# Round Doubles – ASU RV vs. Harvard HT (Aff)

## 1AC

#### Same as doubles.

## 2AC

### Warming

#### Turn – weeds – Co2 leads to weeds – tanks agriculture

Ziska ‘7[Lewis Ziska, PhD, Principal investigator at United States Department of Agriculture  
Agricultural Research Service Alternate Crop and Systems Lab. “Climate change impact on weeds” http://www.climateandfarming.org/pdfs/FactSheets/III.1Weeds.pdf]

Weeds have a greater genetic diversity than crops. Consequently, if a resource (light, water, nutrients or carbon dioxide) changes within the environment, it is more likely that weeds will show a greater growth and reproductive response. It can be argued that many weed species have the C4 photosynthetic pathway and therefore will show a smaller response to atmospheric CO2 relative to C3 crops. However, this argument does not consider the range of available C3 and C4 weeds present in any agronomic environment. That is, at present, the U.S. has a total of 46 major crops; but, over 410 “troublesome” weed species (both C3 and C4) associated with those crops (Bridges 1992). Hence, if a C4 weed species does not respond, it is likely that a C3 weed species will. In addition, many growers recognize that the worst weeds for a given crop are similar in growth habit or photosynthetic pathway; indeed, they are often the same uncultivated or “wild” species, e.g. oat and wild oat, sorghum and shattercane, rice and red rice. To date, for all weed/crop competition studies where the photosynthetic pathway is the same, weed growth is favored as CO2 is increased (Table 1, Ziska and Runion, In Press). In addition to agronomic weeds, there is an additional category of plants that are considered “noxious” or “invasive” weeds. These are plants, usually non-native whose introduction results in wide-spread economic or environmental consequences (e.g. kudzu). Many of these weeds reproduce by vegetative means (roots, stolons, etc.) and recent evidence indicates that as a group, these weeds may show a strong response to recent increases in atmospheric CO2 (Ziska and George 2004). How rising CO2 would contribute to the success of these weeds in situ however, is still unclear. Overall, the data that are available on the response of weeds and changes in weed ecology are limited. Additional details, particularly with respect to interactions with other environmental variables (e.g. nutrient availability, precipitation and temperature) are also needed.

#### Turn – pollution leads to ozone – tanks ag – outweighs any benefit from CO2

Monbiot ‘7[George, Professor @ Oxford Brookes University, Heat: How to Stop the Planet from Burning, pg. 7]

But now, I am sorry to say, it seems that I might have been right, though for the wrong reasons. In late 2005, a study published in the Philosophical Transactions of the Royal Society alleged that the yield predictions for temperate countries were 'over optimistic'. The authors had blown carbon dioxide and ozone, in concentrations roughly equivalent to those expected later this century, over crops in the open air. They discovered that the plants didn't respond as they were supposed to: the extra carbon dioxide did not fertilize them as much as the researchers predicted, and the ozone reduced their yields by 20 per cent." Ozone levels are rising in the rich nations by between 1 and 2 per cent a year, as a result of sunlight interacting with pollution from cars, planes and power stations. The levels happen to be highest in the places where crop yields were expected to rise: western Europe, the midwest and eastern US and eastern China. The expected ozone increase in China will cause maize, rice and soybean production to fall by over 30 per cent by 2020, These reductions in yield, if real, arc enough to cancel out the effects of both higher temperatures and higher carbon dioxide concentrations.

#### Biodiversity is the biggest internal link to extinction – newest studies prove.

Science Daily, ‘11

["Biodiversity Critical for Maintaining Multiple 'Ecosystem Services'" Cites McGill University, August 19, [www.sciencedaily.com/releases/2011/08/110819155422.htm](http://www.sciencedaily.com/releases/2011/08/110819155422.htm)]

By combining data from 17 of the largest and longest-running biodiversity experiments, scientists from universities across North America and Europe have found that previous studies have underestimated the importance of biodiversity for maintaining multiple ecosystem services across many years and places. "Most previous studies considered only the number of species needed to provide one service under one set of environmental conditions," says Prof. Michel Loreau from McGill University's biology department who supervised the study. "These studies found that many species appeared redundant. That is, it appeared that the extinction of many species would not affect the functioning of the ecosystem because other species could compensate for their loss." Now, by looking at grassland plant species, investigators have found that most of the studied species were important at least once for the maintenance of ecosystem services, because different sets of species were important during different years, at different places, for different services, and under different global change (e.g., climate or land-use change) scenarios. Furthermore, the species needed to provide one service during multiple years were not the same as those needed to provide multiple services during one year. "This means that biodiversity is even more important for maintaining ecosystem services than was previously thought," says Dr. Forest Isbell, the lead author and investigator of this study. "Our results indicate that many species are needed to maintain ecosystem services at multiple times and places in a changing world, and that species are less redundant than was previously thought." The scientists involved in the study also offer recommendations for using these results to prioritize conservation efforts and predict consequences of species extinctions. "It is nice to know which groups of species promoted ecosystem functioning under hundreds of sets of environmental conditions," says Isbell, "because this will allow us to determine whether some species often provide ecosystem services under environmental conditions that are currently common, or under conditions that will become increasingly common in the future." But Michel Loreau, of McGill, adds au cautionary note: "We should be careful when making predictions. The uncertainty over future environmental changes means that conserving as much biodiversity as possible could be a good precautionary approach."

### Bubbles CP

#### Perm do both.

#### Doesn’t solve warming: specifically need CO2 reductions in order to solve for warming. New technologies are unproven and commercially not viable, meaning that nuclear is the only tech that solves. That’s 1AC Peters.

#### CP only solves for the US. Effects of warming would still happen elsewhere globally. Only the plan gets those countries on board due to spillover of reprocessing tech and climate agreements. That’s 1AC Roberts and 1AC Acton.

#### Doesn’t solve for the biodiversity impact. Bubbles may decrease the temperature increase caused by warming but DOES NOT address the impact of CO2 on biodiversity. CO2 causes deadzones, leads to ocean acidification and kills keystone species. That’s 1AC Barnosky. Impact is extinction. That’s 1AC Chen.

