacturing sites. The latter would be either for sites for in-space construction of larger platforms, or for processing of materials in the microgravity environment of space. As the technology matures to the megawatt range, additional applications appear promising. For example, electric thrusters in the megawatt range would be attractive for human transportation to Mars and its moons. This technology can be developed in stages, perhaps using high altitude airships as platforms to demonstrate megawatt arrays. As the technology for high power thin film arrays matures, the logical next step would be solar power satellites. With a launch vehicle capable of placing 50,000 kg to geosynchronous orbit, 50 MWe platforms can be considered as building blocks for the GWe stations that would be required to provide a primary source of power for the electrical power grid. 4. DEVELOPMENT OF ULTRALIGHTWEIGHT ARRAYS Recent advances in the ability to place photovoltaic materials on very thin film substrates have produced a new generation of solar arrays. These advances allow arrays to be stowed in the launch vehicle in very compact configurations and easily deployed to much larger arrays than have heretofore been achievable. These new, thin film arrays are much lighter - around 1200 W/kg, including the deployment systems. Problematic to most thin-film solar arrays are radiation and atomic oxygen erosion. Test solar cells are made on CP1TM polyimide that is space-rated for 10 years in Geosynchronous Earth Orbit ( GEO), or SRS CORIN which is the only transparent uncoated commercial polyimide that will not erode in LEO. These flexible, 6 micron thick, thin film arrays, can be rolled or folded into a very low stowed volume in the launch vehicle configuration, and then deployed in space by simple boom extension or roller mechanisms. Such a typical 50 kW space solar array and deployment system would weigh 32 kg with a payload volume the size of a suitcase. This low mass and payload volume, combined with high power density, can provide 50 kW+ space solar arrays at 25% of the cost of current rigid solar arrays. The key technologies are ultra-thin, deployable arrays that generate power at acceptable efficiencies with high power density, and are resistant to atomic oxygen and radiation in the operational space environment.

## K

### Extinction First

**Extinction outweighs**

Bostrum 3/6 (Nick, Professor of Philosophy at Oxford, directs Oxford's Future of Humanity Institute and winner of the Gannon Award, Interview with Ross Andersen, correspondent at The Atlantic, 2012, “We're Underestimating the Risk of Human Extinction”, <http://www.theatlantic.com/technology/archive/2012/03/were-underestimating-the-risk-of-human-extinction/253821/>)

Bostrom, who directs Oxford's Future of Humanity Institute, has argued over the course of several papers that human extinction risks are poorly understood and, worse still, severely underestimated by society. Some of these existential risks are fairly well known, especially the natural ones. But others are obscure or even exotic. Most worrying to Bostrom is the subset of existential risks that arise from human technology, a subset that he expects to grow in number and potency over the next century.

Despite his concerns about the risks posed to humans by technological progress, Bostrom is no luddite. In fact, he is a longtime advocate of transhumanism---the effort to improve the human condition, and even human nature itself, through technological means. In the long run he sees technology as a bridge, a bridge we humans must cross with great care, in order to reach new and better modes of being. In his work, Bostrom uses the tools of philosophy and mathematics, in particular probability theory, to try and determine how we as a species might achieve this safe passage. What follows is my conversation with Bostrom about some of the most interesting and worrying existential risks that humanity might encounter in the decades and centuries to come, and about what we can do to make sure we outlast them.

Some have argued that we ought to be directing our resources toward humanity's existing problems, rather than future existential risks, because many of the latter are highly improbable. You have responded by suggesting that existential risk mitigation may in fact be a dominant moral priority over the alleviation of present suffering. Can you explain why?

Bostrom: Well suppose you have a moral view that counts future people as being worth as much as present people. You might say that fundamentally it doesn't matter whether someone exists at the current time or at some future time, just as many people think that from a fundamental moral point of view, it doesn't matter where somebody is spatially---somebody isn't automatically worth less because you move them to the moon or to Africa or something. A human life is a human life. If you have that moral point of view that future generations matter in proportion to their population numbers, then you get this very stark implication that existential risk mitigation has a much higher utility than pretty much anything else that you could do. There are so many people that could come into existence in the future if humanity survives this critical period of time---we might live for billions of years, our descendants might colonize billions of solar systems, and there could be billions and billions times more people than exist currently. Therefore, even a very small reduction in the probability of realizing this enormous good will tend to outweigh even immense benefits like eliminating poverty or curing malaria, which would be tremendous under ordinary standards.

