# 1AC

## 1AC vs OU LM

### Plan Text

#### The United States Federal Government should provide the solar energy investment tax credit without early disposition as a recapture event.

### Contention One is Warming

#### Recapture rules on the investment tax credit prevent solar financing---2 reasons

#### 1. Investor shortage---to use the ITC, solar developers need to find a tax equity investor, but the recession wiped out their traditional partners

Meister 12 [Joel holds a BA in international affairs from the George Washington University. Manager of Government Affairs at the Solar Energy Industries Association, former Outreach and Policy Assistant at the Center for Global Development, “SUNNY DISPOSITIONS: Modernizing Investment Tax Credit Recapture Rules for Solar Energy Project Finance After The Stimulus,” September 2012, http://solar.gwu.edu/Research/Meister\_Sunny\_Dispositions\_ITC\_Recapture.pdf]

The Impact of the 2008 Financial Crisis¶ A developer will often seek to monetize tax benefits by recruiting a third party with sufficient tax liabilities to fund a portion of the project’s initial construction costs through a capital contribution, or ‘tax equity’ investment, in exchange for a share of the project’s cash flow and nearly all of the tax benefits. 19 “Many renewable energy developers are smaller companies that operate with narrow profit margins and lower tax liabilities and, consequently, may be unable to use the tax credits immediately.” 20 Only large financial institutions with significant, predictable tax liabilities historically invested in renewable energy projects. 21 But the financial crisis of 2008 shook the renewable energy sector to its core, as mounting losses on Wall Street ate away at companies’ profits, thereby reducing their tax liabilities and need for credits and/or deductions. 22 Some financial firms permanently exited the market altogether, including AIG, Lehman Brothers, Merrill Lynch, Wachovia, and ABN Amro. 23 Based on industry surveys, the approximately 20 institutions actively investing in renewable energy in 2007 fell to roughly eight in 2008 and “shrunk” to between four and six by early 2009. 24 “The associated decline in overall tax equity financing provided to renewable energy projects was equally dramatic, falling from a record $6.1 billion in 2007 to $3.4 billion in 2008 and $1.2 billion in 2009.” 25

#### The plan solves investor shortage

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Modernization would also reduce a significant barrier for non-traditional investors who would be concerned about the five-year ownership requirement and/or possible friction with lenders. Many point to Google as the poster child for corporations with large tax liabilities using their balance sheet to supply the tax equity historically provided by Wall Street firms. 245 As of June 2012, Google claims to have invested over $915 million in renewable energy, including investments in 1.8 gigawatts of electric generating assets. 246 Despite Google “significantly moving the ball forward,” however, transactional attorneys note that there is a “steep learning curve” for even the most profitable “widgetmakers,” especially if their business has very little to do with energy. 247 Analysis by Bloomberg New Energy Finance found corporations “reluctant to take on tax equity,” because solar and wind investments are usually a departure from “core business,” and because most companies “do not have a dedicated in-house team to grapple with the complexities of tax equity or to assess projects risks of renewable assets.” 248¶ Senior DOE officials convened a meeting in March of 2012 to shorten that learning curve and “spur more corporations to follow in Google's step.” 249 Along with leading renewable energy tax and project finance attorneys, nearly 80 representatives from the largest companies in the United States were invited, from Exxon Mobil Corp. to Walt Disney Co. 250 Despite enthusiasm in the press and in the Obama Administration, new investors are unlikely to emerge quickly, if at all. A meeting attendee noted IRS audit risk and financial statement risk as two general challenges impeding many corporations from moving into tax equity, but the third risk of ITC recapture is uniquely perplexing within a corporate hierarchy.¶ “A corporation’s risk tolerance decreases substantially the further it moves away from its core business and expertise. It requires months in educating the various stakeholders in a large corporation that must ultimately sign off on the very notion of tax equity investments. There are so many taxspecific risks that scare a conventional corporate tax department. And unlike investment banks, staff are not used to this type of activity, and, in general, do not have the time or energy needed to push transactions through the proper channels. Additionally, their job descriptions and compensation incentives do not align with these types of activities. This can lead to more internal headaches and challenges. ITC recapture can be especially acute in the education process, because it is often seen internally as a risk variable over which the tax equity investor has no control. Removing ‘early disposition’ as a recapture event would fundamentally alter the risk profile, especially for first-time or relatively new investors.” 251¶ Interviews with experienced counsel, developers, and investors reflect an overwhelming consensus that elimination of the early disposition constraint would reduce this perceived risk for tax equity investors and make them more comfortable with transactions incorporating debt at the project level.

#### 2. Negotiations---recapture risk leads to clashes between tax equity investors and lenders, causing higher costs and project failure

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The two lowest-cost options of the 1603 Treasury Program and federal loan guarantees are no longer available, which leaves commercial debt and equity from the private sector to fill the gap. Optimizing the capital structure is increasingly important for the most cost-competitive financing of renewable energy projects. 78 According to a recent analysis of financing structures by the National Renewable Energy Laboratory (“NREL”), the ability to add project-level debt can significantly decrease the levelized cost of energy (“LCOE”) for solar projects. 79 In the case of a photovoltaic (“PV”) plant, the LCOE dropped 20-50% versus equity-only financing. For a Concentrating Solar Power (“CSP”) plant, the LCOE dropped 29-35% versus equity-only financing. 80¶ Negative Impacts of Recapture Rule for Early Dispositions¶ Illiquidity Impedes the Development of a Secondary Market for Solar Assets ¶ Adding debt to a transaction, however, is easier said than done. Prior to creation of 1603, developers, lenders, and investors had yet to establish market terms to efficiently address concerns over recapture risk, and a “period of sorting out” is expected to begin in late 2012 and early 2013. 81 At the outset, “many investors have little interest in assets that cannot be sold at short notice for net asset value.” 82 Recapture “headaches” 83 from solar “credits are particularly vexing for liquidity-seekers.” 84 “There is option value in being able to sell an asset whenever you want. Frequently this is called the liquidity premium, where a more liquid property has more value.” 85 Moreover, the illiquid ITC prohibits the transfer of projects, which “limits the fungibility that is necessary for the development of a viable secondary market.” 86 For example, industry analysts predicted the sunset of stimulus-era programs would result in a robust period of mergers and acquisitions (“M&A”) in renewable energy projects as “developers look for ways to raise capital to drive development” and larger established companies with strong balance sheets look to diversify their energy holdings. 87 Interest in project sales would also be accelerated by economically distressed tax equity investors “similarly looking to exit their positions to raise cash.” 88 A 2012 industry survey reported solar PV as the most preferred sector for acquisitions among renewable energy technologies. 89 Yet with the exception of 1603 projects not subject to limits on early disposition, ITC recapture rules will prohibit the sale of solar projects already placed in service for the first five years, discouraging M&A activity in projects with successful operational histories that may be most appealing to investors. This also constrains developers who may wish to raise capital for subsequent projects and tax equity investors that need to exit their investments.¶ Inter-Creditor Friction Increases Transaction Costs¶ The profile of a tax equity investor is very similar to subordinated debt, requiring a certain return but standing second in line to the senior lender. 90 But unlike a pure subordinated lender, tax equity investors face the additional risk that foreclosure could trigger recapture of tax benefits. As a result, “The most significant cost of tax equity…is that it makes obtaining project level debt more difficult.” 91 Investors often request a forbearance agreement or ‘standstill period’ “as a practical accommodation on the part of lenders to give the tax equity participants protection and comfort to take part in the transaction.” 92 “The key element in a forbearance agreement is the lender’s covenant to forbear from foreclosing on a significant portion of its collateral if the project defaults.” 93¶ The difficulty in negotiating forbearance and inter-creditor agreement text can consume a considerable amount of time and money for all parties. Some lenders report recapture risk alone consuming approximately two to three months or more. 94 Delays often occur when the tax equity investor or legal counsel are relatively inexperienced with the ITC recapture rules. If the investor and/or counsel are not comfortable with the basic mechanics of the structuring, negotiations over recapture risk can “threaten to scuttle the entire deal,” and “the lender ends up paying for that lack of experience and bears the cost of educating the counter-party” on how the risks may be minimized. 95¶ Even if the parties understand the nature of the recapture risk, the parties may nonetheless disagree over whether forbearance terms are even appropriate for an intercreditor agreement. The tax equity investor will often request forbearance for at least the full five-year vestment period, whereas the lender providing debt on a non-recourse basis will want to retain the right to foreclose on the project assets to safeguard its security. Many lenders see forbearance “violating the premise of the debt’s pricing,” because the “grand deal for cheap debt” is a lender’s right to take control of the project in the event of default. 96 Chris Diaz of Seminole Financial Services compares the negotiating process to struggling with a Rubik’s Cube puzzle when one side’s color is properly configured but the rest of the cube is completely mis-matched: ¶ “Each party will offer recapture terms perfectly consistent with its own interests, but it will cause problems for the other sides of the transaction. The tax equity investor wants to hold the lender’s feet to the fire, but it is difficult to get a lender comfortable giving up his only remedy of foreclosure for five years. Ultimately, they must try to find a middle ground, and it is an arduous process.”¶ If a compromise is reached, costly revisions to other project documents are often necessary to conform the ultimate terms. 98 A single institution could hypothetically provide both debt and tax equity for a single project. 99 But these “combined offerings” are rare occurrences, despite the perceived “alignment” benefits from dealing with a single party. 100 In reality, it may present similar challenges, as separate business units within the company may have separate negotiating counsel and the debt portion may be structured for subsequent sale to other investors. 101 In any case, the original counter-parties must anticipate intercreditor and forbearance issues.¶ Increased Cost Threatens Optimal Capital Structuring and PPA Clearing Price¶ Like other risk factors in a transaction, the ease or difficulty with which parties address ITC recapture may determine the success or failure of the entire project. Recounting a 15 MW solar PV project that fell apart because the parties could not find agreement, one leading project finance attorney described the unfortunate consequences that developers struggle to avoid.¶ “When debt walks, optimal capital structuring has not been achieved. Unreasonable forbearance terms from either party can blow up a deal, and recapture risk causes that friction. The unfortunate alternative is relying on tax equity alone, which is more expensive, lowers the developer’s return, and ultimately increases the cost of the power contract. It is a ridiculous reason not to do a deal and holds back many quality projects from moving forward.” 102¶ Debt “significantly increases the risk profile of the transaction for the tax equity investor.” 103 Compensating for this increased risk and the illiquid nature of the investment, the tax equity investor will require a higher return with a significant yield premium that increases the cost of capital for the developer. 104 The premium charged for combining tax equity and debt is a function of the transactional “sausage-making” required to convene multiple parties with varied interests in a single transaction. 105 For the few investors that have agreed to project-level debt in the past, they charged a premium of roughly 200-300 basis points. 106 A January 2012 report estimated that tax equity investors required after-tax returns in the range of 7.5-12%, compared to 9.5-16% for a leveraged PV project. 107 Yield premiums for leveraged transactions are now around 725 basis points. 108¶ Even a 2% premium has a significant impact on the LCOE. For a hypothetical PV plant, NREL calculated the LCOE increases by $.025 per kilowatt-hour (kWh) of electricity for sale leaseback transactions and $0.05 per kWh for partnership flips. 109 In February 2012, industry leaders roughly approximated that for every 100 basis point increase in the cost of capital, the economic “clearing price” for the PPA for electricity increases by approximately $.015 per kWh, ultimately leading to higher costs for the party purchasing the power. 110

#### The plan resolves recapture problems

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Revising Section 50 and Barriers to Recapture Modernization¶ Just as Congress focused on the desired policy outcome of the credit when revising the LIHTC in 2008, Congress should revise Section 50 for solar energy property to permit growth in the industry. The following suggested amendment to Section 50(a)(4) could serve as a starting point for legislative text:¶ For purposes of this subsection, the increase in tax under this subsection shall not apply to an energy credit claimed for qualified energy property described in Section 48(a)(3)(A)(i) solely by reason of the disposition of the energy property (or an interest therein) if it remains qualified energy property and there is no change in use as a consequence of the disposition for the remaining recapture period with respect to such energy property.¶ Refocusing the recapture rules for solar energy property to the scope of use would more closely align the credit with the policy intent of promoting the construction of solar energy property to generate electricity. This statutory construction would deter the discarding of property in asset churning schemes by requiring the taxpayer and subsequent owner to maintain the property’s status as qualifying solar energy equipment used to “generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat” under Section 48. 260¶ In exchange for recapture modernization, Congress could apply comparable safeguards established for 1603 and the LIHTC. For example, the revised recapture rules could explicitly prohibit sale to disqualified persons as defined under 1603. 261 To address concerns over so-called straw party schemes previously envisioned in the LIHTC context, legislation could establish identical reporting requirements with an extended statute of limitations. 262 This would not be administratively infeasible for the solar industry, which already complies with more detailed reporting requirements for the 1603 Treasury Program. The taxpayer claiming a 1603 grant must certify to Treasury on an annual basis for five years under penalty of perjury that “the property has not been disposed of to a disqualified person and that the property continues to qualify as specified energy property.” 263

and Congress and the Administration should see that it is in the interest of the country to forge this policy sooner than later.

#### Only the plan makes solar cost-competitive---incentivizes learning by doing that brings down costs exponentially

Reichelstein and Yorston 12 [Stefan Reichelstein, PhD, Senior Fellow at the Woods Institute for the Environment, Professor of Accounting at the Stanford Graduate School of Business; Michael Yorston, Dept of Management Science and Engineering at Stanford, October 2012, “The Prospects for Cost Competitive Solar PV Power,” http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2182828]

Solar PV modules have experienced a remarkably consistent pattern of learning-by-doing over the past thirty years. Specifically, the prices of solar cells and modules have on average come down about 20% each time the total (cumulative) capacity of solar installations has doubled. To assess the prospects for cost competitive solar PV, we posit that the industry can maintain this learning for another decade. If furthermore solar facilities are installed at a rate of about 30 GW per year, which would equal the amount of capacity added in 2011, we obtain two predictions. First, utility-scale facilities are on track to achieve cost competitiveness by 2020. Secondly, commercial-scale installations will be able to achieve grid-parity at the retail price level, that is, they will be cost competitive even if even if the preferential tax treatment of solar PV were to be discontinued at that point in time. To be sure, the current tax treatment appears essential in order to sustain the investment volume that is essential for a continued trajectory down the learning curve. Yet, we also submit that the economic viability of solar PV requires neither a ‘technological breakthrough’, nor does it seem essential to maintain the current public subsidies indefinitely.