#### Doesn’t solve tritium: doesn’t increase the amount of LEU.

#### CP can’t solve the aff – kills biodiversity.

CBD, ’12

[January 2012, Convention on Biodiversity is a global agreement addressing all aspects of biological diversity: genetic resources, species, and ecosystems, “Impacts of Climate Related Geo-engineering on Biological Diversity”,

http://www.google.com/url? sa=t&rct=j&q=&esrc=s&source=web&cd=6&cad=rja&ved=0CEAQFjAF&url=http%3A%2F %2Fwww.cbd.int%2Fclimate%2Fdoc%2Fdraft-study-impacts-geoengineering-second review-en.doc&ei=YH9fUMeFBe2-0QHr5YD4Ag&usg=AFQjCNHsdSSOpqZzKaLmzbp9ZzTnIJSZVQ]

The specific impacts of surface albedo enhancement on biodiversity and ecosystem services, over and above the impacts of generic SRM approaches involving uniform dimming are described in section 4.1, depend on what method is used. Surface albedo can be increased, for example, through whitening the built environment, use of crops with more reflective foliage, covering deserts (or other lands) with reflective material, and use of micro-bubbles in water bodies. The albedo of the surface ocean might be enhanced through the introduction of microbubbles (currently called ‘Bright Water’) with claims that the microbubbles are effective at reducing solar radiation even at parts per million levels . In general, if surface albedo changes were large enough to have an effect on the global climate, they would have to be deployed across a very large area – with consequent impacts on ecosystems, or would involve a very high degree of localised cooling. For instance, covering deserts with reflective material on a scale large enough to be effective in addressing the impacts of climate change would probably have significant negative ecological effects , for instance on species richness and population densities. Introducing bubbles into large expanses of water bodies would probably have negative impacts on ocean biodiversity due to decreased light penetration, with possible impacts on currents and further knock-on impacts on local ecosystems.

#### CP fails in implementation – bubbles dissolve too quickly.

Morgan 11 – (10/8/11, John, PhD in physical chemistry, runs R&D programmes at a Sydney startup company, research experience in chemical engineering in the US and at the Commonwealth Scientific and Industrial Research Organisation, Australia's national science agency, “Low intensity geoengineering – microbubbles and microspheres,” <http://bravenewclimate.com/2011/10/08/low-intensity-geoengineering-microbubbles-and-microspheres/>)

No, the real problem is that the bubbles want to dissolve. The air inside a bubble is at a higher pressure than the water it floats in, because surface tension is trying to pull the surface inwards, and the air is compressed. The pressure increase (given by the Young-LaPlace equation) is greater the smaller the bubble, and can be surprisingly large. For a 1 mm diameter bubble in seawater, the internal pressure is almost 3 atmospheres greater than the water outside. At these high pressures the air bubble will rapidly dissolve, even in water that is saturated with air at sea level. Unstabilized 10 μm bubbles in seawater are observed to dissolve in about 10 seconds. However, as Seitz describes, some seawater bubbles are much more durable, being stabilized by adsorption of natural surfactants and small particles on their surfaces. These materials form incompressible surface films that balance the pull of surface tension, and stabilized bubbles in the micron size range have been observed to last for 20-30 hours.

#### In the short term US nuclear waste is stored on-site.

Galbraith 11 (Kate, Staff Writer, “A New Urgency to the Problem of Storing Nuclear Waste”, New York Times, 11-27-11, http://www.nytimes.com/2011/11/28/business/energy-environment/a-new-urgency-to-the-problem-of-storing-nuclear-waste.html, RSR)

Other countries are also looking at waste in new ways in the post-Fukushima world. Right now, worldwide, most spent fuel waste is stored on the site of the facility that produced it, in spent-fuel pools and, after it eventually cools, dry casks. Experts say dispersed storage is expensive and that central storage would be more secure. Few countries , apart from Sweden and Finland, have moved forward on centralized disposal sites, deep in the earth, designed to hold the waste permanently. France is evaluating a permanent disposal site for spent fuel , near the remote northeastern village of Bure.

#### On-site storage is dangerous – storage pools are vulnerable to accidents.

Alvarez 12 (Robert, Senior Scholar at IPS, where he is currently focused on nuclear disarmament, environmental, and energy policies, “Improving Spent-Fuel Storage at Nuclear Reactors”, Winter, ISSUES IN SCIENCE AND TECHNOLOGY, RSR)

Until the NAS completes its study, if it agrees to do so, the bulk of current attention is focused on the NRC’s analysis of the Fukushima disaster. As in Japan, U.S. spent-fuel pools are not required to have defense-in-depth nuclear safety features. They are not covered by the types of heavy containment structures that cover reactor vessels. Reactor operators are not required have backup power supplies to circulate water in the pools and keep them cool in the event of onsite power failures. Reactor control rooms rarely have instrumentation keeping track of the pools’ water levels and chemistry. (In one incident at a U.S. reactor, water levels dropped to a potentially dangerous level after operators simply failed to look into the pool area.) Some reactors may not have the necessary capabilities to restore water to pools when needed. Quite simply, spent-fuel pools at nuclear reactors are not required to have the same level of nuclear safety protection as required for reactors, because the assumption was that they would be used only for short-term storage before the rods were removed for reprocessing or permanent storage. In its interim report, the NRC task force recognized these shortcomings and recommended that the NRC order reactor operators to: • “. . . provide sufficient safety-related instrumentation, able to withstand design-basis natural phenomena, to monitor key spent fuel pool parameters (i.e., water level, temperature, and area radiation levels) from the control room.” • “. . . revise their technical specifications to address requirements to have one train of onsite emergency electrical power operable for spent fuel pool makeup and spent fuel pool instrumentation when there is irradiated fuel in the spent fuel pool, regardless of the operational mode of the reactor.” • “. . . have an installed seismically qualified means to spray water into the spent fuel pools, including an easily accessible connection to supply the water (e.g., using a portable pump or pumper truck) at grade outside the building.” Improving pool safety is certainly important. For decades, nuclear safety research has consistently pointed out that severe accidents could occur at spent-fuel pools that would result in catastrophic consequences. A severe pool fire could render about 188 square miles around the nuclear reactor uninhabitable, cause as many as 28,000 cancer fatalities, and cause $59 billion in damage, according to a 1997 report for the NRC by Brookhaven National Laboratory. If the fuel were exposed to air and steam, the zirconium cladding around the fuel would react exothermically, catching fire at about 800 degrees Celsius. Particularly worrisome are the large amounts of cesium-137 in spent-fuel pools, because nearly all of this dangerous isotope would be released into the environment in a fire, according to the NRC. Although it is too early to know the full extent of long-term land contamination from the accident at the Dai-Ichi station, fragmentary evidence has been reported of high cesium-137 levels as far away as metropolitan Tokyo. The NRC also has reported that spent-fuel fragments were found a mile away from the reactor site. The damage from a large release of fission products, particularly cesium-137, was demonstrated at Chernobyl. More than 100,000 residents from 187 settlements were permanently evacuated because of contamination by cesium-137. The total area of this radiation-control zone is huge: more than 6,000 square miles, equal to roughly two-thirds the area of New Jersey. During the following decade, the population of this area declined by almost half because of migration to areas of lower contamination.