### AT: Must Always Reject State

#### Avoiding engaging the topic because the state is irredeemably racist over-essentializes modern black-life

McWhorter 9—Associate Professor in the English and Comparative Literature, Columbia (John, What African-American Studies Could Be, [www.mindingthecampus.com/originals/2009/09/by\_john\_mcwhorter\_while\_this.html](http://www.mindingthecampus.com/originals/2009/09/by_john_mcwhorter_while_this.html))

The answer common in such departments is that the principal mission is to teach students about the eternal power of racism past and present. Certainly it should be part of a liberal arts education to learn that racism is more than face-to-face abuse, and that social inequality is endemic to American society. However, too often the curriculum of African-American Studies departments gives the impression that racism and disadvantage are the most important things to note and study about being black.

The question is whether this, for all of its moral urgency in the local sense, qualifies as education under any serious definition.

Typical is the curriculum of one African-American Studies department in a solid, selective state school west of the Mississippi. In this department, racism is, essentially, everything.

One course teaches that "Housing discrimination systematically skews opportunities and life chances," another that "racism, sexism, and heterosexism shape black life chances in a 21st century context," while yet another zeroes in on "the effects of institutional racism on social policy, desegregation, integration, and affirmative action programs."

Then there is "Blacks in the Media" - or, rather, one slice of that subject: "Studying literature, comic books, comic strips, cartoons, music, theater, cinema, broadcasting, and television, students will analyze the mythical imageries which have created stereotypes." This is a common trope in writings on black performance, in which any performer can be jammed into a category such as "Mammy" or "Tragic Mulatto," sidestepping the nevertheless brilliant performances of people like Ethel Waters and Fredi Washington in the old days, or Queen Latifah and Halle Berry today.

Following from this glum desperation is a fetishization of radical politics as blacks' only constructive allegiance. One would never know the marginal import of radicalism to most black lives from its centrality to so many African-American Studies department syllabi. One course analyzes "the tradition of radical thought and the relevance of this thought to the needs and interests of the black community" - but what does the "relevance" consist of except intellectually? Yet the same department also offers a course on, more specifically, black Marxism.

According to this curriculum, being black has been so horrific that we are even challenged by the mere physicality of existence. One courses teaches that black women's bodies have to be "important spaces of resistance," while another is based on the idea that black people have been done in by various permutations of "urban spatial relations."

Because racism and inequality will always exist in some forms, this all qualifies as a bone-deep, almost willful pessimism about black potential. One would expect the thinking class of a troubled race to at least pay more lip service to looking forward. The set-jawed obsession with tabulating obstacles becomes almost peculiar, as if based on an assumption that in some way, black Americans are uniquely exempt from treating challenges as surmountable. There is even a course on black psychology whose description would get a white-run department picketed out of existence in a week, examining "manifestations of various psychological characteristics of people of African decent [sic], their cultual [sic] and behavioral norms, including the way that issues of race, class, gender and sexuality affect their cognitive, social, and emotional development."

One senses that the people teaching in African-American Studies departments feel that blackness is indeed something very different, likely because African slaves were unwilling immigrants. However, Ralph Ellison once asked "Can a people live and develop for over three hundred years simply by reacting?"

To those who would consider themselves representing black people by answering in the affirmative, there are legions of black people of all walks who would heartily disagree. There is no self-standing metric of unassailable truth that justifies intellectuals treating that disagreement - that is, the life-spirit of a people millions strong making the best of the worst for four hundred years -- as unworthy of serious address.

As to the possible objection that course descriptions do not engage these departments closely enough, a look at a few actual course syllabi is useful.

At the University of Pennsylvania, the syllabus for "Racial and Sexual Conflict" openly states that "The term paper for this course should be concerned with the structure, causes, and policies that attempt to alleviate or perpetuate racial and/or sexual discrimination in the United States." Technically, this stipulation could allow an exploration of what people have done to get past obstacles rather than merely describe them. However, the material covered in this course gives precious little support to such an endeavor.