#### US solar expansion goes global—that solves warming

Romm 08 (Joseph, a senior fellow at the Center for American Progress, where he oversees ClimateProgress.org. He is the author of "Hell and High Water: Global Warming -- The Solution and the Politics." Romm served as acting assistant secretary of energy for energy efficiency and renewable energy in 1997. He holds a Ph.D. in physics from MIT. “The technology that will save humanity,” http://www.salon.com/2008/04/14/solar\_electric\_thermal/)

Clearly, the world needs a massive amount of carbon-free electricity by 2050 to stabilize greenhouse gas emissions. The industrialized countries need to cut their carbon dioxide emissions from electricity generation by more than 80 percent in four decades. Developing countries need to find a way to raise living standards without increasing electricity emissions in the short term, and then reduce those emissions sharply. And, over the next few decades, the world needs to switch to a ground transportation system whose primary fuel is clean electricity.¶ This electricity must meet a number of important criteria. It must be affordable: New electricity generation should cost at most about 10 cents per kilowatt hour, a price that would probably beat nuclear power and would certainly beat coal with carbon capture and storage, if the latter even proves practical on a large scale. The electricity cannot be intermittent and hard to store, as is energy from wind power and solar photovoltaics. We need power that either stays constant day and night or, even better, matches electricity demand, which typically rises in the morning, peaks in the late afternoon, and lasts late into the evening.¶ This carbon-free electricity must provide thousands of gigawatts of power and make use of a low-cost fuel that has huge reserves accessible to both industrialized and developing countries. It should not make use of much freshwater or arable land, which are likely to be scarce in a climate-changed world with 3 billion more people.¶ Solar electric thermal, also known as concentrated solar power (CSP), meets all these criteria. A technology that has the beauty of simplicity, it has proved effective for generations. As the Web site of CSP company Ausra illustrates, solar thermal has a long and fascinating history.¶ Back around 700 B.C., the Chinese first used “burning mirrors” to ignite firewood. In 230 B.C., a colleague of Archimedes built a parabolic mirror, which focuses the sun’s rays to a single point, also better for starting fires. Around 212 B.C., Archimedes supposedly had Greek soldiers use their bronze shields to concentrate the sunlight on Roman ships and set them on fire. In the 15th century, the Italians used burning mirrors to solder copper sections of the Santa Maria del Fiore cathedral. Leonardo da Vinci’s notebooks contain many designs for solar concentrators, including some for industrial purposes, because he worried about the destruction of the earth’s vast forests in humanity’s search for fuel. In the 1860s and 1870s, Augustin Mouchot built the first dish-shaped reflector that ran a heat engine, and he used solar thermal to heat a boiler that ran an ice maker. His assistant demonstrated a printing press running on concentrated solar. But all this work came to naught because of the general lack of direct sunlight in France and the abundance of cheap coal, which became a primary energy source for the Industrial Revolution. A Swedish immigrant to America, John Ericsson, developed a motor driven by parabolic trough mirrors in 1870. In 1909, H.E. Wilsie added a critical component, a system for storing solar energy for when the sun did not shine. Heat is much easier to store than electricity, a fact that gives CSP a crucial — maybe the crucial — advantage over wind and solar photovoltaics. In 1913, an American, Frank Shuman, installed a 55-kilowatt CSP water-pumping station using parabolic mirrors in Meadi, Egypt. The mirrors focused the sun on tubes whose heated fluid ran an engine to make electricity. This was perhaps the first commercial CSP plant. But it was shut down at the start of WWI, and, as Ausra notes, “the plant was never restarted because of the discovery of cheap oil in the Middle East.” In the 1960s, the Italians developed two of the key CSP designs used today. The first uses a linear mirror to focus the light on a long tube, allowing the mirrors to be flat, cheaper to build and less exposed to the wind. In the second, called a power tower, many mirrors move in two dimensions, focusing on a central tower that holds the engine. The 1970s oil shocks led to the first commercial developer of U.S. solar thermal electric projects, Luz International. The company built and sold nine solar plants in California’s Mojave Desert. The plants circulated oil in pipes, heating it to 700 degrees with long parabolic mirrors; the oil boiled water to drive a steam turbine. Although the technology functioned well, Luz was forced to file for bankruptcy in 1991. The reasons, detailed in this Sandia report, included uncertainty in the market, a delay of federal and state tax breaks, and the lack of economic value derived from environmental benefits. For more than a decade, those barriers, coupled with low natural-gas prices, kept CSP moribund. The technology got a huge boost in 2004, when Spain approved a guaranteed price, a “feed-in tariff,” for CSP. That led to an explosion of Spanish CSP, starting with a power tower near Seville, and a plant outside Granada, the first parabolic trough system in Europe, which should be running later this year. In this country, soaring gas prices and renewable portfolio standards have sparked a resurgence. In 2006, the Arizona Public Service Co. dedicated the first new CSP plant in the United States in two decades — a 1-megawatt concentrated solar trough system with an engine used for decades by the geothermal industry. In June 2007, Nevada Solar One, the state’s first CSP plant, went online. On 275 acres near Boulder City, it provides 64 MW of electricity from 98 percent solar power and 2 percent natural gas. And in California, PG&E has created deals with three major CSP companies to generate electricity for the Golden State. Another 10 plants are in the advanced planning stages in the Southwest, along with nine plants in countries that include Israel, Mexico and China. The key attribute of CSP is that it generates primary energy in the form of heat, which can be stored 20 to 100 times more cheaply than electricity — and with far greater efficiency. Commercial projects have already demonstrated that CSP systems can store energy by heating oil or molten salt, which can retain the heat for hours. Ausra and other companies are working on storing the heat directly with water in the tubes, which would significantly lower cost and avoid the need for heat exchangers. CSP costs have already begun to decline as production increases. According to a 2008 Sandia National Laboratory presentation, costs are projected to drop to 8 to 10 cents per kilowatt hour when capacity exceeds 3,000 MW. The world will probably have double that capacity by 2013. The price drop will likely occur even if the current high prices for raw materials like steel and concrete continue (prices that also affect the competition, like wind, coal and nuclear power). Since all three remaining presidential candidates endorse a cap on carbon dioxide emissions coupled with a system for trading emissions permits, carbon dioxide will likely have a significant price within a few years. And that means the economics of carbon-free CSP will only get better. Improvements in manufacturing and design, along with the possibility of higher temperature operation, could easily bring the price down to 6 to 8 cents per kilowatt hour. CSP makes use of the most abundant and free fuel there is, sunlight, and key countries have a vast resource. Solar thermal plants covering the equivalent of a 92-by-92-mile square grid in the Southwest could generate electricity for the entire United States. Mexico has an equally enormous solar resource. China, India, southern Europe, North Africa, the Middle East and Australia also have huge resources. CSP plants can also operate with a very small annual water requirement because they can be air-cooled. And CSP has some unique climate-friendly features. It can be used effectively for desalinating brackish water or seawater. That is useful for many developing countries today, and it’s a must-have for tens if not hundreds of millions of people if we don’t act in time to stop global warming and dry out much of the planet. Such desertification would, ironically, mean even more land ideal for CSP. The technology has no obvious bottlenecks and uses mostly commodity materials — steel, concrete and glass. The central component, a standard power system routinely used by the natural gas industry today, would create steam to turn a standard electric generator. Plants can be built rapidly — in two to three years — much faster than nuclear plants. It would be straightforward to build CSP systems at whatever rate industry and governments needed, ultimately 50 to 100 gigawatts a year growth or more. So what do we need to do to ramp up CSP? Interestingly, most CSP executives don’t talk much about the need for government R&D. They mostly need policies aimed at creating initial market demand that would help bring down costs quickly over the next several years. One such policy is a so-called national renewable portfolio standard, which would require utilities to get a minimum percentage of their electricity from new renewable forms of power, or purchase such power from other utilities. After that, the typical manufacturing learning curves and economies of scale — plus a market price for carbon dioxide set by the cap-and-trade system — should do the rest. That means Congress and the president must renew the 30 percent solar energy investment tax credit through 2016. After all, it’s the least they can do. From 2002 to 2007, fossil fuels received almost $14 billion in electricity-related tax subsides, whereas renewables received under $3 billion. From 1948 to today, nuclear energy R&D exceeded $70 billion, whereas R&D for renewables was about $10 billion. The United States has already lost the leadership it had in solar photovoltaics and wind, thanks to deep budget cuts by President Reagan and the Newt Gingrich-led Congress. By 2010, China will be the top manufacturer of photovoltaic cells and wind turbines. Must we also abandon our historical leadership in CSP to conservative doctrine? Other countries, particularly Spain but also Israel and Australia, are poised to be dominant. And China, which has already begun importing coal and pursuing CSP projects, will not be far behind. CSP could well be one of the major job-creating industries of the century. Every other major country aggressively supports clean tech industries with subsidies and mandates. But our Congress and president can’t even agree on a requirement for 10 percent of U.S. energy to be from renewable sources — far less than most European countries and half our own states. We should have a federal standard requiring U.S. utilities to get 20 percent of their power from renewables by 2020. Another useful incentive would be loan guarantees, a program that could be retired once we have a price for carbon dioxide. CSP has no fuel cost, and low operations and maintenance costs, but it has high upfront capital costs. Loan guarantees can reduce the risks of the first big plants at little or no cost to the taxpayer. The United States should also insist that CSP be a high priority for development projects by the Global Environmental Facility and the World Bank. Finally, we will need more electric transmission in this country. The good news is that because it matches the load most of the day and has cheap storage, CSP can share power lines with wind farms. When the country gets serious about global warming, we will need to get serious about a building a transmission system for a low-carbon economy.¶ If we are smart, the United States can be the economic leader here. **We can accelerate the deployment of a technology that may be critical to saving humanity from a ruined climate.**

#### US emissions reductions are modeled globally—solves warming

Talbott and Arnold 12 (Strobe Talbott, President of the Brookings Institution, and John-Michael Arnold

Special Assistant to the President of the Brookings Institution, “It’s the Climate, Stupid!” http://www.brookings.edu/~~/media/research/files/papers/2012/5/25%20americas%20role%20talbott/0525%20americas%20role%20talbott.pdf)

And then there’s climate change, the most urgent, most consequential, most dangerous issue of these times. Climate change is also the ultimate example of the nexus between U.S. domestic and foreign policy. **As long as the** U**nited** S**tates is tied up in knots at home, it can’t lead the world.**¶American voters today have an unprecedentedly onerous distinction: they are both the first generation to realize that they live in the era of global warming and also the last generation with a chance to do something about it. The human enterprise must cut its emissions of greenhouse gases by 50 percent in the coming decades, a period when population is projected to grow by 50 percent. That means in the next five years people have got to begin bending the curve of emissions that drives global warming—otherwise it will probably be too late to head off an irreversibly catastrophic tipping point somewhere around midcentury.¶ In meeting this daunting challenge, the United States—which has pumped almost a third of total global carbon emissions into the atmosphere since the Industrial Revolution— is uniquely able to catalyze international consensus and action. Whether that is called a window of opportunity or a window of obligation, it is closing.

#### Warming is real, anthropogenic and causes extinction

Flournoy 12 -- Citing Feng Hsu, PhD NASA Scientist @ the Goddard Space Flight Center. Don Flournoy is a PhD and MA from the University of Texas, Former Dean of the University College @ Ohio University, Former Associate Dean @ 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 @ Scripps College of Communications @ Ohio University (Don, "Solar Power Satellites," January, Springer Briefs in Space Development, Book, p. 10-11

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 )

#### 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.

#### It is not too late to reverse warming – taking action now is critical

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.

### 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 noncmmittal 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.

#### Action with policy relevance is key when survival is at stake---extinction is the ONLY prior question

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.

#### Public advocacy is key to effective action on climate change---individual resistance fails

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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.

#### 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.

#### 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.

#### 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’.

#### 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

#### Pragmatism is a bridge between theory and policy – it solves climate change best

Simpson 10 (Francis, College of Engineering, Vanderbilt University, “Environmental Pragmatism and its Application to Climate Change The Moral Obligations of Developed and Developing Nations to Avert Climate Change as viewed through Technological Pragmatism”, Spring 2010 | Volume 6 | Number 1)

Pragmatism and Footprinting¶ Environmental pragmatism is a relatively new field of environmental ethics that seeks to move beyond the strictly theoretical exercises normal in philosophy and allows the environmental movement to formulate substantial new policies (Light, 1). Environmental Pragmatism was initially posited by Bryan Norton and evolved to not take a stance over the dispute between non-anthropocentric and anthropocentric ethics. Distancing himself from this dispute, he preferred to distinguish between strong and weak anthropocentricism (Light, 290-291, 298). The main philosophers involved in advancing the debate in environmental pragmatism include Eric Katz, Andrew Light, and Bryan Norton. This particular discipline advocates moral pluralism, implying that the environmental problems being faced have multiple correct solutions. Light argues that the urgency of ecological crises requires that action is necessary through negotiation and compromise. While theorists serve to further the field of environmental ethics and to debate the metaethical basis of various environmental philosophies, some answers to questions are best left to private discussion rather than taking time to argue about them publically (introduction of pragmatism). Pragmatism believes that if two theories are equally able to provide solutions to a given problem, then debate on which is more is argued that: “the commitment to solving environmental problems is the only precondition for any workable and democratic political theory” (Light, 11). While the science behind a footprint is well understood, what can the synthesis of environmental pragmatism and footprinting tell us about the moral obligation to avert climate change? How does grounding the practice of sustainability footprinting in environmental pragmatism generate moral prescriptions for averting climate change?¶ Environmental Pragmatism necessitates the need for tools in engineering to be developed and applied to avert the climate change problem, since pragmatism inherently calls for bridging the gap between theory and policy/ practices. With the theory of pragmatism in mind, further research and development of tools such as life-cycle analysis and footprinting are potential policy tools that are necessary under a pragmatist viewpoint so that informed decisions can be made by policy makers. Since the role of life-cycle analysis and footprinting attempt to improve the efficiency and decrease the overall environmental impact of a given process, good, or service, environmental pragmatism would call for the further development and usage of these tools so that we can continue to develop sustainably and fulfill our moral obligation to future generations. By utilizing footprinting and life-cycle analysis, it becomes possible to make environmentally conscious decisions not only based upon a gut instinct but additionally based on sound science. Finally, in regards to averting climate change, footprinting and life-cycle analysis offer another dimension to traditional cost-benefit analysis and can allow for our moral obligation to future generations to weigh into final decisions which will eventually result in policies and/ or a production of a good or service. Since traditional cost benefit analysis does not account for the environment explicitly, pragmatism would call for the application of these tools to ensure that the environment is adequately protected for future generations.¶ Climate change modeling inherently contains many unknowns in terms of future outcomes and applied simplifications, but these factors should not be enough to hold us back from an environmental pragmatism stand point. Rather than hiding behind a veil of uncertainty with the science, the uncertainty of the possible catastrophic outcomes demands action on the part of every human individual. Environmental pragmatism could also adopt a view point like the precautionary principle where a given action has great uncertainty, but also great consequence (Haller). Since we are attempting to protect human lives and prevent unnecessary suffering, environmental pragmatism would dictate that we should take action now and stop debating the theoretical aspects of this problem. A moral obligation exists to protect human life, and it becomes our obligation to avert climate change. Despite the relatively high economic costs of averting climate change, it is worth noting that the creation of green jobs and new sectors will help to stimulate the economy rather than completely hindering it. People inherently fear change, and it is my opinion that averting climate change requires a drastic change in our consumption patterns, an important reason why people are resisting averting climate change. From an environmental pragmatism viewpoint, it is humanities responsibility to avert climate change before it is too late since we have a moral obligation to protect the future of humanity and the biosphere.