#### The densely packed fuel is enough to trigger a full scaled meltdown – Fukushima proves.

Kinitisch 11 (Eli, Reporter at Science Magazine, “Waste Panel Expected To Back Interim Storage”, Science Magazine, Vol. 333, 7-8-11, RSR)

In any case, experts agree, some new plan for waste storage is essential. Waste currently stored in pools and casks at U.S. sites does not pose “unmanageable … safety or security risks,” says a subcommittee report. But every ton that stays at reactor sites makes those risks slightly greater. Fuel in U.S. spent fuel pools is packed four times as densely as it was 25 years ago, raising concerns about the risk of explosions or meltdown if the pools were to empty in an accident. The tsunami that devastated the Fukushima nuclear plant in Japan in March may have resulted in a loss of water in one of its ponds (Science, 1 April, p. 24). A draft commission report says the issue of the safety of keeping fuel densely packed in pools should be “reexamined,” although “it is still too early to draw deﬁ nitive conclusions” from the Fukushima accident. It calls for an expert panel at the National Academies to tackle the subject.

#### These catastrophic meltdowns cause extinction – reactors contain 100x the radiation of nuclear bombs.

Lendman 11 (Stephen, Research Associate of the Centre for Research on Globalization,

03/ 13, “Nuclear Meltdown in Japan,”, The People’s Voice <http://www.thepeoplesvoice.org/TPV3/Voices.php/2011/03/13/nuclear-meltdown-in-japan>, accessed 8-2-12, RSR)

Reuters said the 1995 Kobe quake caused $100 billion in damage, up to then the most costly ever natural disaster. This time, from quake and tsunami damage alone, that figure will be dwarfed. Moreover, **under a worst case** core **meltdown, all bets are off as the entire region and beyond will be threatened with permanent contamination**, making the most affected areas unsafe to live in. On March 12, Stratfor Global Intelligence issued a "Red Alert: Nuclear Meltdown at Quake-Damaged Japanese Plant," saying: Fukushima Daiichi "nuclear power plant in Okuma, Japan, appears to have caused a reactor meltdown." Stratfor downplayed its seriousness, adding that such an event "does not necessarily mean a nuclear disaster," that already may have happened - the ultimate nightmare short of nuclear winter. According to Stratfor, "(A)s long as the reactor core, which is specifically designed to contain high levels of heat, pressure and radiation, remains intact, the melted fuel can be dealt with. If the (core's) breached but the containment facility built around (it) remains intact, the melted fuel can be....entombed within specialized concrete" as at Chernobyl in 1986. In fact, that disaster killed nearly one million people worldwide from nuclear radiation exposure. In their book titled, "Chernobyl: Consequences of the Catastrophe for People and the Environment," Alexey Yablokov, Vassily Nesterenko and Alexey Nesterenko said: "For the past 23 years, it has been clear that there is a danger greater than nuclear weapons concealed within nuclear power. **Emissions from** this **one reactor** exceeded a hundred**-fold the radioactive contamination of** the bombs dropped on **Hiroshima and Nagasaki.**" "**No** citizen of any **country** can be assured that he or she **can be protected from radioactive contamination. One nuclear reactor can pollute half the globe.** Chernobyl fallout covers the entire Northern Hemisphere." Stratfor explained that if Fukushima's floor cracked, "it is highly likely that the melting fuel will burn through (its) containment system and enter the ground. This has never happened before," at least not reported. If now occurring, "containment goes from being merely dangerous, time consuming and expensive to nearly impossible," making the quake, aftershocks, and tsunamis seem mild by comparison. Potentially, millions of lives will be jeopardized. Japanese officials said Fukushima's reactor container wasn't breached. Stratfor and others said it was, making the potential calamity far worse than reported. Japan's Nuclear and Industrial Safety Agency (NISA) said the explosion at Fukushima's Saiichi No. 1 facility could only have been caused by a core meltdown. In fact, 3 or more reactors are affected or at risk. Events are fluid and developing, but remain very serious. The possibility of an extreme catastrophe can't be discounted. Moreover, independent nuclear safety analyst John Large told Al Jazeera that by venting radioactive steam from the inner reactor to the outer dome, a reaction may have occurred, causing the explosion. "When I look at the size of the explosion," he said, "it is my opinion that there could be a very large leak (because) fuel continues to generate heat." Already, Fukushima way exceeds Three Mile Island that experienced a partial core meltdown in Unit 2. Finally it was brought under control, but coverup and denial concealed full details until much later. According to anti-nuclear activist Harvey Wasserman, Japan's quake fallout may cause nuclear disaster, saying: "This is a very serious situation. **If the cooling system fails** (apparently it has at two or more plants), the super-heated **radioactive fuel rods will melt**, and (if so) you could conceivably have an explosion," that, in fact, occurred. As a result, **massive radiation releases may follow**, impacting the entire region. "**It could be**, literally, **an apocalyptic event.** The reactor could blow." If so, Russia, China, Korea and most parts of Western Asia will be affected. Many thousands will die, potentially millions under a worse case scenario, including far outside East Asia.¶ Moreover, at least five reactors are at risk. Already, a 20-mile wide radius was evacuated. What happened in Japan can occur anywhere. Yet Obama's proposed budget includes $36 billion for new reactors, a shocking disregard for global safety.¶ Calling Fukushima an "apocalyptic event," Wasserman said "(t)hese nuclear plants have to be shut," let alone budget billions for new ones. It's unthinkable, he said. If a similar disaster struck California, nuclear fallout would affect all America, Canada, Mexico, Central America, and parts of South America.¶ Nuclear Power: A Technology from Hell¶ Nuclear expert Helen Caldicott agrees, telling this writer by phone that a potential regional catastrophe is unfolding. Over 30 years ago, she warned of its inevitability. Her 2006 book titled, "Nuclear Power is Not the Answer" explained that contrary to government and industry propaganda, even during normal operations, nuclear power generation causes significant discharges of greenhouse gas emissions, as well as hundreds of thousands of curies of deadly radioactive gases and other radioactive elements into the environment every year.¶ Moreover, nuclear plants are atom bomb factories. A 1000 megawatt reactor produces 500 pounds of plutonium annually. Only 10 are needed for a bomb able to devastate a large city, besides causing permanent radiation contamination.¶ Nuclear Power not Cleaner and Greener¶ Just the opposite, in fact. Although a nuclear power plant releases no carbon dioxide (CO2), the primary greenhouse gas, a vast infrastructure is required. Called the nuclear fuel cycle, it uses large amounts of fossil fuels.¶ Each cycle stage exacerbates the problem, starting with the enormous cost of mining and milling uranium, needing fossil fuel to do it. How then to dispose of mill tailings, produced in the extraction process. It requires great amounts of greenhouse emitting fuels to remediate.¶ Moreover, other nuclear cycle steps also use fossil fuels, including converting uranium to hexafluoride gas prior to enrichment, the enrichment process itself, and conversion of enriched uranium hexafluoride gas to fuel pellets. In addition, nuclear power plant construction, dismantling and cleanup at the end of their useful life require large amounts of energy.¶ There's more, including contaminated cooling water, nuclear waste, its handling, transportation and disposal/storage, problems so far unresolved. Moreover, nuclear power costs and risks are so enormous that the industry couldn't exist without billions of government subsidized funding annually.¶ The Unaddressed Human Toll from Normal Operations¶ Affected are uranium miners, industry workers, and potentially everyone living close to nuclear reactors that routinely emit harmful radioactive releases daily, harming human health over time, causing illness and early death.¶ The link between radiation exposure and disease is irrefutable, depending only on the amount of cumulative exposure over time, Caldicott saying:¶ "If a regulatory gene is biochemically altered by radiation exposure, the cell will begin to incubate cancer, during a 'latent period of carcinogenesis,' lasting from two to sixty years."¶ In fact, a single gene mutation can prove fatal. No amount of radiation exposure is safe. Moreover, when combined with about 80,000 commonly used toxic chemicals and contaminated GMO foods and ingredients, it causes 80% of known cancers, putting everyone at risk everywhere.¶ Further, the combined effects of allowable radiation exposure, uranium mining, milling operations, enrichment, and fuel fabrication can be devastating to those exposed. Besides the insoluble waste storage/disposal problem, nuclear accidents happen and catastrophic ones are inevitable.¶ Inevitable Meltdowns¶ Caldicott and other experts agree they're certain in one or more of the hundreds of reactors operating globally, many years after their scheduled shutdown dates unsafely. Combined with human error, imprudently minimizing operating costs, internal sabotage, or the effects of a high-magnitude quake and/or tsunami, an eventual catastrophe is certain.¶ Aging plants alone, like Japan's Fukushima facility, pose unacceptable risks based on their record of near-misses and meltdowns, resulting from human error, old equipment, shoddy maintenance, and poor regulatory oversight. However, under optimum operating conditions, all nuclear plants are unsafe. Like any machine or facility, they're vulnerable to breakdowns, that if serious enough can cause enormous, possibly catastrophic, harm.¶ Add nuclear war to the mix, also potentially inevitable according to some experts, by accident or intent, including Steven Starr saying:¶ "Only a single failure of nuclear deterrence is required to start a nuclear war," the consequences of which "would be profound, potentially killing "tens of millions of people, and caus(ing) long-term, catastrophic disruptions of the global climate and massive destruction of Earth's protective ozone layer. The result would be a global nuclear famine that could kill up to one billion people."¶ Worse still is nuclear winter, the ultimate nightmare, able to end all life if it happens. It's nuclear proliferation's unacceptable risk, a clear and present danger as long as nuclear weapons and commercial dependency exist.¶ In 1946, Enstein knew it, saying:¶ "Our world faces a crisis as yet unperceived by those possessing the power to make great decisions for good and evil. The unleashed power of the atom has changed everything save our modes of thinking, and thus we drift toward unparalleled catastrophe."¶ He envisioned two choices - abolish all forms of nuclear power or face extinction. No one listened. The Doomsday Clock keeps ticking.