One week, the discussion concerns the questions as to "What role does educational opportunity play in economic opportunity? How has government policy affected educational opportunity by race?" However, the readings include none of the academic literature by scholars such as Joleen Kirschenman, Kathryn Neckerman, Jomills Braddock, James McPartland and Alford Young on how attitudinal factors affect the hireability of many uneducated black men, none of the literature on solid job opportunities for people without college degrees, and nothing on organizations nationwide assisting people in taking advantage of such opportunities. In a course purporting to teach America's brightest and most ambitious students about urgent realities, how are sources such as these irrelevant?

At the University of Massachusetts at Amherst, one course exemplifies the focus on radicalism. "Race, Radicalism and African American Culture" seeks to "track the genealogy of the movement that came to be called 'Black Power,' and to situate black radical artists and intellectuals in the broader history of twentieth-century American thought, culture, and politics."

And the course covers a noble procession of figures: Marcus Garvey, W.E.B. Du Bois, Richard Wright, Paul Robeson, the Black Panthers, Amiri Baraka, Cornel West, Bell Hooks. Not to mention James Baldwin. And Malcolm X. And Stokely Carmichael. Upon which the simple question is: despite their resonance, what effect did any of these people have upon the fact that there are today more middle-class black people than poor ones? Which was more central to making whites comfortable enough with blackness to elect a black President, the legacy of Malcolm X or the legacy of Dr. King?

As to King, the course does address Bayard Rustin, who was central to organizing the March on Washington. But he was at loggerheads with black radicals as the sixties wore on. The main legacy of black radicalism has been mood and fashion. Is its centrality to so many African-American Studies departments' curricula a matter of comprehensive engagement with black political development? Or is it what happens to be a common political orientation among modern academics in the humanities, including black ones?

To the extent that the answer is the latter, students are being underserved. At Columbia, in one African-American Studies course Manning Marable assigns an article by Robin Kelley called "Beyond the 'Real' World, or Why Black Radicals Need to Wake Up and Start Dreaming." But which black radical dreams have borne fruit in a way that would elicit a salute from ordinary black people in 2009? Dr. King had a dream indeed -- but he didn't mean us to stop there.

The issue is not the quality of these courses in themselves. I will gladly assume that these professors are all excellent lecturers, assiduous researchers and dedicated mentors. Yet attention must be paid to their ideological bias nevertheless. An African-American Studies curriculum whose main message is that black Americans' most interesting experience has always been racism, still is, and that this requires radicalism as a politics of choice is not education. It is indoctrination. It proposes a single minority view as sense incarnate. This is not what education is supposed to be.

To the extent that these courses and syllabi are typical, then, there is a problem. And anyone familiar with African-American Studies departments knows that these courses and syllabi are, indeed, typical.

African-American Studies departments have a place in a liberal arts education. However, to deserve that inclusion in anything beyond a symbolic sense, they should revise their curricula in exactly two ways, simple but crucial.

First, there should be full acknowledgment in all courses that the role of racism in black people's lives and fates is receding, and to such a degree that the race's challenges today are vastly different than they were forty years ago.

The aim should not be to downplay the reality of racism, but to present precisely what education consists of: the ambiguities and challenges of real life and how one thinks about it.

Defeatism should be discouraged. Any sense that defeatism is the empirically proper position on black American history in the same way as it would have been for Pompeiians in the face of the eruption of Mount Vesuvius fails -- for the simple reason that progress for black Americans continues on so many fronts.

Most of the people in question would resist being characterized as defeatist, or as not acknowledging change. However, there is acknowledgment and there is genuflection. Plus, a claim that black radicalism is our only real future is, in itself, defeatism. Four centuries of black history give no indication that these politics will significantly affect how most black people thrive.

For example, a course like Yale's on "African-American Politics" should include not only mention of the Bradley Effect (under which whites voters have claimed in polls that they would vote for black candidates but do not at the voting booth) but also that it has been proven to be on the wane repeatedly for twenty years, including in the election of Barack Obama. Otherwise, Yale's teachings will lag behind what even Wikipedia tells us about the reality on the Bradley Effect, as opposed to its recruitment as a strategy of indoctrination.

The course I mentioned on blacks' problems with urban space flags environmental racism - but would ideally mention the important work of Christopher Foreman of the Brookings Institution (black, for the record) showing that claims along these lines have been overblown.