#### Renewables reorient our relationship to the environment and protect it

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“Technology is therefore no mere means. Technology is a way of revealing. If we give heed to this, then another whole realm for the essence of technology will open itself up to us. It is the realm of revealing, i.e of truth” (Heidegger,12). Heidegger presents technology as a way to lead people towards the revealing of reality to which they are exposed, this revelation will eventually lead to truth, he states. His statement implies a beginning of a new perception and relation with nature along with understanding of knowledge and experience. Northern European countries, such as Germany, Netherlands, Norway, Sweden, Scotland and Denmark, have based a possible solution to the environmental crisis on that principle; it is possible to see them advancing towards what might be a series of technological results to lead to a new balance of people and nature.¶ Are technological solution a way to close the gap between men and nature? Will they lead to a true revealing or a new balance? It is possible to see that through the way Heidegger depicts technology more understanding can be gathered by people on nature and the nature of being. The advancements of the Northern European countries above listed have addressed the popular energy demands by people in different ways: wind farms, sea turbines, biogas and hydroelectric power. It is interesting to analyse how those countries have aimed to rural centres in their pursuit of these technologies, and in those small communities nature has become of value, as to be preserved, as it actually benefit people not solely on economic grounds.¶ As an example the community of Dardesheim in Germany is aiming to cut his carbon footprint by investing in renewable energy. Namely the choices being enacted in Dardesheim do not effect merely the economy, as a result people's relationship with nature changes towards a more revealing true state of being. It is possible to take Dardesheim's example as a chance for people to re-discover a balance. Similarly to Dardesheim, there are many small communities in Germany and the countries above listed, that are finding new solutions and balance with the environment. Is that a plausible realization to Heidegger's ideas on technology? It is possible to see the example of such small communities as a turn of the tide, a tide in which people and nature are put on the same level, as both benefit from ethical choices of technological use. In other words nature becomes a treasure in which it is allowed to blossom, people do take pride and protect it, since it ultimately protects themselves. Through examples like that it is possible to view the idea of ecological cosmology as well as technology as a benefit to humanity, that should by all means expand. “Similarly, imagining a “State of law of nature”, a due process for the discovery of the common world, is not going to make life easier for those who claim to be sending back to the nonexistence of the irrational all the propositions whose looks they do not like” (Latour, 224). Latour, in his book, suggests a discourse to begin to enable people and nature, as well as technology and democracy, to co-exist. For instance it is very interesting to note that a balance can be found in the discourse that Latour suggests, but a change in perspective is needed. Nature and its beings have to be put on the same level as people. It is pretty difficult to picture a reality such as that, but it is a needed step that technology can assist people with. Technology – as well as – democracy have a common system , or a system of law, through which humanity can extend its understanding and rights to the non-humans.¶ The law of nature, the natural law, forces people to look for a moral law rather than an artificial law and legal system. Furthermore it would allow people to connect with the other beings, and instead of abusing them redefine an existence that is meaningful to both elements of life. The change of perspective is possible because of science and the knowledge that humanity, through technology has gained about the other beings that populate the planet. Technology is key to a level of understanding that can push humanity forward in overcoming a global environmental crisis and a a climate crisis which challenges every living element of planet earth. Besides those factors it is very interesting to see how through logos or discourses those objectives can be achieved.

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

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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

## Warming

### Renewables Can Solves

#### Not about solar

#### Only solar solves

Fthenakis 8 [Vasilis Fthenakis, Ph.D., Senior Research Scientist at the Center for Life Cycle Analysis; James E. Mason, Ph.D., Director of the Renewable Energy Research Institute; Ken Zweibel, founder of the Institute for Analysis of Solar Energy at GWU, former PV R&D program manager at NREL; “The technical, geographical, and economic feasibility for solar energy to supply the energy needs of the US,” *Energy Policy*, http://www.solarplan.org/Research/F-M-Z\_Solar%20Grand%20Plan\_Energy%20Policy\_2009.pdf]

Abstract¶ So far, solar energy has been viewed as only a minor contributor in the energy mixture of the US due to cost and intermittency constraints. However, recent drastic cost reductions in the production of photovoltaics (PV) pave the way for enabling this technology to become cost competitive with fossil fuel energy generation. We show that with the right incentives, cost competitiveness with grid prices in the US (e.g., 6–10 USb/kWh) can be attained by 2020. The intermittency problem is solved by integrating PV with compressed air energy storage (CAES) and by extending the thermal storage capability in concentrated solar power (CSP). We used hourly load data for the entire US and 45-year solar irradiation data from the southwest region of the US, to simulate the CAES storage requirements, under worst weather conditions. Based on expected improvements of established, commercially available PV, CSP, and CAES technologies, we show that solar energy has the technical, geographical, and economic potential to supply 69% of the total electricity needs and 35% of the total (electricity and fuel) energy needs of the US by 2050. When we extend our scenario to 2100, solar energy supplies over 90%, and together with other renewables, 100% of the total US energy demand with a corresponding 92% reduction in energy-related carbon dioxide emissions compared to the 2005 levels.¶ 1. Introduction¶ The world faces the dual challenges of fossil fuel depletion and carbon dioxide (CO2) emissions, and the main candidates for facing these challenges are coal with carbon capture and storage (CCS), nuclear, and renewable sources of energy. However, safe and economic concepts for CCS have not been proven; nuclear suffers from high cost, radioactive waste management, fuel availability, and nuclear weapon proliferation issues, and renewables have been limited by resource limits, high cost, and intermittency problems. Biomass could be a substitute for fossil fuels, but enough land or water to meet the demand and to feed the world’s growing population is not available (Perlack et al., 2005). Wind is intermittent, and the total capacity of Class 4 and higher wind resources in the US is about 1.2 Terawatt (TW) (American Wind Energy Association, 1991). Solar energy has huge potential—tens or hundreds of TWs are practical, but it suffers from intermittency. Recent drastic cost reductions in the production of photovoltaics (PV) pave the way for enabling solar technologies to become cost competitive with fossil fuel energy generation. Scaling of concentrating solar power (CSP) may also enable drastic cost reductions. In this study, we forecast future energy demand levels for the US, and then we extrapolate the deployment level of existing solar technologies, supplemented by other renewable energy sources, to prove the feasibility for solar energy to supply that energy. These technologies are (1) PV, (2) PV combined with compressed air energy storage (CAES) power plants, and (3) CSP plants with thermal storage systems. A vision for very large implementation of solar systems in desert lands of the US southwest (SW) was presented in Scientiﬁc American (Zweibel et al., 2008). The current article discusses the feasibility of this vision.

### Energy Shortage Not Inevitable

#### From 1998---lolsy

#### New forecasting solves

Lundin 2/26 (Barbara L. Vergetis, the Editor of FierceMarkets' Energy Group, “Goodbye to solar intermittency concerns,” http://www.fierceenergy.com/story/goodbye-solar-intermittency-concerns/2013-02-26)

The intermittent nature of solar energy may be less of a concern to utilities with the creation of a new, more accurate forecasting method.¶ The National Center for Atmospheric Research (NCAR) is spearheading a three-year project to create unprecedented, 36-hour solar forecasts for solar power plants.¶ The system will forecast sunlight and resulting power every 15 minutes over specific solar facilities, enabling utilities to continuously anticipate the availability of solar energy.¶ "It's critical for utility managers to know how much sunlight will be reaching solar energy plants in order to have confidence that they can supply sufficient power when their customers need it," said Sue Ellen Haupt, director of NCAR's Weather Systems and Assessment Program and lead researcher on the project.¶ The information will be testing during different seasons across the country, including the Northeast, Florida, Colorado/New Mexico, and California, to ensure the system works year-round in different types of weather.¶ Once the system is proven, the techniques will be widely disseminated for use by the energy industry and meteorologists.

### AT: Consumerism

#### The plan is natural capitalism - it's sustainable

Hawken et al 10 (Paul, environmentalist, entrepreneur, and author, Amory B. Lovins, Co-founder, Chairman, and Chief Scientist of Rocky Mountain Institute, and L. Hunter Lovins, founder of Natural Capitalism, Inc. and Natural Capitalism Solutions and co-founder of the Rocky Mountain Institute and a professor at the Presidio School of Management's MBA in Sustainable Management program, “Natural Capitalism: The Next Industrial Revolution”, Google Books, p. 259-262)

CHURCHILL ONCE REMARKED THAT DEMOCRACY IS THE WORST SYSTEM OF government — except for all the rest. The same might be said of the market economy. Markets are extremely good at what they do, harnessing such potent motives as greed and envy — indeed, Lewis Mum ford said, all the Seven Deadly Sins except sloth. Markets are so successful that they are often the vehicle for runaway, indiscriminate growth, including the growth that degrades natural capital.¶ A common response to the misuse, abuse, or misdirection of market forces is to call for a retreat from capitalism and a return to heavy-handed regulation. But in addressing these problems, natural capitalism does not aim to discard market economics, nor reject its valid and important principles or its powerful mechanisms. It does suggest that we should vigorously employ markets for their proper purpose as a tool for solving the problems we face, while better understanding markets' boundaries and limitations.¶ Democracies require ceaseless political vigilance and informed citizenship to prevent them from being subverted or distorted by those who wish to turn them to other ends. Markets, too, demand a comparable degree of responsible citizenship to keep them functioning properly despite those who would benefit more from having them work improperly. But the success of markets when they do work well is worth the effort. Their ingenuity, their rapid feedback, and their diverse, dispersed, resourceful, highly motivated agents give markets unrivaled effectiveness. Many of the excesses of markets can be compensated for by steering their immense forces in more creative and constructive directions. What is required is diligence to under-stand when and where markets are dysfunctional or misapplied, and to choose the correct targeted actions to help them to operate better while retaining their vigor and vitality.¶ This book has often argued that most of the earth’s capital, which makes life and economic activity possible, has not been accounted for by conventional economics. The goal of natural capitalism is to extend the sound principles of the market to all sources of material value, not just to those that by accidents of history were first appropriated into the market system. It also seeks to guarantee that all forms of capital are as prudently stewarded as money is by the trustees of financial capital.¶ The notion that much of the remedy for unsustainable market activities is the adoption of sustainable market activities may offend both those who deny that markets can be unsustainable and those who deny that markets and profits can be moral. Yet worldwide experience confirms an abundance of market-based tools whose outcomes can be environmentally, economically, and ethically superior. These tools include institutional innovations that can create new markets in avoided resource depletion and abated pollution, maximize competition in saving resources, and convert the cost of a sulfur tax or a carbon-trading price into profits realized from the sale and use of efficient technologies.

#### 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.

### No Solvency---Deforestation

#### New data proves deforestation doesn't cause warming

New Scientist 10 citing ecologists at Winrock International, a US-based consulting agency. "Deforestation 'not so important for climate change'," Dec 8, http://www.newscientist.com/article/dn19817-deforestation-not-so-important-for-climate-change.html

Climate negotiations were dealt a bombshell at the weekend when ecologists reported that carbon emissions from the destruction of tropical forests are probably only half previous estimates.¶ If we are emitting less carbon dioxide from deforestation that's got to be good news, surely. The trouble is the findings seriously question the only success so far of the UN negotiations on curbing climate change under way in Cancún, Mexico. If cutting down trees emits far less CO2 than we thought, where's the incentive to stop chopping?¶ This is a dismaying thought when negotiators feel they are close to a deal on compensating tropical countries for curbing deforestation.¶ Four years ago, the UN's [IPCC] Intergovernmental panel on Climate Change estimated that deforestation was responsible for up to 20 per cent of CO2 emissions. A more recent study by Richard Houghton of Woods Hole Research Center in Falmouth, Massachusetts, revised that down to 15 per cent for the period 2000 to 2005. Both estimates relied on national declarations of forest loss made to the UN, coupled with simple estimates to convert that loss into carbon emissions.¶ But now ecologists at Winrock International, a respected US consultancy based in Arlington, Virginia, whose work was funded by the World Bank and the Norwegian government, says a more detailed analysis puts the figure for 2000 to 2005 at around 8 per cent, with a possible range between 5 and 12 per cent. Nancy Harris of Winrock said in Cancun that the estimate was "the lowest reported to date".¶ The analysis, which has yet to be formally published, used more than 3 million data points from a laser-radar satellite measurement technique known as lidar and 4000 carbon inventories from forest plots on the ground. Harris said it did not include forest regrowth after deforested land had been abandoned by farmers, which could reduce the figure further.

### AT: Airplane

#### Solve this---batteries, etc…

### AT: India

#### Plan solves this

### AT: Guilt/Minor Reforms

#### No guilt---guilt-free---plan allows people to ENJOY

#### Not a minor reform

### Warming Predictions Good

#### Risk assessment is good in the context of climate – allows effective policy making

Schneider and Lane 6 (Stephen, Prof. Bio. Sci., Senior Fellow of Institute for Int’l. Studies, Co-Director of Center for Environmental Science and Policy @ Stanford, and Janica, Research Assistant to Dr. Schneider, “An Overview of ‘Dangerous’ Climate Change”, <http://www.metoffice.gov.uk/corporate/pressoffice/adcc/BookCh2Jan2006.pdf>)

Ultimately, scientists cannot make expert value judgments about what climate change risks to face and what to avoid, as that is the role of policy makers, but they can help policymakers evaluate what ‘dangerous’ climate change entails by laying out the elements of risk, which is classically defined as probability x consequence. They should also help decision-makers by identifying thresholds and possible surprise events, as well as estimates of how long it might take to resolve many of the remaining uncertainties that plague climate assessments. There is a host of information available about the possible consequences of climate change, as described in our discussion of the SRES scenarios and of the impacts of climate change, but the SRES scenarios do not have probabilities assigned to them, making risk management difficult. Some would argue that assigning probabilities to scenarios based on social trends and norms should not be done (e.g. [15]), and that the use of scenarios in and of itself derives from the fact that probabilities can’t be analytically estimated. In fact, most models do not calculate objective probabilities for future outcomes, as the future has not yet happened and ‘objective statistics’ are impossible, in principle, before the fact. However, modelers can assign subjective confidence levels to their results by discussing how well established the underlying processes in a model are, or by comparing their results to observational data for past events or elaborating on other consistency tests of their performance (e.g. [14]). It is our belief that qualified assessment of (clearly admitted) subjective probabilities in every aspect of projections of climatic changes and impacts would improve climate change impact assessments, as it would complete the risk equation, thereby giving policy-makers some idea of the likelihood of threat associated with various scenarios, aiding effective decision-making in the risk-management framework. At the same time, confidence in these difficult probabilistic estimates should also be given, along with a brief explanation of how that confidence was arrived at.

### Fear Good/Motivates

#### 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.

#### 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.

#### Fear mobilizes action

Raino Malnes 8, Department of Political Science, University of Oslo, Norway, Climate science and the way we ought to think about danger, Environmental Politics, Volume 17, Issue 4 August 2008 , pages 660 - 672

The upshot is that efforts to boost the credibility of the greenhouse theory are liable to backfire. Scientific dissenters are likely to speak up loudly, and those with political or economic interest in dismissing the danger of climate change will benefit from this turn of the debate. They need not take on the arduous task of arguing that adverse effects of human activity are too unlikely to be worth worrying about. All they have to do is disprove that adversity is a foregone conclusion. A memo from a Republican politician in the United States illustrates the last point. Articulated as a defence of President Bush's resistance to greenhouse gas reductions, it says: **'Should the public come to believe that the scientific issues are settled, their views about global warming will change** accordingly. Therefore, you need to continue to make the lack of scientific certainty a primary issue in the debate' (quoted from Lanchester 2007, p. 5)

It is in many ways unfortunate that scientists who try to pass the greenhouse theory for certified truth open the door to this kind of argumentation. They play into the hands of those who are out to disparage the theory by allowing them to trade on its margin of error. But lack of certainty is, as we have seen, no embarrassment to the theory and no reason not to act on its dire predictions.