### Coal DA

#### Warming outweighs --- absent multipliers, nuclear war won’t happen.

#### The New York End Times 6 The New York End Times is a non-partisan, non-religious, non-ideological, free news filter. We monitor world trends and events as they pertain to two vital threats - war and extinction. We use a proprietary methodology to quantify movements between the extremes of war and peace, harmony and extinction. http://newyorkendtimes.com/extinctionscale.asp

We rate Global Climate Change as a greater threat for human extinction in this century. Most scientists forecast disruptions and dislocations, if current trends persist. The extinction danger is more likely if we alter an environmental process that causes harmful effects and leads to conditions that make the planet uninhabitable to humans. Considering that there is so much that is unknown about global systems, we consider climate change to be the greatest danger to human extinction. However, there is no evidence of imminent danger. Nuclear war at some point in this century might happen. It is unlikely to cause human extinction though. While several countries have nuclear weapons, there are few with the firepower to annihilate the world. For those nations it would be suicidal to exercise that option. The pattern is that the more destructive technology a nation has, the more it tends towards rational behavior. Sophisticated precision weapons then become better tactical options. The bigger danger comes from nuclear weapons in the hands of terrorists with the help of a rogue state, such as North Korea. The size of such an explosion would not be sufficient to threaten humanity as a whole. Instead it could trigger a major war or even world war. Under this scenario human extinction would only be possible if other threats were present, such as disease and climate change. We monitor war separately. However we also need to incorporate the dangers here .

#### Coal is officially dead – new investment won’t resurrect projects because the economics no longer make sense.

Pope 12 (Carl Pope, 4-9-2012, Former chairman and executive director, Sierra Club, National Energy Journal, “KING COAL: HOIST ON HIS OWN PETARD,” <http://energy.nationaljournal.com/2012/04/whats-really-causing-coals-dec.php#2193151>)