It must also fall out of this that there will be no such thing as a course shoehorning the careers of hundreds of hard-working and excellent black artists and performers as lessons in stereotyping, or as most interesting for how they were hemmed in by racism than for what they accomplished regardless. Just as it is impossible to imagine Jewish Americans submitting themselves to so dispiriting and reductive a historiography of performance as this one, black scholars should step away from this kind of thinking as giving in to, rather than coping with, the ills of our history.

In the same vein, black popular music (including hip hop) should not be treated as most interesting in how it happened to intersect with (leftist and radical) political ideology - anymore than klezmer music, Chinese opera, or Tchaikovsky is. What about how our music is just good?

Second, an African-American Studies department should be considered larval without a course on black conservative thought - upon which courses on black radicalism would then be acceptable as alternative arguments.

Crucially, token assignment of writings of ancient three-named figures like Booker T. Washington, who wrote amidst post-Civil War conditions now ancient history, are a mere beginning. Most departments already slip in Washington, for example - although they should now regularly engage Robert Norrell's new biography that rescues the man from a century of calumny.

However, equally central to honest engagement with "black thought" are modern figures often considered controversial by the campus set, such as Shelby Steele, Thomas Sowell, Walter Williams, Debra Dickerson, and Stanley Crouch. (I will refrain from putting myself on this list, but will mention that my work is not uncommonly assigned to college students and seems not to leave them deaf to America's sociological imperfections.) Also useful, given that African-American Studies syllabi typically include some white writers, would be Stephen and Abigail Thernstrom, Lawrence Mead, Dan Subotnik and Peter Wood.

There is an argument hardly unfamiliar in the halls of ivy that black writers of this ilk are irrelevant to serious discussion because they are traitors to the race. Those charges must be permitted as free speech - but have no place in any brand of academic inquiry. All of the writers I have listed are careful thinkers deeply concerned with the fate of black America. It will not do to tar them as "not scholarly" because they do not all write in academic format or publish in obscure scholarly journals. Writings typically assigned by James Baldwin, Cornel West or even most of the others in this school are not written in this format either.

Thomas Sowell is read by millions in a nationally syndicated column, and this is in part because he is an economics and history scholar of long standing, whose books are often festooned with footnotes and references to academic work. Shelby Steele won the National Book Award, because of rhetorical skill surely the equal of writers like Patricia Williams and Michael Eric Dyson. Stanley Crouch is a polymath whose salty, "down" essence challenges anyone's claim that not being with the black radical program means not being "culturally black."

To be sure, many professors in African-American Studies departments think of themselves as doing their jobs in what they term "contesting" assorted topics. An example is Marable's "Critical Approaches to African-American Studies" at Columbia in which the contesting is the likes of "Remapping the black experience," "Redefining whiteness," and "Race-ing justice." However, this is a rearranging of furniture, very en famille. The confrontational, leftwardly politicized assumptions remain steadfast - while millions of blacks have overcome having never heard of politics of this kind.

These views, nevertheless, have value and should be heard. Yet they are not, on their own, truth. They verge into excess and anti-empiricism as readily as views from the right. There exist as many intelligent "contestings" of these leftist views as there exist "contestings" of the writings of Shelby Steele or myself. In a university department worth the status, contesting from all sides must be heard.

### AT: Perm Cooption

#### All their cooption args apply to the alt and prove the necessity of the perm---if white supremacy coopts everything then even highly radical challenges to it will fail to overthrow the system---but specific pragmatic reforms can alleviate suffering and injustice

Winant 97 – Howard Winant, Professor of Sociology and Director of the Center for New racial Studies at UC Santa Barbara, September-October 1997, “Behind Blue Eyes: Contemporary White Racial Politics,” online: http://www.soc.ucsb.edu/faculty/winant/whitness.html

Once, US society was a nearly monolithic racial hierarchy, in which everyone knew "his" place. Today, nobody knows where he or she fits in the US racial order.

Thirty years after the enactment of civil rights legislation, agreement about the continuing existence of racial subordination has vanished. The meaning of race has been deeply problematized. Why? Because the legacy of centuries of white supremacy lives on in the present, despite the partial victories of the 1960s. Because the idea of "equality," it turned out, could be reinterpreted, rearticulated, reinserted in the business-as-usual framework of US politics and culture. Because that framework is extremely resilient and able to absorb political challenges, even fundamental and radical ones. Because the outlawing of formal discrimination, which was a crucial and immediate objective of the 1960s movements, did not mean that informal racist practices would be eradicated, or indeed even that anti-discrimination laws would be seriously enforced.