Generally speaking, the line between pseudo-danger and real danger is crossed long before we know for sure that calamity awaits. But many people need accommodation to the idea that danger may reside in unfavourable odds as well as the assurance that things are bound to go badly. Scientists, in particular, **ought to explain the point to the public in the way they convey the results of their research.** They should make us aware that uncertainty is resilient in even the best parts of science. Counting heads It appears that a majority of scientists who conduct climate research endorse the greenhouse theory. Among them is the sizeable contingent that takes part in the work of the IPCC. Does the fact that the greenhouse theory has the bulk of qualified opinion on its side attest to its trustworthiness? The Condorcet jury theorem provides a neat answer. It says, in pointed terms, that if each member of a jury is more likely to be right than wrong, then the majority of the jury, too, is more likely to be right than wrong; and the probability that the right outcome is supported by a majority of the jury is a (swiftly) increasing function of the size of the jury, converging to 1 as the jury tends to infinity. (List and Goodin 2001, p. 283) There is, in a sense, safety in numbers, and the credibility of an opinion depends straightforwardly on the number of people who vouch for it. This argument, whose statistical validity is impeccable, grounds a presumption to the effect that scientific disputes can be resolved by counting heads. Provided the basic premise of the argument applies to the community of climate scientists - if, that is, each scientist is more likely to be right than wrong about the best explanation of climate change - then the greenhouse theory, owing to its overwhelming popularity, has far more credibility than the theory of natural variability. Two objections can be raised. First, the applicability of the basic premise is not beyond doubt in the present case. In particular, we should not assume too readily that each scientist is more likely to be right than wrong about the trustworthiness of model-based simulations of the atmosphere. Consider, by way of contrast, another type of scientific controversy: disagreement over the attribution of works of art. If neither historical records nor tangible evidence (like the shaping of a hand or an eye in a painting) leave any clear clue, the claim that one should trust overall impressions of the kind that come naturally to an educated eye has an irreducible intuitiveness to it. For example, Giorgione and Titian are both credited the Concert Champecirctre, which hangs in the Louvre, and the debate turns partly on how far the picture has marks of Giorgione's style or elements familiar from Titian's work. In this case, I suppose, Titian is (currently) the best candidate for truth because this judgement finds favour with the largest number of experts on Venetian Renaissance art. The more a certain attribution is endorsed in this group, the greater its credibility. The dispute over descriptions of the climate system differs in crucial respects. Recall Emanuel's reason to believe that global warming is caused by human activity. His averred doubt about the realism of scientific models is offset by the convergence of model based predictions. Yet, his conclusion is hesitant. First, he points out that the models 'are not entirely independent of one another, often sharing common pieces of computer code and common ancestors' (Emanuel 2007, p. 10). Secondly, important processes in the atmosphere do not allow of modelling and therefore have to be represented by parameters. 'Changing the values of the parameters or the way the various processes are parameterized', he argues, 'can change not only the climate simulated by the model, but the sensitivity of the model's climate to, say, greenhouse gas increases' (ibid., p. 11). In effect, trusting the greenhouse theory is tantamount to 'operat[ing] under the faith that the real climate will fall among the projections made with the various models' (ibid.). In the attribution of works of art, we may learn from the judgement of an expert who mines a picture for epistemic considerations in a reliable, albeit indecipherable way. There is no analogy to this when it comes to pronouncements on the trustworthiness of climate models. In the latter case, every relevant epistemological consideration is out in the open and equally available to all climate scientists. Some of them take the problem of parameterisation to be offset by the convergence of predictions from several models, while others do not. Thus, in the midst of a complex scientific debate, there comes a pure question of where to place one's faith. As regards this question, each scientist is no more likely to get things right than wrong. Thus, the foundation of faith in one assessment or the other is not reinforced by the number of faithful. One more reason to doubt the applicability of the basic premise of the jury theorem to climate science has to do with the role played by the IPCC (Malnes 2006). William R. Cline (1992, p. 3) says that the first IPCC report 'provided an important occasion to reveal a wide consensus among a substantial majority of scientists'. It seems, however, that working on the report was as much an inducement to concur on a particular point of view as an occasion to reveal scientific consensus. These scientists were assigned to prepare the basis for political decisions. They entered into a role that is extraneous to the one scientists primarily fill. What defines the role of scientists is a dual requirement: to seek out epistemic considerations before one forms an opinion, and to make up one's mind on the basis of such considerations only (where something, ε , is an epistemic consideration with respect to some subject of inquiry provided there is a fact of the matter, and ε may be germane in sorting it out.) The IPCC process mixes this requirement with another: to develop an analysis of climate change suitable for use in political decision-making. Research in itself may not be affected by conflict between the role of scientist and advisor, respectively. But the conflict shows up in scientists' presentation of results. This, at any rate, is the conclusion that suggests itself from the kind of incongruence in IPPC reports that was documented earlier (see the section on uncertainty above). This conclusion is buttressed by what John Houghton, who was chairman of Working Group 1 at the time of the first IPCC report, says about the task at hand: [O]ur work was rather like the making of a weather forecast. It is of little help for a forecaster to say that the weather will change tomorrow but that he is unwilling to say in what way. The forecaster also needs to give his best estimate of the detail of that change. (Houghton 1990, p. 6) The analogy of saying that the weather will change, but not in what way, would have been to expound competing climate theories without vesting more trust in one than in the other. Houghton suggests, to be sure, that the greenhouse theory is the 'best estimate' of where the truth lies. But, as we saw above, scientific uncertainty surrounds the validity of computer models when it comes to identifying all the major causes of climate change. Thus, Houghton and his colleagues must be basing their estimate on more than epistemic considerations. From what he says, they seem swayed by the assumption that their work would serve to facilitate political decision-making only if it came to a determinate conclusion. What happens is, generally speaking, that non-epistemic considerations enter into the formation of someone's belief about a certain matter of fact and influence the opinion she eventually arrives at. This is a well-known phenomenon that occurs in many mundane contexts (Sunstein 2006, pp. 34-35). As people sometimes rise above such influences, scientists associated with the IPCC are obviously not destined to be distorted in their work by taking on an extra-scientific task. But there is, as we have seen, indications of distortion when the result of research is conveyed to the public. Thus, climate science is not safely covered by the jury theorem. One more objection may be made to the idea that scientific disagreement about climate change can be overcome by counting heads. The objection applies whether or not the jury theorem covers climate science. By citing the number of adherents to the greenhouse theory in order to verify it, one invites rejoinders like this: Scientists … who question the global warming disaster narrative [are] not hard to find. Last year 60 of them sent a letter to Prime Minister Stephen Harper of Canada … disputing the contention that 'a climate catastrophe is looming and humanity is the cause.' … Among those signing the letter to Harper were … (Jacoby 2007, p. 7) Then comes a list of names, followed by the observation that 'science of climate change is still young and unsettled' (ibid.). This is quite right, but does not bear on the question whether the danger of anthropogenic climate change exists. Those who advocate complacency and inaction will always be able to name some sceptics among scientists in order to sow the impression that no theory of climate change is as yet dependable. The crucial issue, however, is whether model-based simulations of the climate give enough reason to reckon with a real danger that ought to be averted. So they do, although they may well be wrong. The contrary assessment can only be made to look sensible because the stage has been set, by advocates of the greenhouse theory, for the wrong kind of debate. Shallow and deep belief To sum up the argument so far, there is both epistemic and strategic reason to be frank about uncertainties that surround climate science. First, a non-dogmatic view of climate change is all existing evidence permits and, secondly, sound scepticism may drive out nihilistic scepticism, i.e. the notion that nothing ought to be done as long as we cannot be sure about the impact of anthropogenic greenhouse gas emissions. Will those who mix belief with doubt in this manner take it to heart that grave danger exists? Or will their belief be shallow in the way of, say, most people's belief about life and death after they have accepted that Einstein may very well be right about the four-dimensional nature of reality? While the relativistic theory of space-time implies that no one and nothing ever ceases to exist, Einstein may be the only one to take true comfort in contemplating that a deceased friend remains 'in existence back there along the fourth dimension' (Leslie 2007, p. 57). Jennifer Church (2002, p. 366) says that some beliefs are 'deep' in the sense that they 'operate unreflectively, automatically generating a wide range of thought, feelings, and behaviour'. Thus, '[a] deep belief in the guilt of a defendant leads automatically to thought about his character, feelings of fear or anger, behaviour that is wary or punitive, and so on' (ibid.). If, by contrast, I go along with the verdict that someone committed a heinous crime while entertaining considerable doubt about it, I will not be equally disposed to react with fear, wariness or vindictiveness in the presence of this person. This argument carries over to the relationship between thought and action in the case of climate change. Presumably, the nature of my belief about the danger associated with greenhouse gas emissions affects my readiness to support reductions. Dragging one's feet is only reasonable when adversity is distant and can be diverted only by taking on significant short-term costs, and resolve will hardly be stiffened if, on top of this, I am told that the depiction of danger is conjectural. I still stand by the argument outlined above and there are three reasons not to flinch. In the first place, if deep belief that danger exists is at one with complete trust in the greenhouse theory, then the prospect of deepening belief will always be slim. I argued above that scientific professions of certainty about the greenhouse effect are apt to provoke protestations that fuel scientific disagreement and pave the way for scepticism of the worst kind. This is to say that there is no way of cultivating unquestioned confidence however much (and particularly if) one tries by deliberately playing down uncertainties. Shallow belief does not just accompany non-dogmatic climate science; it is more or less inevitable as long as experts disagree. But we may, in the second place, try to deepen non-dogmatic belief about danger **in order to prevent shallowness from contributing to inaction**. Consider the general nature of belief formation. It is mostly involuntary. We are frequently not in control of what we think about matters of fact. Looking over my shoulder and catching sight of a raging bull, I cannot but believe that danger looms. Belief has its own oppressive ethics that leaves little opportunity for asking what to think. As Adler (2000, p. 2) puts it, 'Our degree of belief must match our degree of evidential support'. But suppose I smell gasoline while driving and begin to worry whether it comes from a leak in the fuel supply system. For all I know, the car will soon catch fire, but what do I know about cars? Perhaps they reek of gasoline once in a while, and I am most reluctant to do anything right now to improve my epistemic situation. (I am in a hurry.) Still, I can make an earnest effort not to put the worst-case scenario out of mind. Granted that the case is open to doubt, I will not be able to immerse myself in deep belief about looming danger, but I can at least combat complacency. Moulding the contents of one's thought is no small feat (see Strawson 2003), and one may be hard put to work up concern about distant danger, **but the effort is never futile.** Finally, whether or not deep belief about danger ever comes about under conditions of scientific disagreement, it can turn out to be a mixed blessing, because it tends to foster fear. What is wrong with that? For one thing, fear is an unpleasant state of mind, which detracts from the quality of life. Some, among them Adam Smith (1976, p. 12), see it as a bane of our existence. The infant … feels only the uneasiness of the present instant, which can never be great. With regard to the future, it is perfectly secure, and in its thoughtlessness and want of foresight, possesses an antidote against fear and anxiety, the great tormentors of the human breast, from which reason and philosophy will, in vain, attempt to defend it, when it grows up to a man. Smith may be right that, after a certain age, everyone will inevitably be in the grip of many fears, but the fewer, ceteris paribus, the better. There is, in other words, a practical reason to take things calmly. In so far as people control what they worry about, they should be wary of worrying too much. To reach this conclusion, one need not count fear and anxiety among our greatest tormentors. It is enough that such sentiments make people worse off that they would have been without them. Much, however, hinges on the ceteris paribus clause. It alludes to the tension between lack of fear and readiness to do that which is called for by real, albeit uncertain, danger. Hence, the ceteris paribus clause ties in with the main argument of this section. Fear, while unpleasant, **may galvanise people into action by emotionally augmenting the supposition that adversity lies ahead**. But I am sceptical about this means of stiffening resolve. Abating the greenhouse effect is going to be not just a costly affair, but an arduous one. It will take time, and large parts of the world will be in a state of prolonged emergency. Hard problems have to be sorted out along the way. They pertain to the ways and means of climate policy, as well as the distribution of costs between social groups, states and generations discussed by others in this volume. Will widespread fear provide a favourable condition, mentally and socially, for rational deliberation about such problems? Or will it be conducive to phoney problem-solving? James Lovelock contends that the response so far 'is just like that before the Second World War, an attempt to appease'. The Kyoto agreement, he thinks, is 'uncannily like that of Munich, with politicians out to show that they do respond but in reality playing for time' (quoted from Lanchester 2007, p. 3).

### Enviro Prag Good – Warming

#### Pragmatic warming policy is effective and key to prevent extinction---the K results in disengagement and endless theoretical uncertainty that debilitates action---only the perm can bridge the gap

Simpson 10 (Francis, College of Engineering, Vanderbilt University, “Environmental Pragmatism and its Application to Climate Change The Moral Obligations of Developed and Developing Nations to Avert Climate Change as viewed through Technological Pragmatism”, Spring 2010 | Volume 6 | Number 1)

Pragmatism and Footprinting

Environmental pragmatism is a relatively new field of environmental ethics that seeks to move beyond the strictly theoretical exercises normal in philosophy and allows the environmental movement to formulate substantial new policies (Light, 1). Environmental Pragmatism was initially posited by Bryan Norton and evolved to not take a stance over the dispute between non-anthropocentric and anthropocentric ethics. Distancing himself from this dispute, he preferred to distinguish between strong and weak anthropocentricism (Light, 290-291, 298). The main philosophers involved in advancing the debate in environmental pragmatism include Eric Katz, Andrew Light, and Bryan Norton. This particular discipline advocates moral pluralism, implying that the environmental problems being faced have multiple correct solutions. Light argues that the urgency of ecological crises requires that action is necessary through negotiation and compromise. While theorists serve to further the field of environmental ethics and to debate the metaethical basis of various environmental philosophies, some answers to questions are best left to private discussion rather than taking time to argue about them publically (introduction of pragmatism). Pragmatism believes that if two theories are equally able to provide solutions to a given problem, then debate on which is more is argued that: “the commitment to solving environmental problems is the only precondition for any workable and democratic political theory” (Light, 11). While the science behind a footprint is well understood, what can the synthesis of environmental pragmatism and footprinting tell us about the moral obligation to avert climate change? How does grounding the practice of sustainability footprinting in environmental pragmatism generate moral prescriptions for averting climate change?

Environmental Pragmatism necessitates the need for tools in engineering to be developed and applied to avert the climate change problem, since pragmatism inherently calls for bridging the gap between theory and policy/ practices. With the theory of pragmatism in mind, further research and development of tools such as life-cycle analysis and footprinting are potential policy tools that are necessary under a pragmatist viewpoint so that informed decisions can be made by policy makers. Since the role of life-cycle analysis and footprinting attempt to improve the efficiency and decrease the overall environmental impact of a given process, good, or service, environmental pragmatism would call for the further development and usage of these tools so that we can continue to develop sustainably and fulfill our moral obligation to future generations. By utilizing footprinting and life-cycle analysis, it becomes possible to make environmentally conscious decisions not only based upon a gut instinct but additionally based on sound science. Finally, in regards to averting climate change, footprinting and life-cycle analysis offer another dimension to traditional cost-benefit analysis and can allow for our moral obligation to future generations to weigh into final decisions which will eventually result in policies and/ or a production of a good or service. Since traditional cost benefit analysis does not account for the environment explicitly, pragmatism would call for the application of these tools to ensure that the environment is adequately protected for future generations.