Washington is in a tizzy about “who killed coal?” in the wake of EPA’s new air pollution standard for carbon pollution. That standard, which requires that new power plants be at least as clean as a new natural gas plant, has blocked a miniscule number of coal plants that were still proceeding – but observers are pointing out that almost all of the new coal plants being proposed five years ago had already been cancelled, because of underlying economic uncertainty, deployment of wind, and cheap gas. That doesn’t stop coal industry advocates from blaming EPA. Just before EPA issued the rule, coal industry allies in Congress wrote a letter referencing claims that EPA’s clean-air rulemaking in the last two years had already cost 1.4 million jobs. The American Clean Coal Council complained that EPA’s rules had already shut down 140 coal plants. But the back-story is not being told. It turns out that while Joshua Freed is correct in saying that “Blaming regulation for the decline of coal is like blaming cars for the demise of horse-drawn carriages”, coal actually laid the foundation for its own demise thirty years ago. In 1977, Congress proposed to require all power plants – regardless of when they were built or what they burned – to meet basic pollution control standards. Coal and its utility allies – led by the Southern Company – argued that they were about to shut down their fleet of old coal clunkers anyway, and that pollution controls would be a silly expense for assets that were about to be retired. Congress believed them, and even gave the Southern company a loophole that allowed it to “grandfather” and exempt from pollution controls coal power plants that came on line as late as a twelve years after the law was passed. And then, from 1977 until 2000, utility companies simply refused to upgrade their plants, allowing the entire fleet to continue, vampire like, as a seemingly immortal threat to the public health. Running for President, even George W. Bush implausibly promised to end the “grandfathering” scandal, only to back off once in the White House at the behest of Vice-President Cheney. Instead, coal companies and utilities promised a brand-new fleet of “clean” coal plants – if you didn’t count carbon pollution. A total of 180 was placed in the permit and finance queue – until, on close examination, it became clear that these new facilities would be neither clean or cheap – and one by one, they almost all were cancelled or abandoned. The few that opened almost broke the financial backs of the utilities that built them – forcing 25-50% rate increases on customers. And when the new plants didn’t materialize, and wind and natural gas got cheap, the utilities who, after all, are businessmen, not coal miners, simply dumped the dirty black rock. When EPA finally blew the whistle on pollutants like mercury, coal ash and particulates that legally should have been cleaned up in the decades from 1977 to 2008, the bill for upgrading old coal no longer made sense – even as the bill for deploying new coal had already gone through the roof. Coal it turned out was not only not clean – as Al Gore’s Reality campaign had already pointed out – worse, it was no longer cheap. And that has made all the difference. But it was a self-inflicted wound – because if the coal industry and its utility allies had really invested in cleaning up their plants from 1977-2000, when the economics still appeared to make sense, then even the arrival of cheap wind and gas wouldn’t have been able to knock them off their perch.

#### Natural gas is killing coal.

The Guardian 11 June 2012 Scott Rosenberg and Chip Giller “'The problem for coal right now is entirely economic' – EPA's Lisa Jackson” <http://www.guardian.co.uk/environment/2012/jun/11/coal-economic-epa-lisa-jackson>

And then coal has another pollution problem, and that's carbon pollution: it's the most carbon-intense fossil fuel. And the president invested in carbon capture and sequestration technology as part of the Recovery Act. He said all along, I'm from a coal state, so I believe that if there's going to be a future for coal it has to be one that deals with carbon pollution, with climate change. So in my opinion the problem for coal right now is entirely economic. The natural gas that this country has and is continuing to develop is cheaper right now on average. And so people who are making investment decisions are not unmindful of that — how could you expect them to be? It just happens that at the same time, these rules are coming in place that make it clear that you cannot continue to operate a 30-, 40-, or 50-year old plant and not control the pollution that comes with it.

#### Their link evidence cites renewables as killing coal. That’s expanding now.

Mitchell 2/13 (Travis, associate editor for all FierceEnergy and FierceFinance publications and is based in the Washington, DC office. Before joining FierceMarkets, Travis worked as an editorial/communication intern at the Rural Community Assistance Partnership, a national non-profit focusing on clean water and has also worked on the multimedia desk for the Washington bureau of Agence France-Presse. Travis holds a B.A. in journalism from American University in Washington, DC, where he also spent four years as a student DJ for WVAU. He is fluent in French, a music lover and enjoys eating his way around the District, Facts show renewable energy success, http://www.fierceenergy.com/story/facts-show-renewable-energy-success/2013-02-19, MDA)

**There are** plenty of **misconceptions about the costs and benefits of renewable energy.** But while opinions vary as to the effectiveness of generation sources such as wind and solar, facts are indisputable. And the **facts show that renewable power is increasingly economical and poised for explosive growth in the United States.**¶ **While the U.S. actually saw substantial decline in the renewable energy investment dollars from 2011-2012 (from $300 billion down to $270 billion), that's** a **misleading** figure. **The drop can be attributed**, in part, **to falling costs of renewable energy materials, and increased energy use.** In fact, **2012 was a record year for U.S. installed renewable capacity** at 17.4 GW.¶ **"Solar had a very strong year, but really wind was the big winner overall in terms of capacity**," said Ethan Zindler, head of policy analysis at Bloomberg New Energy Finance. ¶ Zindler was part of a gathering of energy analysts at a recent American Council on Renewable Energy (ACORE) policy forum, which highlighted industry advancements and acted as a brainstorming session for the future of renewable energy policy. While not optimistic about how renewable energy would fare over the next couple years, Zindler noted that these technologies -- **wind**, in particular -- **are approaching cost parity with coal generation.**¶ Renewables enjoy falling costs¶ **A Bloomberg New Energy Finance analysis shows a** 20-**30 percent drop in the levelized costs (without subsidies) of photovoltaic tech**nology over the past 12 months, and the price of wind generation continues to be down.¶ "The short answer is that, in a number of cases, **these technologies really are now very much getting close to being competitive with their fossil rivals**," Zindler said.¶ Making costs more reasonable is a product of increased investment and research, and much of it was spurred from the American Recovery and Reinvestment Act of 2009, a policy move that pumped substantial cash into renewable energy. **The ultimate goal is to see the cost of solar, wind and geothermal systems continue to fall. This is becoming increasingly necessary as natural gas prices remain at historic lows.**¶ **Renewables will go toe-to-toe with natural gas in the coming years, as state Renewable Portfolio Standards and U.S. E**nvironmental **P**rotection **A**gency regulations **make it tougher to build new coal generation and more cumbersome to keep old units operating.**¶ Importance of continued policy support¶ Just as policy can encourage development, its absence can stunt it. Renewables spending slowed recently over fear of revoked renewable production tax credits and subsidies.¶ In time, **the renewables industry will certainly thrive on its own.** But for now, policy is critical to supporting renewable energy growth.¶ Not only will policy offer much needed financial support, but it is also part of the country's heritage, according to Nancy Pfund, managing partner at venture capital firm DBL Investors.¶ "Even from the early days of land grants and coal railroad development, **the government has played a critical role in supporting the emergence of new technologies in the energy field and transitioning us from one to the other**," Pfund said, speaking at the ACORE forum.¶ Few of those presenting at the forum projected wide-sweeping energy legislation to hit any time soon. But absent a comprehensive energy reform bill, there are likely to be incremental changes to help erect a stronger energy roadmap, including focusing on continuing support for funding that could further drive down the cost of renewables.¶ Perhaps Congress should also heed research that demonstrates a growing number Americans want and support renewable energy.¶ "All the polls, all the studies show that American's love solar energy and they want the government to pursue policies that support it," Pfund said. She predicted that over the next few years, the renewable energy discussion will shift from policy professionals to the broader consumer marketplace.¶ This consumer support also creates an opportunity for utilities to work with lawmakers in driving renewable energy policy and growth, she said.¶ All in all, **the facts seem to be piling up on the side of renewable energy.** Policy reform has been shown to work, and has driven costs down. Likewise, a lack of firm policy has slowed advancement, again a testament to it's potential effectiveness. **The next few years will be critical and challenging for renewble energy, but as long as installed capacity continues to grow, and the facts demonstrate improvement, it will be tough to make the argument against these generation sources and the policies that support them.**

#### Nuclear renaissance now. Pistilli says nuclear is already receiving subsidies and building plants.

#### **Global nuclear expansion now.** Over 200 reactors are going to be constructed in the next five years. That’s 1AC Marketwire.