And yet it would be inaccurate to say that the movement failed. In virtually every area of social life, the impact of the postwar racial mobilizations is plain to see (Jaynes and Williams 1989). Although in some sectors, like housing desegregation, massive efforts to transform an entrenched and complex pattern of racial discrimination were largely (though not entirely) defeated (Massey and Denton 1993), in other areas -- for example the desegregation of the armed forces (Moskos 1988, Butler 1980) -- really remarkable change occurred.

### 1AR Rev Offense

#### revolutionary ethics inevitably collapse into violence by converting individuals into identity categories

Horowitz 89—David, author and civil rights activist, founder of the New Left in the 1960s and editor of its largest magazine, Rampart, and Peter Colier, journalist, "Destructive Generation", pp

Not an intention, but a totalitarian faith is what creates the common bond between revolutionary cynics like Stalin and Fidel and the Sandinista comandantes and progressive believers like yourself.

Totalitarianism is the possession of reality by a political Idea— the Idea of the socialist kingdom of heaven on earth, the redemption of humanity by political force. To radical believers, this Idea is so beautiful it is like God Himself. It provides the meaning of a radical life. It is the solution that makes everything possible; it is the end that justifies every regrettable means. Belief in the kingdom of socialist heaven is the faith that transforms vice into virtue, lies into truth, evil into good. For in the revolutionary religion, the Way, the Truth, and the Life of salvation lie not with God above but with men below—ruthless, brutal, venal men—on whom the faith confers the power of gods. There is no mystery in the transformation of the socialist paradise into Communist hell: Liberation theology is a Satanic creed.

Totalitarianism is the crushing of ordinary, intractable, human reality by a political Idea.

Totalitarianism is what my father s funeral and your letter are about.

Your letter indicts me because my ideas have changed- But the biggest change in me is not in any new political convictions I may have. It is in a new way of looking at things. The biggest change is seeing that reality is more important than any Idea. Reality—the concrete-ness of events and of people. In the years since we were close, I have gained respect for the ordinary experience of others and of myself. It is not a change I wanted to make. It is something that happened to me despite my resistance. But it is a change that has allowed me to learn from what I know. To connect, for example, the little episodes of our progressive heritage (like my father's memorial) with the epic inhumanities that its revolutions inspire. It is because you have not changed that these connections remain invisible to you.

What concerns me about you is that you have lost the compassion and humanism which motivated our parents to make their original choice.

You say their original choice. Another Orwellian evasion. Their "original choice" was Communism, was it not? Our parents were idol-ators in the church of a mass murderer named Joseph Stalin. They were not moralists but Marxist-Leninists. For them, the revolution was morality (and beauty and truth as well). For them, compassion outside the revolution was mere bourgeois sentimentality. How could you forget this? Compassion is not what inspired our parents' political choices. Nor is compassion what inspired the Left to which you and I both belonged—the New Left, which forgot the people it liberated in Indochina once their murderers and oppressors were red, which never gave a thought to the Cubans it helped to bury alive in Castro's jails, which is still indifferent to the genocides of Marxist conquest: the fate of the Cambodias and Tibets and Afghanistans.

Compassion is not what motivates the Left, which is oblivious to the human suffering its generations have caused. What motivates the Left is the totalitarian Idea: the Idea that is more important than reality itself. What motivates the Left is the Idea of the future in which everything is changed, everything transcended. The future in which the present is already annihilated; in which its reality no longer exists.  
What motivates the Left is an Idea whose true consciousness is this: Everything human is alien. Because everything that is flesh-and-blood humanity is only the disposable past. This is the consciousness that makes mass murderers of well-intentioned humanists and earnest progressives) the Hegelian liberators of the socialist cause.

In the minds of the liberators, it is not really people who are buried when they bury their victims. Because it is not really people who stand in their way. Only "agents of past oppressions"; only "enemies of the progressive Idea." Here is an official rationale, from a Cheka security official of the time of Lenin, for the disposal of thirty million human souls: "We are not carrying out war against individuals. We are exterminating the bourgeoisie as a class. We are not looking for evidence or witnesses to reveal deeds or words against the Soviet power. The first question we ask is: to what class does he belong, what arc his origins, upbringing, education, or profession? These questions define the fate of the accused. This is the essence of the Red Terror."