Climate change modeling inherently contains many unknowns in terms of future outcomes and applied simplifications, but these factors should not be enough to hold us back from an environmental pragmatism stand point. Rather than hiding behind a veil of uncertainty with the science, the uncertainty of the possible catastrophic outcomes demands action on the part of every human individual. Environmental pragmatism could also adopt a view point like the precautionary principle where a given action has great uncertainty, but also great consequence (Haller). Since we are attempting to protect human lives and prevent unnecessary suffering, environmental pragmatism would dictate that we should take action now and stop debating the theoretical aspects of this problem. A moral obligation exists to protect human life, and it becomes our obligation to avert climate change. Despite the relatively high economic costs of averting climate change, it is worth noting that the creation of green jobs and new sectors will help to stimulate the economy rather than completely hindering it. People inherently fear change, and it is my opinion that averting climate change requires a drastic change in our consumption patterns, an important reason why people are resisting averting climate change. From an environmental pragmatism viewpoint, it is humanities responsibility to avert climate change before it is too late since we have a moral obligation to protect the future of humanity and the biosphere.

## Advocacy

### AT: Externalize

#### Communicating environmental problem-solving targeted at policy solutions is key to solve extinction---the K is philosophical nonsense that gets trapped in the academy---only the perm catalyzes effective international action

Wapner 8 (Paul Kevin, Associate Professor and Director of the Global Environmental Politics Program in the School of International Service at American University, February, “The Importance of Critical Environmental Studies in the New Environmentalism,” Global Environmental Politics, Vol. 8, No. 1, p. 6-7)

We are all familiar with the litany of environmental woes. Scientists tell us, for example, that we are now in the midst of the sixth great extinction since life formed on the planet close to a billion years ago. If things don’t change, we will drive one-third to one-half of all species to extinction over the next 50 years.4 Despite this, there are no policy proposals being advanced at the national or international levels that come even close to addressing the magnitude of biodiversity loss.5 Likewise, we know that the build-up of greenhouse gases is radically changing the climate, with catastrophic dangers beginning to express themselves and greater ones waiting in the wings. The international community has embarked on significant efforts to curb greenhouse gas emissions but no policies are being debated that come even close to promising climate stabilization—including commitments to reduce the amount of carbon emissions per unit of GDP, as advanced by the US government, and to reduce GHG emissions globally by 5 percent below 1990 levels, as specified by the Kyoto Protocol. Scientists tell us that, to really make a difference, we need reductions on the order of 70–80 percent below 1990 levels.6 Such disconnects between high-level policy discussions and the state of the environment are legion. Whether one looks at data on ocean fisheries, fresh water scarcity or any other major environmental dilemma, the news is certainly bad as our most aggressive policies fall short of the minimum required. What is our role as scholars in the face of such a predicament?

Many of us can and should focus on problem-solving theory. We need to figure out, for example, the mechanisms of cap and trade, the tightening of rules against trafficking in endangered species and the ratcheting up of regulations surrounding issues such as water distribution. We should, in other words, keep our noses to the grindstone and work out incremental routes forward. This is important not simply because we desperately need policy-level insight and want our work to be taken seriously but also because it speaks to those who are tone deaf to more radical orientations. Most of the public in the developed world apparently doesn’t like to reflect on the deep structures of environmental affairs and certainly doesn’t like thought that recommends dramatically changing our lifestyles. Nonetheless, given the straits that we are in, a different appreciation for relevance and radical thought is due—especially one that takes seriously the normative bedrock of our discipline.

Critical theory self-consciously eschews value-neutrality and, in doing so, is able to ask critical questions about the direction of current policies and orientations. If there ever were a need for critical environmental theory, it is now— when a thaw in political stubbornness is seemingly upon us and the stakes of avoiding dramatic action are so grave. The challenge is to fashion a more strategic and meaningful type of critical theory. We need to and ways of speaking that re-shift the boundary between reformist and radical ideas or, put differently, render radical insights in a language that makes clear what they really are, namely, the most realistic orientations these days.

Realism in International Relations has always enjoyed a step-up from other schools of thought insofar as it proclaims itself immune from starry-eyed utopianism. By claiming to be realistic rather than idealistic, it has enjoyed a permanent seat at the table (indeed, it usually sits at the head). By analogy, problem-solving theory in Environmental Studies has likewise won legitimacy and appears particularly attractive as a new environmental day is, arguably, beginning to dawn. It has claimed itself to be the most reasonable and policy relevant. But, we must ask ourselves, how realistic is problem-solving theory when the numbers of people currently suffering from environmental degradation—either as mortal victims or environmental refugees—are rising and the gathering evidence that global-scale environmental conditions are being tested as never before is becoming increasingly obvious. We must ask ourselves how realistic problem-solving theory is when most of our actions to date pursue only thin elements of environmental protection with little attention to the wider, deeper and longer-term dimensions. In this context, it becomes clear that our notions of realism must shift. And, the obligation to commence such a shift sits squarely on the shoulders of Environmental Studies scholars. That is, communicating the realistic relevance of environmental critical theory is our disciplinary responsibility.

For too long, environmental critical theory has prided itself on its arcane language. As theoreticians, we have scaled the heights of abstraction as we have been enamored with the intricacies of sophisticated theory-building and philosophical reflection. In so doing, we have often adopted a discourse of high theory and somehow felt obligated to speak in tongues, as it were. Part of this is simply the difficulty of addressing complex issues in ordinary language. But another part has to do with feeling the scholarly obligation to pay our dues to various thinkers, philosophical orientations and so forth. Indeed, some of it comes down to the impulse to sound unqualifiedly scholarly—as if saying something important demands an intellectual artifice that only the best and brightest can understand. Such practice does little to shift the boundary between problem solving and critical theory, as it renders critical theory incommunicative to all but the narrowest of audiences.

In some ways, the key insights of environmentalism are now in place. We recognize the basic dynamic of trying to live ecologically responsible lives. We know, for example, that Homo sapiens cannot populate the earth indefinitely; we understand that our insatiable appetite for resources cannot be given full reign; we know that the earth has a limit to how much waste it can absorb and neutralize. We also understand that our economic, social and political systems are ill-fitted to respect this knowledge and thus, as social thinkers, we must research and prescribe ways of altering the contemporary world order.

While we, as environmental scholars, take these truths to be essentially self-evident, it is clear that many do not. As default critical theorists, we thus need to make our job one of meaningful communicators. We need to find metaphors, analogies, poetic expressions and a host of other discursive techniques for communicating the very real and present dangers of environmental degradation. We need to do this especially in these challenging and shadowy times.

Resuscitating and refining critical Environmental Studies is not simply a matter of cleaning up our language. It is also about rendering a meaningful relationship between transformational, structural analysis and reformist, policy prescription.

#### MARKEE

 Yes, a realistic environmental agenda must understand itself as one step removed from the day-to-day incrementalism of problem-solving theory. It must retain its ability to step back from contemporary events and analyze the structures of power at work. It must, in other words, preserve its critical edge. Nonetheless, it also must take some responsibility for fashioning a bridge to contemporary policy initiatives. It must analyze how to embed practical, contemporary policy proposals (associated with, for example, a cap-and-trade system) into transformative, political scenarios. Contemporary policies, while inadequate themselves to engage the magnitude of environmental challenges, can nevertheless be guided in a range of various directions. Critical Environmental Studies can play a “critical” role by interpreting such policies in ways that render them consonant with longer-range transformative practices or at least explain how such policies can be reformulated to address the root causes of environmental harm. This entails radicalizing incrementalism—specifying the relationship between superstructural policy reforms and structural political transformation.

Until very recently, our environmental vision was dimmed as the boundaries of meaningful scholarship narrowed. As those boundaries now promise to widen, we have some choices to make. We can render ourselves comfortable in the new “center” that has opened up, and engage in policy-relevant theory that will win us wide audiences and give us the impression that we’re making a difference. Or, we can explore the uncharted terrain of critical thought and struggle to ªnd a language to communicate what we see and to relate our vision to what other, more problem-solving scholars are wrestling with. The former offers much but, if we are not extremely careful, threatens to place us in lock-step with a world that seems bent on ignoring the fundamental drivers of environmental dangers. The latter calls on us to leave our comfort zone and disorient ourselves from a world largely tone-deaf to the magnitude and depth of our environmental challenges. Here we risk obscurity but also possibly gain insight that could actually understand the enormity of our environmental woes. If the latter is an option, it would also require us to look deeper into our hearts and minds for clarity and to cultivate a language with which to better communicate and undertake the necessary work of teasing out the radical promise of incrementalism. To me, the latter is clearly the more realistic, politically responsible and promising path.

Environmental Studies has the challenging task of engaging in, and attracting others to engage in, research directed at problems that will frustrate us in our day-to-day endeavors and whose solutions will transcend our lifetimes. What can we offer each other and our reading public? As I see it, we can offer our honesty: our truthfulness about how severe contemporary environmental challenges are and our frankness about what kinds of political transformations will actually make a difference. Critical Environmental Studies has long strived for such a level of intellectual sincerity. To be sure, it has often been sidetracked and has lost its way—especially over the past decade or so. As the political conditions begin to ripen toward a new era of environmental consciousness and governmental commitment, it is time to capitalize on that sincerity and invest ourselves, that much more, in envisioning and explicating routes toward a genuinely greener world.

## Kritik

### ALT FAILS

#### POLITICS IS THE VERY ACT OF TAKING CARE FOR THE WORLD AND OTHERS AGAINST THE ENDLESS DEPREDATIONS OF MODERNITY – THE ALTERNATIVE IS MORE GUILT LADEN AND TURNS US AGAINST THE WORLD BY TYING US TO THE CULT OF THE SELF

Lawrence J. Biskowski, Professor of political theory and political economy at the University of Georgia, Politics versus Aesthetics: Arendt's Critiques of Nietzsche and Heidegger, The Review of Politics, Vol. 57, No. 1 (Winter, 1995), pp. 59-89

One lesson Arendt gleaned from the Nazi experience and its aftermath was how easily the basic morality of a people could be reversed under the conditions of modernity-with no more difficulty than would be required "to change their table manners."94 Arendt came to the conclusion, as Canovan points out,95 that neither tradition, religion, or authority, nor metaphysics, nor even common-sense morality, could be counted on to provide effective bulwarks against such monstrosities. The perpetual flux of values possible in and sometimes characteristic of modernity means, as Max Weber suggests,96 that the irrational reality of life and the content of its possible meanings are inexhaustible. As a result, Arendt says, the groundwork of the world has begun to shift, to change and transform itself with ever-increasing rapidity from one shape into another, as though we were living and struggling with a Protean universe where everything at any moment can become almost anything else.97

Fortunately, this does not necessarily entail "the loss of the human capacity for building, preserving, and caring for a world that can survive us and remain a fit place to live in for those who come after us."98 To care for the world in this way is in large part the task of politics, at least for Arendt. This can be seen most clearly in her descriptions of the act of political founding, through which a kind of shelter for freedom and plurality may be created.99 In a sense, however, all genuinely political action partakes in some measure of this love of freedom and hence also in care for the world which makes such freedom possible.100

Arendt attempts to find a way out of the various dilemmas of modernity, including moral solipsism, instrumental rationality, and the process-imperatives of progress and economic production. But she attempts to do so while still avoiding the seductions of the aesthetic cult of the self**-**its ultimate self-referentiality, its abjuration of morality and moral interpretation, its turning away from the world, and its

resulting political disorientation. Her success in confronting the problems of the modern condition is, of course, highly debatable; the question of her advocacy of a postmodern, aestheticized politics radically adverse to morality and moral interpretation seems much less so.

#### Baudrillard’s approach to the environment fails---discursive focus results in inward focus that furthers destruction

Glover 6 (Leigh, policy fellow and assistant professor in the Center for Energy and Environmental Policy at the University of Delaware, “Postmodern Climate Change”, Psychology Press, August 31, Google Books, p. 58)

A major liability of postmodernity's contribution to environmentalism is its inability to construct political programs based on firm critiques of society's dominant power relationships. In this sense, Gare draws a contrast between postmodernity and what he regards as the useful and insightful critique of political economy. Global environmental destruction has involved far more than individual power relationships and 'discursive formations,' he argues, as they result from the power of market institutions, corporations, and nations states operating at the global scale, and various power relationships between groups within societies. It is these latter forms of power that postmodernity must inform if it is to assist in addressing ecological problems. Yet postmodernity cannot do so, being (1995:98) "simply committed to the defense of local knowledge and local power against global knowledge and global power." Not only do poststructuralists "fail to reveal the interconnectedness of environmental problems" but also "invalidate the efforts of those who are striving to reveal them" (Gare 1995: 99).

Because of the way postmodernists (and poststructuralists) have developed an ambivalence over any simple relationship between object and language (especially in the hands of Baudrillard), discourse becomes inwardly focused on discourse itself. If theories are increasingly defined and developed in relation to other theories, environmental destruction becomes "incomprehensible;" then, in a telling phrase (1995: 99): "This inability to deal with the phenomenon of a global environmental crisis manifests the loss of contact with the world." Environmentalism is popular in the post- modern era, matching with a general skepticism towards the concept of progress and concomitant with an acceptance of diverse cultures and beliefs, with special sympathies towards those diminished by progress. Although postmodernism fosters alterative perspectives, so that deep ecology, eco- feminism and New Age thinking offer greater respect for nature and opportunities for alternative values (Gare 1995: 100). "hardly any of this support has translated into effective action, into changing the way people live and the way the economy is organized to make society less environmentally destructive."