#### Expanding nuclear power revitalizes the economy

Fertel 9—35 years of experience consulting for electric utilities on issues related to designing, siting, licensing and managing both fossil and nuclear plants. Worked in executive positions with such organizations as Ebasco, Management Analysis Company and Tenera. In November 1990, he joined the U.S. Council for Energy Awareness as vice president of Technical Programs. (Marvin, Op-Ed: In Energy, Nuclear Leads Transition to Green Jobs, http://www.nei.org/keyissues/newnuclearplants/economicbenefitsofnewnuclearplants/in-energy-nuclear-leads-transition-to-green-jobs/)

There is tremendous potential for rebuilding the U.S. economy on green jobs, particularly as energy companies gear up to meet rising electricity demand. The nuclear energy industry already is creating tens of thousands of American green jobs in the first wave of this transition.¶ Nuclear energy is one of the few bright spots in the U.S. economy – expanding rather than contracting. That’s due to a growing consensus that any credible program to address climate change must include carbon-free technologies like nuclear energy.¶ Energy companies, mainly in the fast-growing Sun Belt, have filed federal permits to build up to 26 nuclear plants. Betting on an increased emphasis on carbon-free nuclear energy to meet future power needs in the United States and elsewhere, reactor designers and manufacturers are expanding engineering centers and manufacturing facilities as well as their payrolls.¶ Green job growth has already begun in North Carolina, Tennessee and Pennsylvania and will spread to Virginia and Louisiana in the coming months. In Lake Charles, La., the Shaw Group and Westinghouse will fabricate reactor modules at a 300-acre site that will employee 1,400 workers. In Newport News, Va., Northrop Grumman and AREVA are building a new facility to manufacture massive reactor vessels and stream generators.¶ These and other companies already have hired more than 9,000 employees and invested $4 billion in developing new nuclear manufacturing and business operations. The Shaw-Westinghouse facility alone will generate 2,900 jobs—an economic horn of plenty for local officials. In this case, Louisiana Gov. Bobby Jindal said “we know that we have to invest more in alternative domestic energy sources like wind, ethanol, solar and nuclear energy. This announcement does not only represent new jobs and a new, vibrant economic engine in our state, but also shows that Louisiana is harnessing the future of the energy industry and the most innovative thinking of the next generation.”¶ Tim Kaine said his state has “unique attributes” to position it as a leader in nuclear energy. After the Newport News project was announced last October, the local newspaper focused on the single most important fact for local workers: Northrop Grumman + AREVA = 540 good jobs for Newport News. ¶ Engineering and manufacturing jobs are green jobs in today’s market and foretell the significant potential in the energy sector for stimulating the U.S. economy. ¶ The U.S. electricity industry faces an unprecedented challenge. It must invest up to $2 trillion in new power generation and distribution technology to meet an expected 25 percent increase in demand by 2030. And it must do so assuming that there will be a price on carbon, currently a byproduct of 70 percent of the nation’s electricity production capability. Of the emission-free sources, nuclear energy dominates today and has the most potential for large-scale expansion. ¶ Nuclear energy must play an important role in helping America succeed in this challenge. Expanding nuclear power will help reduce the threat of global warming, meet the rising demand for electricity and stimulate the U.S. economy. ¶ ¶ Building a new generation of nuclear plants will create tens of thousands of dependable, good-paying jobs for American workers. Whether building new carbon-free nuclear power plants or a “smart” grid that will help use electricity more wisely, nuclear energy jobs are as green as any other low or non-carbon source of electricity.¶ A single nuclear plant will create 1,400 to 1,800 jobs during construction and 400 to 700 employees during the 60-year operating lifetime of the plant. Based on economic studies of 22 U.S. nuclear power plants, each year a new reactor will produce $430 million in local expenditures for goods, services and labor; generate more than $20 million in state and local tax revenue; and produce at least $75 million in federal tax payments. Construction of a new reactor also will provide a substantial boost to suppliers of commodities and manufacturers of hundreds of components.¶ An abundant supply of electricity is critical to preserving and advancing our quality of life, standard of living and national security. Affordable, reliable electricity is vital for America’s long-term economic success, but building all new sources of electricity is capital intensive. The pace of new nuclear plant development, and of job creation in this sector of the economy, is largely dictated by the financing support available from the federal government – particularly in today’s tight credit markets. ¶ Limited financial stimulus for wind, solar and advanced nuclear plants is appropriate to jumpstart this economic shift. For example, the federal loan guarantee program passed by Congress for carbon-free energy sources will lower the cost of building new electricity supplies that will in turn keep consumer costs down. Best of all, it doesn’t use U.S. taxpayer money. Those companies that will pursue loan guarantees also will pay the fees associated with implementing the program. ¶ However, $18.5 billion in loan guarantee volume approved by Congress in 2005 was swamped by applications from 17 companies seeking a total of $122 billion in loan guarantees for new nuclear plant projects. The loan guarantee program alone doesn’t address the real need for $2 trillion in financing for the electricity sector over the next 15 years. ¶ The economic and energy challenges facing our nation are daunting. We must have a national energy policy that develops carbon-free technologies, drives innovation to supply reliable electricity and creates jobs to help stimulate the U.S. economy. Nuclear energy is a vital part of the solution to these goals—producing 73 percent of all carbon-free electricity while creating tens of thousands of stable, high-paying jobs as part of a transition to a greener economy.

### Security K

#### Our interpretation is that debate should be a question of the aff plan versus a competitive policy option.

#### This is key to ground and predictability – infinite number of possible kritik alternatives or things the negative could reject explodes the research burden. That’s a voting issue.