#### ) Your ‘Don’t Worry, Be Happy’ approach to the world is a delusional self-indulgent act of arrogance and disdain for humanity – it’s not radical; this contempt for anybody but yourself sanctions the sacrifice of those not laughing --- the perm’s crucial to a genuine celebration of life

**MARCEL,** CONTRIBUTOR TO COMMONDREAMS.ORG, **6**

[JOYCE, MARCH 8, “HAPPY HAPPY HAPPY ALL THE TIME”, http://www.commondreams.org/views06/0308-35.htm]

Polar bears are drowning but **what the hell. Don't worry, be happy**. At least that's the Republican philosophy as spelled out - at last! - by a letter-writer to the Boston Globe. According to her, Democrats are miserable. Republicans are happy. It's as easy as that. Where have liberals gone wrong? Headlined "Conservatives Have More Fun," the writer lays it out with a simplicity that is nothing short of breathtaking. "Could it be that we conservatives have a more positive world view?" she says. "How about a more positive view of the future?" How can you be happy, she asks, when you think your country "consists of imperialist occupiers trying to take over the world." But if, like her, you "realize the true road to freedom happens when democracies lead to thriving societies, you're feeling pretty good right now." As that thriving democracy in Iraq hangs by a hair over a cauldron of civil war, as Muslims all over the world are so outraged at our invasion and occupation that they take to the streets to protest a few cynical cartoons, as every Middle Eastern country that gets a choice between modernity and Sharia law goes for that old-time religion, it becomes clear that President George W. Bush could be leaving behind him a string of democratically-elected fundamentalist governments. But **let's not worry. Be happy.** "Let's think about the environment," the letter-writer continues in her merry, bubbly way. "Liberals believe we've ruined the earth and it's just a matter of time before it's uninhabitable. By now, if you're a liberal, you're really depressed. In reality, the United States is a model for the world and has some of the best air and water quality of any industrialized nation." Sure we do. In bottles. For sale. But the oceans are over. The polar ice caps are melting, hence the drowning polar bears. Deforested mountains are producing killer mud slides. There's a drought in the Midwest. Bird migration routes are changing. Up here in Vermont, we can't eat the fish in our rivers and streams because of mercury poisoning. The aquifers that feed our wells are polluted by acid rain. Sugaring season is disrupted by global warming. The other day I heard about a study predicting that snowfall in Vermont will end in about 20 years. This is scary stuff. What this woman is really saying is, "I've got my McMansion and my Escalade and my kids are in a private school, and America works for me." The letter-writer's thinking **drips with selfishness and arrogance** about her place in the universe. Jesus didn't say, "don't worry, be happy." I seem to recall him saying that "it is easier for a camel to go through the eye of a needle, than for a rich man to enter into the kingdom of God." The **combination of the "I've got mine, Jack" philosophy** with the **"my happiness is the only thing that matters, and to hell with everybody else" is how the George Bushes of the world gain power.** Why should we care if we're **torturing brown skinned folk in secret prisons**? Who cares if the government is listening to our phone calls and reading our e-mails - we have nothing to hide. We must hate freedom. Only namby pamby civil libertarians care about due process and rule of law. There's a war on, don't you know? By **ignoring the many real problems that fester** around her, the letter-writer can **delude herself** that everything is fine and liberals are just **crabby cry-babies**. But even many Republicans are finally realizing that their Dear Leader is an incompetent fool. Is this is a case of buyers remorse, or are they starting to see that despite the generally messed-up state of the Democratic Party, the GOPs could still lose control of Congress out of general voter disgust? "We have a choice each morning we're lucky enough to open our eyes," says the letter-writer. "We can look at our lives and society in a positive manner and work toward making a better world for our children, or we can endlessly dwell on every negative aspect of life... I know which one will make me a happier person." **Happy, happy, happy**. But on analysis, the letter-writer is confusing personal happiness with political happiness. Speaking strictly for my liberal self, I'm a pretty happy person. Most of the people I know are, too. **Just because we hate the direction our government has taken doesn't mean we don't love and enjoy our families, our homes, our friends, our community and our work**. I refuse to allow my disgust at Bush and his policies spoil my personal life. Life is short and wasting eight years of it being miserable doesn't make any sense. If you fall into that trap, the terrorists have won. America today **isn't a case of happiness or depression.** It's a matter of **facing reality** or living in a **rose colored bubble** where **everything is fine**. And when the jumbo jet crashes into the office tower, you wonder what the hell happened. Why do they hate us? Speaking of being happy, Tuesday was Town Meeting day in Vermont. My town, along with several others, voted to ask our Washington representative to start impeachment proceedings against Bush. The Associated Press picked up the story. Reading it, liberals across America learned that they are not alone. Hopefully, this will further support them in their struggles for political change and social justice. Frankly, a little political change and social justice will make a lot of people **very, very happy.** In fact, when Bush is gone, there will be dancing in the streets.

#### Hold to alt text

### AT: Consumption

#### 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.

#### Eliminating human intervention in the environment is impossible and causes extinction in the short term---market incentives are key

Barnhizer 6 -- Professor of Law, Cleveland State University. (David, Waking from Sustainability's "Impossible Dream": The Decisionmaking Realities of Business and Government, 18 Geo. Int'l Envtl. L. Rev. 595, Lexis)

Medieval alchemists sought unsuccessfully to discover the process that would enable them to turn base metal into gold--assigning the name "Philosopher's Stone" to what they sought. The quest was doomed to failure. Just as a "sow's ear" cannot become a "silk purse," a base metal cannot become gold. Sustainability is impossible for the same reasons. It asks us to be something we are not, both individually and as a political and economic community. It is impossible to convert humans into the wise, selfless, and nearly omniscient creatures required to build and operate a system that incorporates sustainability. Even if it were ultimately possible (and it is not), it would take many generations to achieve and we are running out of time.

There is an enormous gap among what we claim we want to do, what we actually want to do, and our ability to achieve our professed goals. I admit to an absolute distrust of cheap and easy proclamations of lofty ideals and commitments to voluntary or unenforceable codes of practice. The only thing that counts is the actor's actual behavior. For most people, that behavior is shaped by self-interest determined by the opportunity to benefit or to avoid harm. In the economic arena this means that if a substantial return can be had without a high risk of significant negative consequences, the decision will be made to seek the benefit. It is the reinvention of Hardin's Tragedy of the Commons. n1

This essay explores the nature of human decisionmaking and motivation within critical systems. These systems include business and governmental decisionmaking with a focus on environmental and social areas of emerging crisis where the consequence of acting unwisely or failing to act wisely produces large-scale harms for both human and natural systems. The analysis begins by suggesting that nothing humans create is "sustainable." Change is inevitable and [\*597] irresistible whether styled as systemic entropy, Joseph Schumpeter's idea of a regenerative "creative destruction," or Nikolai Kondratieff's "waves" of economic and social transformation. n2

Business entities and governmental decisionmakers play critical roles in both causing environmental and social harms and avoiding those consequences. Some have thought that the path to avoiding harm and achieving positive benefits is to develop codes of practice that by their language promise that decisionmakers will behave in ways consistent with the principles that have come to be referred to as "sustainability." That belief is a delusion--an "impossible dream." Daniel Boorstin once asked: "Have we been doomed to make our dreams into illusions?" n3 He adds: "An illusion . . . is an image we have mistaken for reality. . . . [W]e cannot see it is not fact." n4 Albert Camus warns of the inevitability of failing to achieve unrealistic goals and the need to become more aware of the limited extent of our power to effect fundamental change. He urges that we concentrate on devising realistic strategies and behaviors that allow us to be effective in our actions. n5

As companies are expected to implement global codes of conduct such as the U.N. Global Compact and the Organisation for Economic Co-operation and Development's (OECD) Guidelines for Multinational Enterprises, n6 and governments [\*598] and multilateral institutions supposedly become more concerned about limiting the environmental and social impacts of business decisionmaking, it may be useful to consider actual behavior related to corporate and governmental responses to codes of practice, treaties, and even national laws. Unfortunately, business, government, and multilateral institutions have poor track records vis-a-vis conformity to such codes of practice and treaties.

Despite good intentions, empty dreams and platitudes may be counterproductive. This essay argues that the ideal of sustainability as introduced in the 1987 report of the Brundtland Commission and institutionalized in the form of Agenda 21 at the 1992 Rio Earth Summit is false and counterproductive. The ideal of sustainability assumes that we are almost god-like, capable of perceiving, integrating, monitoring, organizing, and controlling our world. These assumptions create an "impossible" character to the "dream" of sustainability in business and governmental decisionmaking.

Sustainability of the Agenda 21 kind is a utopian vision that is the enemy of the possible and the good. The problem is that while on paper we can always sketch elegant solutions that appear to have the ability to achieve a desired utopia, such solutions work "if only" everyone will come together and behave in the way laid out in the "blueprint." n7 Humans should have learned from such grand misperceptions as the French Enlightenment's failure to accurately comprehend the quality and limits of human nature or Marxism's flawed view of altruistic human motivation that the "if only" is an impossibly utopian reordering of human nature we will never achieve. n8

 [\*599] A critical defect in the idea of sustainable development is that it continues the flawed assumptions about human nature and motivation that provided the foundational premises of Marxist collectivism and centralized planning authorities. n9 Such perspectives inject rigidity and bureaucracy into a system that requires monitoring, flexibility, adaptation, and accountability. But, in criticizing the failed Marxist-Leninist form of organization, my argument should not be seen as a defense of supposed free market capitalism. Like Marxism, a true free market capitalism does not really exist.

The factors of greed and self interest, limited human capacity, inordinate systemic complexity, and the power of large-scale driving forces beyond our ability to control lead to the unsustainability of human systems. Human self-interest is an insurmountable barrier that can be affected to a degree only by effective laws, the promise of significant financial or career returns, or fear of consequences. The only way to change the behavior of business and governmental decisionmakers is through the use of the "carrot" and the "stick." n10 Yet even this approach can only be achieved incrementally with limited positive effects.

### AT: Capitalism K

#### No root cause

Larrivee 10— PF ECONOMICS AT MOUNT ST MARY’S UNIVERSITY – MASTERS FROM THE HARVARD KENNEDY SCHOOL AND PHD IN ECONOMICS FROM WISCONSIN, 10 [JOHN, A FRAMEWORK FOR THE MORAL ANALYSIS OF MARKETS, 10/1, <http://www.teacheconomicfreedom.org/files/larrivee-paper-1.pdf>]

 The Second Focal Point: Moral, Social, and Cultural Issues of Capitalism Logical errors abound in critical commentary on capitalism. Some critics observe a problem and conclude: “I see X in our society. We have a capitalist economy. Therefore capitalism causes X.” They draw their conclusion by looking at a phenomenon as it appears only in one system. Others merely follow a host of popular theories according to which capitalism is particularly bad. 6 The solution to such flawed reasoning is to be comprehensive, to look at the good and bad, in market and non-market systems. Thus the following section considers a number of issues—greed, selfishness and human relationships, honesty and truth, alienation and work satisfaction, moral decay, and religious participation—that have often been associated with capitalism, but have also been problematic in other systems and usually in more extreme form. I conclude with some evidence for the view that markets foster (at least some) virtues rather than undermining them. My purpose is not to smear communism or to make the simplistic argument that “capitalism isn’t so bad because other systems have problems too.” The critical point is that certain people thought various social ills resulted from capitalism, and on this basis they took action to establish alternative economic systems to solve the problems they had identified. That they failed to solve the problems, and in fact exacerbated them while also creating new problems, implies that capitalism itself wasn’t the cause of the problems in the first place, at least not to the degree theorized.

### We Solve Ressentement

#### Debate’s switch-side component builds a symbiotic relationship between mutual empowerment and disempowerment, which prevents violence and allows for the exercise of freedom

Herman W. **Siemens**, Department of Philosophy, Nijmegen University, The Netherlands, Nietzsche’s Agon With Ressentiment, Continental Philosophy Review, Volume 34, Number 1 / March, 200**1**, 69–93

My claim is that Nietzsche’s textual confrontations, both early and late, exhibit a recurrent strategy of “agonal transvaluation”: they draw us into a critical contestation of dominant values, whose dynamic form is modeled on the pre-Socratic “agonal” community presented in the early essay Homer’s Contest (1872).9 Here Nietzsche describes a specific organisation of power, a dynamic tension that holds between a plurality of more-or-less equal, **active forces contesting one another.** As the signature institution of ancient Greek political culture, it pervades all areas of life, from art and education **to political debate**; it is the “life-ground” of the polis. Agonal contestation engages the antagonists in a **complex interplay of mutual affirmation and mutual negation**, a “play of forces” [Wettspiel der Kräfte] that stimulates or provokes each to deeds that would outbid the other, while containing both within the limits of measure. The productive relation of mutual empowermentdisempowerment creates a dynamic of limited aggression **that precludes absolute destruction (death or total negation) on one side**, and absolute, conclusive victory (total affirmation) for any single contestant on the other. Agonal victory is thus **relative and provisional**, and the agon itself inconclusive. Like all forms of play, the agon is intrinsically repeatable; the dynamics of provocation and limitation gives the agonal “play of forces” a form that is **radically open-ended.** As a productive conflict of active forces, agonal culture embodies Nietzsche’s therapeutic interest in “growing and struggling life” as fertility from GS 370. In Homer’s Contest, the agon serves to explain the extraordinary productivity “in deeds and works” of pre-Socratic culture: through mutual provocation and empowerment, it propitiates the elevation [Steigerung] or growth of life and the cultivation of greatness [Grösse]. It should not, however, be thought that horror, despair and sickness are simply absent from this picture. Health is not a given; it is an achievement of agonal culture, which is unthinkable in the absence of terrifying and destructive affective forces.10 Like tragedy, **the agon effects a practical transformation of “inhuman” into human,** culture-building forces in conjunction with an affirmative interpretation of life, radically opposed to Christian morality as “Anti-Nature” (TI). In Nietzsche’s account, aggressive, thanatos drives dominate: as a regime of limited aggression the agon transforms and assimilates them into a productive and affirmative practice of life. From this brief sketch it can be seen that the agon combines in an astonishing way various elements which Nietzsche associates, at one time or other, **with health**.11 Equilibrium [Gleichgewicht] and measure [Maass] (e.g. GS 113. See Pasley 148) are of paramount importance in the agon. Then, there is innocence [Unschuld] in the sense of an extra-moral attitude, a non-judgemental openness to instincts and passions (KSA 8: 5[146]). For our purposes, the next two features are crucial: the dynamic, energetic conception of health (as in GS 370), of abundant strength and vitality, able to thrive on obstacles as challenges in a dynamic of productive self-surpassing (Pasley 124f.); and then the more radical picture of a ‘health in the teeth of sickness’ (Pasley 154), or what Nietzsche calls “great health”, that thrives on sickness ‘as its eternally stimulating and eternally re-forming antagonist’ (Pasley 149), turning damaging forces into stimulants, to its advantage. It is upon the affirmative transformation of pathological, destructive impulses **through agonal contestation** that the therapeutic claim will be based. The argument begins with the proposition that agonal culture regulates Nietzsche’s transvaluative discourse as its **productive and organising principle**, as a model that organises his critical confrontations. Detailed arguments in favour of agonal hermeneutics cannot be presented in this context,12 where the discussion will be confined to a number of points that bear directly on the question of therapy.

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## Case

### We Affirm Life

**Suffering is only inevitable in a world where affirmative action is not taken - the plan is the best way to affirm life**

May 5 (Todd May, prof @ Clemson. “To change the world, to celebrate life,” Philosophy & Social Criticism 2005 Vol 31 nos 5–6 pp. 517–531)

**To change the world and to celebrate life. This**, as the theologian Harvey Cox saw, **is the struggle** within us. **It is a struggle in which** one cannot choose sides; or better, a struggle in which **one must choose both sides. The abandonment of one for the** sake of the **other can lead only to disaster or callousness. Forsaking the celebration of life for** the sake of **changing the world is the path of the sad revolutionary.** In his preface to Anti-Oedipus, Foucault writes that one does not have to be sad in order to he revolutionarv. The matter is more urgent than that, however. **One cannot** be both sad and revolutionary lacking a sense of the wondrous that is already here, among us, one who is bent upon changing the world can only become solemn or bitter. He or she is **focus**ed **only on the future; the present is** what is **to be overcome. The vision of what** is not but **must come to be overwhelms all** else, **and the point of change** itself **becomes lost**. The history of the left in the 20th century offers numerous examples of this, and the disaster that attends to it should be evident to all of us by now. **The alternative is surely not to shift one’s allegiance to the pure celebration of life**, although there are many who have chosen this path. **It is** at best **blindness not to see the misery that envelops so many** of our fellow humans, **to say nothing of what happens to** sentient **nonhuman creatures. The attempt to jettison world-changing for an uncritical assent to the world as it is requires** a **self-deception** that I assume would be anathema for those of us who have studied Foucault. Indeed, **it is anathema for all** of us **who awaken each day to an America whose expansive boldness is** matched **only by** an equally expansive **disregard for those we place in harm’s way. This is the struggle, then. The one between the desire for life celebration and** the **desire for world-changing. The struggle between reveling in the contingent and fragile joys that constitute our world and wresting it from its intolerability**. I am sure it is a struggle that is not foreign to anyone who is reading this. I am sure as well that the stakes for choosing one side over another that I have recalled here are obvious to everyone. **The question** then **becomes one of how to choose both sides at once.** III Maybe it happens this way. You walk into a small meeting room at the back of a local bookstore. There are eight or ten people milling about. They’re dressed in dark clothes, nothing fancy, and one or two of them have earrings or dreadlocks. They vary in age. You don’t know any of them. You’ve never seen them before. Several of them seem to know one another. They are affectionate, hugging, letting a hand linger on a shoulder or an elbow. A younger man, tall and thin, with an open face and a blue baseball cap bearing no logo, glides into the room. Two others, a man and a woman, shout, ‘Tim!’ and he glides over to them and hugs them, one at a time. They tell him how glad they are that he could make it, and he says that he just got back into town and heard about the meeting. You stand a little off to the side. Nobody has taken a seat at the rectangle of folding tables yet. You don’t want to be the first to sit down. Tim looks around the room and smiles. Several other people filter in. You’re not quite sure where to put your hands so you slide them into your jean pockets. You hunch your shoulders. Tim’s arrival has made you feel more of an outsider. But then he sees you. He edges his way around several others and walks up to you and introduces himself. You respond. Tim asks and you tell him that this is your first time at a meeting like this. He doesn’t ask about politics but about where you’re from. He tells you he has a friend in that neighborhood and do you know . . . ? Then several things happen that you only vaguely notice because you’re talking with Tim. People start to sit down at the rectangle of tables. One of them pulls out a legal pad with notes on it. She sits at the head of the rectangle; or rather, when she sits down there, it becomes the head. And there’s something you don’t notice at all. You are more relaxed, your shoulders have stopped hunching, and when you sit down the seat feels familiar. The woman at the head of the table looks around. She smiles; her eyes linger over you and a couple of others that you take to be new faces, like yours. She says, ‘Maybe we should begin.’ IV **I can offer only a suggestion of an answer** here today. It is a suggestion that brings together some thoughts from the late writings of Maurice Merleau-Ponty with those of Foucault, in order to sketch not even a framework for thought, but the mere outlines of a framework. It is not a framework that would seek to find the unconscious of each in the writings of the other. Neither thinker finishes or accomplishes the other. (Often, for example regarding methodology, they do not even agree.) Rather, it is a framework that requires both of them, from their very different angles, in order to be able to think it. My goal in constructing the outlines of this framework is largely philosophical. That is to say, **the suggestion I would like to make** here **is not one for resolving for each of us the struggle of life-celebration and world-changing, but of offering a way to conceive ourselves that allows us to embrace both sides** of this battle **at the same time**. Given the thinkers I have chosen as reference points, it will be no surprise when I say that that conception runs through the body. Let me start with Merleau-Ponty. In his last writings, particularly in The Visible and the Invisible, he offers a conception of the body that is neither at odds nor even entangled with the world, but is of the very world itself. His concept of the flesh introduces a point of contact that is also a point of undifferentiation. The flesh, Merleau-Ponty writes, ‘is the coiling over of the visible upon the seeing body, of the tangible upon the touching body, which is attested in particular when the body sees itself, touches itself seeing and touching the things, such that, as tangible it descends among them’.2 We must recall this economy of the flesh before we turn to Foucault. There is, for Merleau-Ponty, a single Being. Our world is of that Being, and we are of our world. We are not something that confronts the world from outside, but are born into it and do not leave it. This does not mean that we cannot remove ourselves from the immediacy of its grasp. What it means is that to remove ourselves from that immediacy is neither the breaking of a bond nor the discovery of an original dichotomy or dualism. What is remarkable about human beings is precisely our capacity to confront the world, to reflect upon it, understand it, and change it, while still being of a piece with it. To grasp this remarkable character, it is perhaps worth recalling Gilles Deleuze’s concept of the fold. The world is not composed of different parts; there is no transcendent, whether of God or of subjectivity. The world is one. As Deleuze sometimes says, being is univocal. This oneness is not, however, inert or inanimate. Among other things, it can fold over on itself, creating spaces that are at once insides and outsides, at once different from and continuous with one another. The flesh is a fold of Being in this sense. It is of the world, and yet encounters it as if from a perceptual or cognitive distance. It is a visibility that sees, a tangible that touches, an audible that hears. Merleau- Ponty writes: There is vision, touch when a certain visible, a certain tangible, turns back upon the whole of the visible, the whole of the tangible, of which it is a part, or when suddenly it finds itself surrounded by them, or when between it and them, and through their commerce, is formed a Visibility, a Tangible in itself, which belong properly neither to the body qua fact nor to the world qua fact . . . and which therefore form a couple, a couple more real than either of them.3 For Merleau-Ponty, thought and reflection do not attach themselves to this flesh from beyond it, but arise through it. As our body is of this world, our thought is of our bodies, its language of a piece with the world it addresses. ‘[I]f we were to make completely explicit the architectonics of the human body, its ontological framework, and how it sees itself and hears itself, we would see the possibilities of language already given in it.’4 This conception of the body as flesh of the world is not foreign to Foucault, although of course the terms Merleau-Ponty uses are not his. We might read Foucault’s politics as starting from here, inaugurated at the point of undifferentiation between body and world. The crucial addition he would make is that that point of undifferentiation is not historically inert. The body/world nexus is inscribed in a history that leaves its traces on both at the same time, and that crosses the border of the flesh and reaches the language that arises from it, and the thought that language expresses. How does this work?V Maybe it doesn’t happen that way. Maybe it happens another way. Maybe you walk into a room at a local community center. The room is large, but there aren’t many people, at least yet. There’s a rectangular table in the center, and everyone is sitting around it. A couple of people look up as you walk in. They nod slightly. You nod back, even more slightly. At the head of the table is someone with a legal pad. She does not look up. She is reading the notes on the pad, making occasional marks with the pen in her right hand. Other people come in and take places at the table. One or two of them open laptop computers and look for an outlet. Eventually, the table fills up and people start sitting in chairs behind the table. Your feel as though you’re in an inner circle where you don’t belong. You wonder whether you should give up your chair and go sit on the outside with the others who are just coming in now. Maybe people notice you, think you don’t belong there. At this moment you’d like to leave. You begin to feel at once large and small, visually intrusive and an object of scrutiny. You don’t move because maybe this is OK after all. You just don’t know. The room is quiet. A couple of people cough. Then the woman seated at the head of the table looks up. She scans the room as if taking attendance. She says, ‘Maybe we should begin.’ VI Merleau-Ponty’s discussion of the body as flesh is an ontological one. Although he does not see the body as remote from its historical inscription, his discussion does not incorporate the role such inscription plays. **For a body to be of the world is** also **for it to be temporal**, to be **encrusted in the continuous emerging of the world** over time. And **this** emerging **is not abstract;** rather, **it is concrete. The body/world nexus evolves during particular historical periods.** This fold of the flesh, this body, is not nowhere and at any time. It is there, then; or it is here, now. **A body is entangled within a web of specific events and relations that, precisely because it is of this world, are inescapably a part of that body’s destiny.** As Merleau-Ponty tells us in Phenomenology of Perception, ‘our open and personal existence rests on an initial foundation of acquired and stabilized existence. But it could not be otherwise, if we are temporality, since the dialectic of acquisition and future is what constitutes time.’5 **The medium for the body’s insertion into a particular net of events** and relations **is that of social practices. Our bodies are not first and foremost creatures of the state** or the economy, **no more than they are atomized** wholes **distinct from the world they inhabit.** Or better, **they are creatures of the state** and the economy **inasmuch as those appear through social practices, through** the **everyday practices** that are the ether of our lives. Social practices are the sedimentation of history at the level of the body. When I teach, when I write this article, when I run a race or teach one of my children how to ride a bicycle, my body is oriented in particular ways, conforming to or rejecting particular norms, responding to the constraints and restraints of those practices as they have evolved in interaction with other practices over time. Through its engagement in these practices, my body has taken on a history that is not of my making but is nevertheless part of my inheritance. It is precisely because, as Merleau-Ponty has written, the body and the world are not separate things but rather in a chiasmic relation that we can think this inheritance. And it is because of Foucault’s histories that we can recognize that this inheritance is granted through specific social practices. And of course, as Foucault has taught us, social practices are where the power is. It is not, or not simply, at the level of the state or the modes of production where power arises. It is, as he sometimes puts it, at the capillaries. One of the lessons of Discipline and Punish is that, if the soul is the prison of the body, this is because the body is inserted into a set of practices that create for it a soul. These practices are not merely the choices of an individual whose thought surveys the world from above, but instead the fate of a body that is of a particular world at a particular time and place. Moreover, these practices are not merely in service to a power that exists outside of them; they are mechanisms of power in their own right. It is not because Jeremy Bentham disliked the prison population that the Panopticon became a grid for thinking about penal institutions. It is instead because the evolution of penal practices at that time created an opening for the economy of visibility that the Panopticon represented. When Foucault writes that . . . the soul has a reality, it is produced permanently around, on, within the body by the functioning of a power that is exercised on those punished – and, in a more general way, on those one supervises, trains and corrects, over madmen, children at home and at school, the colonized, over those who are stuck at a machine and supervised for the rest of their lives6 his claim is informed by four other ones that lie behind it: that bodies are of a piece with the world, that the body/world nexus is a temporal one, that the medium of that corporeal temporality is the practices a body is engaged in, and that that medium is political as well as social. The last three claims are, of course, of the framework of Foucault’s thought. The first one is the ontological scaffolding provided by Merleau-Ponty. And it is by means of all four that we can begin to conceive things so as to be able to choose both world-changing and lifecelebrating at the same time. VII It could happen yet another way. Increasingly, it does. There is no meeting. There are no tables and no legal pads. Nobody sits down in a room together, at least nobody sits down at a place you know about. There may not even be a leaflet. Maybe you just got an email that was forwarded by someone you know slightly and who thought you might be interested. At the bottom there’s a link, in case you want to unsubscribe. If you don’t unsubscribe you get more notices, with petitions to sign or times and places for rallies or teach-ins or marches. Maybe there’s also a link for feedback or a list for virtual conversations or suggestions. If you show up, it’s not to something you put together but to something that was already in place before you arrived. How did you decide on this rally or teach-in? You sat in front of your computer screen, stared at it, pondering. Maybe you emailed somebody you know, asking for their advice. Is it worth going? If it’s on campus you probably did. It matters who will see you, whether you have tenure, how much you’ve published. There are no Tims here. You’ve decided to go. If it’s a teach-in, you’ve got plausible deniability; you’re just there as an observer. If it’s a rally, you can stand to the side. But maybe you won’t do that. The issue is too important. You don’t know the people who will be there, but you will stand among them, walk among them. You will be with them, in some way. Bodies at the same time and place. You agree on the issue, but it’s a virtual agreement, one that does not come through gestures or words but through sharing the same values and the same internet connections. As you march, as you stand there, nearly shoulder to shoulder with others of like mind, you’re already somewhere else, telling this story to someone you know, trying to get them to understand the feeling of solidarity that you are projecting back into this moment. You say to yourself that maybe you should have brought a friend along. **There are many ways to conceive the bond between world-changing and life-celebrating.** Let me isolate two: one that runs from Merleau-Ponty to Foucault, from the body’s chiasmic relation with the world to the politics of its practices; and the other one running back in the opposite direction. **The ontology Merleau-Ponty offers** in his late work **is one of wonder. Abandoning** the **sterile philosophical debates** about the relation of mind and body, subject and object, about the relation of reason to that which is not reason, or the problem of other minds, **his ontology forges a unity of body and world that puts us in immediate contact with all** of **its aspects.** No longer are we to be thought the self-enclosed creatures of the philosophical tradition. **We are now in touch with the world, because we are of it.** Art, for example, does not appeal solely to our minds; its beauty is not merely a matter of the convergence of our faculties. We are moved by art, often literally moved, because our bodies and the work of art share the same world. As Merleau-Ponty says, ‘I would be at great pains to say where is the painting I am looking at. For I do not look at it as I do a thing; I do not fix it in its place. My gaze wanders in it as in the halos of Being. It is more accurate to say that I see according to it, or with it, than that I see it.’7 It is only because my body is a fold of this world that art can affect me so. But this affection is also a vulnerability. As my look can happen according to a work of art, so it can happen according to a social practice. And even more so in proportion as that social practice and its effects are suffused through the world in which I carry on my life, the world my body navigates throughout the day, every day. I do not have a chance to look according to a painting by Cezanne very often; but I do encounter the effects of normalization as it has filtered through the practices of my employment, of my students’ upbringing, and of my family’s expectations of themselves and one another. **The vulnerability of the body**, then, **is at once its exposure to beauty and its opening to what is intolerable.** We might also see things from the other end, starting from politics and ending at the body. I take it that this is what Foucault suggests when he talks about bodies and pleasures at the end of the first volume of the History of Sexuality. **If we are a product of our practices and** the **conception of ourselves and the world that those practices have fostered,** so **to change our practices is to experiment in new possibilities both for living and**, inseparably, for **conceiving the world**. To experiment in sexuality is not to see where the desire that lies at the core of our being may lead us; that is simply the continuation of our oppression by other means. Rather, it is to construct practices where what is at issue is no longer desire but something else, something that might go by the name of bodies and pleasures. In doing so, we not only act differently, we think differently, both about ourselves and about the world those selves are inseparable from. And **because these experiments are practices of our bodies, and because our bodies are encrusted in the world, these experiments become not merely acts of political resistance but new folds in the body/ world nexus. To construct new practices is to appeal to aspects or possibilities of the world that have been previously closed to us. It is to offer novel, and perhaps more tolerable, engagements in the chiasm of body and world.** Thus we might say of politics what Merleau-Ponty has said of painting, that we see according to it. **Here**, I take it, **is where** the idea of **freedom** in Foucault **lies**. For Foucault, freedom is not a metaphysical condition. It does not lie in the nature of being human, nor is it a warping, an atomic swerve, in the web of causal relations in which we find ourselves. **To seek** our **freedom** in a space **apart from our encrustation in the world is not** so much **to liberate ourselves from its influence as to build our own private prison.** Foucault once said: There’s an optimism that consists in saying that things couldn’t be better. **My optimism would consist** rather **in saying that so many things can be changed**, fragile as they are, bound up more with circumstances than with necessities, more arbitrary than self-evident, **more a matter of complex, but temporary, historical circumstances than with inevitable anthropological constraints . . .8 That is where to discover our freedom.** And what happens from there? From the meetings, from the rallies, from the petitions and the teach-ins? What happens next? **There is**, after all, **always a next.** If you win this time – end aid to the contras, divest from apartheid South Africa, force debt-forgiveness by technologically advanced countries – **there is always more to do**. There is the de-unionization of workers, there are gay rights, there is Burma, there are the Palestinians, the Tibetans. There will always be Tibetans, even if they aren’t in Tibet, even if they aren’t Asian. But is that the only question: Next? Or is that just the question we focus on? What’s the next move in this campaign, what’s the next campaign? **Isn’t there more going on than that?** After all, **engaging in political organizing is a practice, or a group of practices. It contributes to making you who you are. It’s where the power is, and where your life is, and where the intersection of your life and those of others** (many of whom you will never meet, even if it’s for their sake that you’re involved) and the buildings and streets of your town **is. This moment when you are seeking to change the world, whether by making a suggestion** in a meeting **or** singing at a rally or **marching** in silence or asking for a signature on a petition, **is not a moment in which you don’t exist. It’s not a moment of yours that you sacrifice for others so that it no longer belongs to you. It remains a moment of your life**,