#### State-centrism is the only way to produce human security and limit everyday injustice – material change should be preferred

-alternatives to the state will not be democratically accountable – can’t give content to rights claims

-key to value to life

McCormack, Lecturer in IR at the University of Leicester, ‘10

[Tara, PhD in IR from the University of Westminster, 10, “Critique, Security and Power: The political limits to emancipatory approaches”, pg. 140-142]

Critical and emancipatory theorists fail to understand that there must be a political content to emancipation and new forms of social organisation. Critical theorists seek emancipation and argue for new forms of political community above and beyond the state, yet there is nothing at the moment beyond the state that can give real content to those wishes. There is no democratic world government and it is simply nonsensical to argue that the UN, for example, is a step towards global democracy. Major international institutions are essentially controlled by powerful states. To welcome challenges to sovereignty in the present political context cannot hasten any kind of more just world order in which people really matter (to paraphrase Lynch). Whatever the limitations of the state, and there are many, at the moment the state represents the only framework in which people might have a chance to have some meaningful control over their lives. Critical theorists who argue for more cosmopolitan international frameworks of universal human rights or more global democratic organisations in order to emancipate the oppressed fail to understand that in the current political context they are arguing for fictional rights and communities. In this context, these rights can only be given at the behest of a more powerful state or international organisation. This, however, leads to a relationship between the rights recipient and the rights giver which is not a political relationship of control and accountability, but one closer, as Emma Rothschild has perceptively argued, to charity (Rothschild, 1995). In order to illustrate this problem from another angle, let us consider briefly the concept of Children’s Rights (this example is taken from Norman Lewis, 1998) or gender inequality. Without a doubt in many parts of the world children and women suffer greatly and have many unfair burdens upon them. It may seem therefore that the UN Convention on Children’s Rights, for example, or a framework of universal human rights codified in international law might be seen as a good and progressive thing in order to decrease inequality and empower women and children. Certainly for many critical and emancipatory theorists, as we have seen, the emerging rights regime is part of a potentially more just world order. However, as James Heartfield (1996) has argued, this is to understand that rights are a purely legal matter, rather than a product of prior social and political struggle which is then given legal form. Rights derive from subjects who are capable of exercising them and giving content to them (Heartfield, 1996; Lewis, 1998). Without the social and political struggle and the development of the rights-bearing individual who gives the legal rights their content, rights are fictions. Of course in reality a person in Britain (for example) does not directly exercise his or her rights, rather they are enforced by the existing state. If, for example, a women is denied employment because of her gender this infringes her rights. These rights are codified in state law. She may then go to court in order to force the company to abide by the law and her rights will be upheld. This is not, however, simply an esoteric point for political theorists but one with major implications for people. If we return to the example of the UN Convention on Children’s Rights we can begin to see what the problematic implications of rights without content are. Children’s rights cannot be exercised by children, they do not have the capacity, they are dependent upon other people in order to survive. Their rights are fictions which must be exercised on behalf of them (Lewis, 1998: 93). In reality this means that the state, for example, is empowered here, not the child. In the broader context of contemporary international relations it tends to mean that the developing country in which children’s rights are seen to be lacking (for example a country in which child labour is common) is subject to greater intervention and regulation from a more ‘enlightened’ international community. This also has the effect of turning what are essentially consequences of serious poverty and a low level of development into problems of law and morality. Again, more powerful ‘enlightened’ states are empowered to intervene and regulate developing states in the name of international law and human rights (Lewis, 1998: 95–98). As the problems, however, are not matters of law but of development they cannot be resolved through law. Not only is state sovereignty eroded but the idea of law also. We could also consider the problem of gender inequality in a developing state. A woman in Afghanistan, for example, clearly does not have the civil rights that a woman in another state might have. Yet of course, these are rights that she cannot claim against the government of her state, or rather the government cannot give content to these rights as the government’s control in the case of Afghanistan does not go much further than Kabul. Rather, the only way in which there may be a way for her to have these rights would be through the intervention of another state (indeed women’s rights formed part of the rationale for the military intervention in Afghanistan) whether military or tied to aid. Here, there will be no political relationship between the Afghan woman and, for example, NATO. There will be no mechanism of control and accountability for the woman, her rights are in the gift of power external forces and therefore not rights that can empower as they are not controlled by her. Friedrich Kratochwil argues that critical theory has to address ‘what types of constitutive understanding authorise particular practices and this creates specific types of authority’ (2007: 36). I argue that critical and emancipatory approaches have a certain unrealised constitutive understanding which is abstract and idealised, leading ultimately to forms of power and political practice that are disempowering. Critical theorists separate the rights bearer from the rights claimant. In the absence of any constitutive body that can give content to those rights or even agreed norms that can derive from that political body, these rights are at best meaningless and at worst empower precisely those practices which critical theorists wish to resolve. It is in this respect that in contemporary context critical and emancipatory approaches reproduce and authorise the constitutive particular practices of contemporary powers.

#### Perm – combination of security concerns and a realization of their limits helps on the ground and stops escalation.

**Newman**, Senior Lecturer IR at Birmingham University, ‘10

[Edward, “Peacebuilding as Security in ‘Failing’ and Conflict Prone States”, Journal of Intervention and Statebuilding 4:3, p. 318-320, RSR]

Twenty-first century peacebuilding activities reflect evolving perceptions\*/and constructions\*/of the nature of, and threats to, international and national security. Weak and conflict-prone states are widely regarded, especially in policy circles, as a\*/possibly even the\*/key security threat, and so international peacebuilding activities in part represent a response to this. Therefore, peacebuilding has as a core objective the stabilization of armed conflict and state failure in order to prevent or contain its international repercussions. There are clearly some negative consequences to this in terms of the nature and impact of peacebuilding activities. However, it may be necessary to accept the ‘reality’ of conservative visions of peacebuilding oriented around the promotion of stability, despite the limitations of this, in order to achieve the reduction of violent conflict. Critical challenges to contemporary peacebuilding from a normative perspective are valid, but they are based upon an inaccurate assumption about the true nature of peacebuilding. Debates and activities of contemporary peacebuilding reflect competing visions and interests and the securitization of peacebuilding exposes these internal inconsistencies and tensions within the concept (see for example Heathershaw and Lambach 2008). There are two broad and opposing approaches (Newman 2009c). Transformational peacebuilding emphasizes the resolution of conflict, which may include addressing underlying sources of violence. This approach is premised upon the assumption that durable peace and stability rest upon the achievement of positive peace and giving free expression to local voices, desires and forms of politics. Transformational peacebuilding is built upon bottom-up community initiatives and engages with local institutions, customs and norms. It also accommodates pressures for social change as a part of resolving the root causes of conflict and addressing human security needs. Transformational peacebuilding promotes social justice and accountability for past human rights abuses. For these reasons, in the academic world at least, transformational approaches come closest to advocating emancipation as an objective of peacebuilding and conflict resolution. This approach to peacebuilding in theory does not reflect a universalizing vision\*/in contrast to liberal approaches\*/and is more likely to be context-oriented and centred around community needs. It involves engagement with civil society actors and a more community-focused approach which cultivates moderate peace leaders. Kaldor (2006, p. 123) describes this as a ‘cosmopolitan’ approach: ‘a positive political vision, embracing tolerance, multiculturalism, civility and democracy’. According to this, peacebuilding processes must therefore seek opportunities to restore ‘legitimate political authority’ and the input of progressive, non-sectarian voices from below, to encourage the ‘islands of civility’ amongst reasonable people to talk and make compromises. Advocates of transformational peacebuilding are inevitably critical of top-down approaches, claiming that they merely perpetuate an unjust ‘negative’ peace. Balancing top-down and bottom-up approaches involves a balance between recognizing the realities of power and aspiring to cosmopolitan aspirations and a positive peace. In contrast, realist peacebuilding entails containing or repressing conflict in the interests of international peace and stability in general or particular hegemonic interests. Although it may use the language of peace, this approach is primarily concerned with international systemic stability and addressing the international threats to security inherent in civil war and state failure. It does not necessarily seek to resolve underlying sources of conflict; advocates of this approach are sceptical of international efforts to achieve societal change. Realist peacebuilding recognizes power as the ‘facts on the ground’ and therefore engages with local power-holders as the key to achieving peace and stability. In keeping with this, realist peacebuilding prioritizes the (re)construction of strong states\*/rather than open, participatory governance or social transformation\*/as the means of containing conflict and promoting stability. Justice, welfare and the resolution of the underlying sources of conflict (although usually desirable) are pursued only insofar as they are relevant to maintaining stability.