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 sedimenting in you to make you what you will become, emerging out of a past that is yours as well. What will you make of it, this moment? How will you be with others, those others around you who also do not cease to exist when they begin to organize or to protest or to resist? **The illusion is to think that this has nothing to do with you. You’ve made a decision to participate in world-changing.** Will that be all there is to it? Will it seem to you a simple sacrifice, for this small period of time, of who you are for the sake of others? Are you, for this moment, a political ascetic? Asceticism like that is dangerous. **Freedom lies not in our distance from the world but in the** historically fragile and contingent **ways we are folded into it, just as we ourselves are folds of it.** If we take Merleau-Ponty’s Being not as a rigid foundation or a truth behind appearances but as the historical folding and refolding of a univocity, then **our freedom lies in the possibility of other foldings.** Merleau-Ponty is not insensitive to this point. His elusive concept of the invisible seems to gesture in this direction. Of painting, he writes: the proper essence of the visible is to have a layer of invisibility in the strict sense, which it makes present as a certain absence . . . There is that which reaches the eye directly, the frontal properties of the visible; but there is also that which reaches it from below . . . and that which reaches it from above . . . where it no longer participates in the heaviness of origins but in free accomplishments.9 Elsewhere, in The Visible and the Invisible, he says: if . . . the surface of the visible, is doubled up over its whole extension with an invisible reserve; and if, finally, in our flesh as the flesh of things, the actual, empirical, ontic visible, by a sort of folding back, invagination, or padding, exhibits a visibility, a possibility that is not the shadow of the actual but its principle . . . an interior horizon and an exterior horizon between which the actual visible is a partitioning and which, nonetheless, open indefinitely only upon other visibles . . .10 What are we to make of these references? We can, to be sure, see the hand of Heidegger in them. But we may also, and for present purposes more relevantly, see an intersection with Foucault’s work on freedom. **There is an ontology of freedom at work here,** one **that situates freedom not in the private reserve of an individual but in the unfinished character of any historical situation. There is more to our historical juncture,** as there is to a painting, **than appears to us on the surface** of its visibility. **The trick is to recognize this, and to take advantage of it, not only with our thoughts but with our lives.** And **that is why,** in the end, **there can be no such thing as a sad revolutionary. To seek to change the world is to offer a new form of life-celebration. It is to articulate a fresh way of being, which is at once a way of seeing, thinking, acting, and being acted upon. It is to fold Being once again upon itself,** this time at a new point, **to see what that might yield. There is,** as Foucault often reminds us, **no guarantee** that **this fold will not** itself **turn out to contain the intolerable. In a complex world** with which we are inescapably entwined, a world we cannot view from above or outside, **there is no certainty about the results of our experiments.** Our politics are constructed from the same vulnerability that is the stuff of our art and our daily practices. **But to refuse to experiment is to resign oneself to the intolerable; it is to abandon both the struggle to change the world and the opportunity to celebrate living within it.** And **to seek one aspect without the other – life-celebration without world-changing, world-changing without life-celebration – is to refuse to acknowledge the chiasm of body and world that is the wellspring of both.**  **If we are to celebrate our lives, if we are to change our world,** then perhaps **the best place to begin** to think **is our bodies, which are the openings to celebration and to change**, and perhaps the point at which the war within us that I spoke of earlier can be both waged and resolved. That is the fragile beauty that, in their different ways, both Merleau- Ponty and Foucault have placed before us. The question before us is whether, in our lives and in our politics, we can be worthy of it. **So how might you be a political body, woven into the fabric of the world as a celebrator and as a changer?** **You went to the meeting, and then to the demonstration. How was it there?** Were the bodies in harmony or in counterpoint? Did you sing with your feet, did your voice soar? Did your mind come alive? Did you see possibilities you had not seen before? Were there people whose words or clothes, or even the way they walked hand in hand (how long has it been since you’ve walked hand in hand with someone out in public?) offer you a possibility, or make you feel alive as well as righteous? And how about those people off to the side, the ones on the sidewalk watching? Maybe they just stared, or maybe nodded as you went past. Or maybe some of them shouted at you to stop blocking the streets with your nonsense. Did you recoil within yourself, see yourself as in a mirror, or as the person at Sartre’s keyhole who’s just been caught? Did you feel superior to them, smug in your knowledge? Or did they, too, show you something you might learn from? Are they you at another moment, a moment in the past or in the future? Are they your parents that you have not explained to, sat down beside, or just shared a meal with? That one over there, the old man slightly stooped in the long overcoat: whom does he remind you of? What message might he have unwittingly brought for you? And why does it have to be a demonstration? **You go to a few meetings, a few more demonstrations**. You write some letters to legislators. You send an email to the President. And then more meetings. The next thing you know, you’re involved in a political campaign. **By then you may have stopped asking why**. This is how it goes: demonstrations, meetings with legislators, internet contacts. Does it have to be like this? Are demonstrations and meetings your only means? **Do they become, sooner or later, not only means but ends?** And what kinds of ends? In some sense they should always be ends: a meeting is a celebration, after all. But there are other ends as well. You go to the meeting because that fulfills your obligation to your political conscience**. Does it come to that? There are other means, other ends**. Other means/ends. **Some people ride bicycles, en masse**, slowly through crowded urban streets. You want environmentalism? Then have it. The streets are beautiful with their tall corniced buildings and wide avenues. To ride a bike through these streets instead of hiding in the armor of a car would be exhilarating. If enough of you do it together it would make for a pleasant ride, as well as a little lived environmentalism. Would you want to call it a demonstration? Would it matter? There are others as well who do other things with their bodies, more dangerous things. **Some people** have gone to Palestine in order to **put their bodies between** the **Palestinians and** the **Israeli soldiers** and settlers who attack them. They lie down next to Palestinians in front of the bulldozers that would destroy homes or build a wall through a family’s olive orchard. They feel the bodies of those they are in solidarity with. They smell the soil of Palestine as they lay there. Sometimes, they are harmed by it. A young woman, Rachel Corrie, was deliberately crushed by a US bulldozer operated by an Israeli soldier as she kneeled in front of a Palestinian home, hoping to stop its demolition. To do politics with one’s body can be like this. **To resist, to celebrate, is** also **to be vulnerable.** The world that you embrace, the world of which you are a part, can kill you too. And **so you experiment. You try this and you try that.** You are a phenomenologist and a genealogist. You sense what is around you, attend to the way your body is encrusted in your political involvements. And you know that that sensing has its own history, a history that often escapes you even as it envelops you. **There is always more to what you are, and to what you are involved in, than you can know. So you try to** keep vigilant, **seek**ing **the possibilities without scorning the realities.** **It’s a difficult balance. You can neglect it** if you like. Many do. **But your body is there, woven into the fabric of all the other bodies**, animate and inanimate. **Whether you like it or not**, whether you **recognize it or not. The only question is whether you will take up the world that you are of, or leave it to others, to those others who would be more than willing to take your world up for you.**

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### AT: VTL

#### Doesn’t turn warming---we don’t consume because of ourselves that’s Bryant, Doran, and Berr, and Barnhizer.

#### Value to life is inevitable and subjective

Schwartz 2 (Lisa, professional metaphysician, Medical Ethics: A case based approach, “The Value of Life: Who Decides and How?”, p. 112)

The second assertion made by supporters of the quality of life as a criterion for decision making is closely related to the first, but with an added dimension. This assertion suggests that the determination of the value of the quality of a given life is a subjective determination to be made by the person experiencing that life. The important addition here is that the decision is a personal one that, ideally, ought not to be made externally by another person but internally by the individual involved. Katherine Lewis made this decision for herself based on a comparison between two stages of her life. So did James Brady. Without this element, decisions based on quality of life criteria lack salient information and the patients concerned cannot give informed consent. Patients must be given the opportunity to decide for themselves whether they think their lives are worth living or not. To ignore or overlook patients’ judgment in this matter is to violate their autonomy and their freedom to decide for themselves on the basis of relevant information about their future, and comparative consideration of their past. As the deontological position puts it so well, to do so is to violate the imperative that we must treat persons as rational and as ends in themselves.

### AT: Mean to Nature

Protecting the environment is key to establishing a good relationship to it

Wapner 3 – Professor of Global Environmental Politics in School of Int'l Service, American U (Paul, Leftist Criticism of 'Nature', http://dissentmagazine.org/article/?article=539)

THE THIRD response to eco-criticism would require critics to acknowledge the ways in which they themselves silence nature and then to respect the sheer otherness of the nonhuman world. Postmodernism prides itself on criticizing the urge toward mastery that characterizes modernity. But isn't mastery exactly what postmodernism is exerting as it captures the nonhuman world within its own conceptual domain? Doesn't postmodern cultural criticism deepen the modernist urge toward mastery by eliminating the ontological weight of the nonhuman world? What else could it mean to assert that there is no such thing as nature? ¶ I have already suggested the postmodernist response: yes, recognizing the social construction of "nature" does deny the self-expression of the nonhuman world, but how would we know what such self-expression means? Indeed, nature doesn't speak; rather, some person always speaks on nature's behalf, and whatever that person says is, as we all know, a social construction. ¶ All attempts to listen to nature are social constructions-except one. Even the most radical postmodernist must acknowledge the distinction between physical existence and non-existence. As I have said, postmodernists accept that there is a physical substratum to the phenomenal world even if they argue about the different meanings we ascribe to it. This acknowledgment of physical existence is crucial. We can't ascribe meaning to that which doesn't appear. What doesn't exist can manifest no character. Put differently, yes, the postmodernist should rightly worry about interpreting nature's expressions. And all of us should be wary of those who claim to speak on nature's behalf (including environmentalists who do that). But we need not doubt the simple idea that a prerequisite of expression is existence. This in turn suggests that preserving the nonhuman world-in all its diverse embodiments-must be seen by eco-critics as a fundamental good. Eco-critics must be supporters, in some fashion, of environmental preservation.¶ Postmodernists reject the idea of a universal good. They rightly acknowledge the difficulty of identifying a common value given the multiple contexts of our value-producing activity. In fact, if there is one thing they vehemently scorn, it is the idea that there can be a value that stands above the individual contexts of human experience. Such a value would present itself as a metanarrative and, as Jean-François Lyotard has explained, postmodernism is characterized fundamentally by its "incredulity toward meta-narratives." ¶ Nonetheless, I can't see how postmodern critics can do otherwise than accept the value of preserving the nonhuman world. The nonhuman is the extreme "other"; it stands in contradistinction to humans as a species. In understanding the constructed quality of human experience and the dangers of reification, postmodernism inherently advances an ethic of respecting the "other." At the very least, respect must involve ensuring that the "other" actually continues to exist. In our day and age, this requires us to take responsibility for protecting the actuality of the nonhuman. Instead, however, we are running roughshod over the earth's diversity of plants, animals, and ecosystems. Postmodern critics should find this particularly disturbing. If they don't, they deny their own intellectual insights and compromise their fundamental moral commitment.¶ NOW, WHAT does this mean for politics and policy, and the future of the environmental movement? Society is constantly being asked to address questions of environmental quality for which there are no easy answers. As we wrestle with challenges of global climate change, ozone depletion, loss of biological diversity, and so forth, we need to consider the economic, political, cultural, and aesthetic values at stake. These considerations have traditionally marked the politics of environmental protection. A sensitivity to eco-criticism requires that we go further and include an ethic of otherness in our deliberations. That is, we need to be moved by our concern to make room for the "other" and hence fold a commitment to the nonhuman world into our policy discussions. I don't mean that this argument should drive all our actions or that respect for the "other" should always carry the day. But it must be a central part of our reflections and calculations. For example, as we estimate the number of people that a certain area can sustain, consider what to do about climate change, debate restrictions on ocean fishing, or otherwise assess the effects of a particular course of action, we must think about the lives of other creatures on the earth-and also the continued existence of the nonliving physical world. We must do so not because we wish to maintain what is "natural" but because we wish to act in a morally respectable manner.¶ I have been using postmodern cultural criticism against itself. Yes, the postmodernists are right: we can do what we want with the nonhuman world. There is nothing essential about the realm of rocks, trees, fish, and climate that calls for a certain type of action. But postmodernists are also right that the only ethical way to act in a world that is socially constructed is to respect the voices of the others-of those with whom we share the planet but with whom we may not share a common language or outlook. There is, in other words, a limit or guiding principle to our actions. As political theorist Leslie Thiele puts it, "One can't argue for the diversity of views of "nature" without taking a stand for the diversity of nature."

### AT: Nuke War Turns

#### Nuclear war won't cause extinction

**Martin 82** (Brian, Professor of Social Sciences in the School of Social Sciences, Media and Communication at the University of Wollongong, Journal of Peace Research, Vol. 19, No. 4, pp. 287-300 <http://www.uow.edu.au/arts/sts/bmartin/pubs/82jpr.html>)

To summarise the above points, a major global nuclear war in which population centres in the US, Soviet Union, Europe and China ware targeted, with no effective civil defence measures taken, could kill directly perhaps 400 to 450 million people. Induced effects, in particular starvation or epidemics following agricultural failure or economic breakdown, might add up to several hundred million deaths to the total, though this is most uncertain. Such an eventuality would be a catastrophe of enormous proportions, but it is far from extinction. Even in the most extreme case there would remain alive some 4000 million people, about nine-tenths of the world's population, most of them unaffected physically by the nuclear war. The following areas would be relatively unscathed, unless nuclear attacks were made in these regions: South and Central America, Africa, the Middle East, the Indian subcontinent, Southeast Asia, Australasia, Oceania and large parts of China. Even in the mid-latitudes of the northern hemisphere where most of the nuclear weapons would be exploded, areas upwind of nuclear attacks would remain free of heavy radioactive contamination

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, such as Portugal, Ireland and British Columbia. Many people, perhaps especially in the peace movement, believe that global nuclear war will lead to the death of most or all of the world's population.[12] Yet the available scientific evidence provides no basis for this belief. Furthermore, there seem to be no convincing scientific arguments that nuclear war could cause human extinction.[13] In particular, the idea of 'overkill', if taken to imply the capacity to kill everyone on earth, is highly misleading.[14] In the absence of any positive evidence, statements that nuclear war will lead to the death of all or most people on earth should be considered exaggerations. In most cases the exaggeration is unintended, since people holding or stating a belief in nuclear extinction are quite sincere.[15]