#### Vague alternatives are bad – kill aff ground and could result in the aff. Makes us argue against ourselves. Voter for fairness.

#### Alt fails – we can’t transcend purely empirical ideas

Bartok 84 (Philip J. Dept of Phil U of Notre Dame FOUCAULT’S ANALYTIC OF FINITUDE AND THE “DEATH” OF PHENOMENOLOGY) TBC 7/8/10

Foucault’s line of argument here is most plausibly understood as an internal objection to Husserl’s approach: Transcendental phenomenology fails to achieve the (transcendental) aims set out for it by Husserl himself. The transcendental reduction fails insofar as it merely effects something like a shift of vision, attempting to assign transcendental significance to what are, by Husserl’s own admission, merely empirical contents. If Foucault’s archaeological analysis of the character of the modern episteme is adequate, this failure was inevitable given the fact that Husserl’s project was configured by an episteme characterized by the analytic of finitude. Given the problematic dual status of “man” under this episteme, Husserlian phenomenology cannot help but devolve into an anthropology.

#### **SQUO treats atomic energy as an standing reserve, concealing the problems with waste. Plan solves that.**

Rawles, Lecturer at the University of Edinburgh, 2k

[Richard, “Coyote Learns to Glow”, Part of “Learning to Glow: A Nuclear Reader”, RSR]

Humans, having gathered uranium from the New Mexican desert not all that far from Yucca Mountain, have harnessed the energy within the atom, for commercial and security purposes, in effect by “tricking" nature out of its secret power. We are aided in our industry by this supposedly "free” energy source. As Martin Heidegger observed, we regard the natural world as a “standing reserve:’ there for the plundering-the military metaphor is more than apt in this case. Having stolen from nature its hidden fire, we delude ourselves into believing that there’s no reckoning, no balancing of accounts, despite even the scientific evidence, which tells us there are no free meals in nature’s unforgiving cycles. We are burdened by the waste from this virtual cornucopia, much as the Greeks of the early classical period projected into Pandora's box of woes the burdens of civilizing fire—its destructive aspects, along with the rituals needed to maintain the fire.

#### No impact – threat construction isn’t sufficient to cause wars

Kaufman, Prof Poli Sci and IR – U Delaware, ‘9

(Stuart J, “Narratives and Symbols in Violent Mobilization: The Palestinian-Israeli Case,” *Security Studies* 18:3, 400 – 434)

Even when hostile narratives, group fears, and opportunity are strongly present, war occurs only if these factors are harnessed. Ethnic narratives and fears must combine to create significant ethnic hostility among mass publics. Politicians must also seize the opportunity to manipulate that hostility, evoking hostile narratives and symbols to gain or hold power by riding a wave of chauvinist mobilization. Such mobilization is often spurred by prominent events (for example, episodes of violence) that increase feelings of hostility and make chauvinist appeals seem timely. If the other group also mobilizes and if each side's felt security needs threaten the security of the other side, the result is a security dilemma spiral of rising fear, hostility, and mutual threat that results in violence. A virtue of this symbolist theory is that symbolist logic explains why ethnic peace is more common than ethnonationalist war. Even if hostile narratives, fears, and opportunity exist, severe violence usually can still be avoided if ethnic elites skillfully define group needs in moderate ways and collaborate across group lines to prevent violence: this is consociationalism.17 War is likely only if hostile narratives, fears, and opportunity spur hostile attitudes, chauvinist mobilization, and a security dilemma.

#### Turns the K – strategic planning to prevent crisis escalation is the only way out of the security dilemma – alt fails in practice.

Liotta, Jerome E. Levy Chair of Economic Geography and National Security at the U. S. Naval War College, ‘5

[PH, Security Dialogue 36. 1, “Through the Looking Glass: Creeping Vulnerabilities and the Reordering of Security, pg. 65-6]

Although it seems attractive to focus on exclusionary concepts that insist on desecuritization, privileged referent objects, and the ‘belief’ that threats and vulnerabilities are little more than social constructions (Grayson, 2003), all these concepts work in theory but fail in practice. While it may be true that national security paradigms can, and likely will, continue to dominate issues that involve human security vulnerabilities – and even in some instances mistakenly confuse ‘vulnerabilities’ as ‘threats’ – there are distinct linkages between these security concepts and applications. With regard to environ mental security, for example, Myers (1986: 251) recognized these linkages nearly two decades ago: National security is not just about fighting forces and weaponry. It relates to water-sheds, croplands, forests, genetic resources, climate and other factors that rarely figure in the minds of military experts and political leaders, but increasingly deserve, in their collectivity, to rank alongside military approaches as crucial in a nation’s security. Ultimately, we are far from what O’Hanlon & Singer (2004) term a global intervention capability on behalf of ‘humanitarian transformation’. Granted, we now have the threat of mass casualty terrorism anytime, anywhere – and states and regions are responding differently to this challenge. Yet, the global community today also faces many of the same problems of the 1990s: civil wars, faltering states, humanitarian crises. We are nowhere closer to addressing how best to solve these challenges, even as they affect issues of environmental, human, national (and even ‘embedded’) security. Recently, there have been a number of voices that have spoken out on what the International Commission on Intervention and State Sovereignty has termed the ‘responsibility to protect’:10 the responsibility of some agency or state (whether it be a superpower such as the United States or an institution such as the United Nations) to enforce the principle of security that sovereign states owe to their citizens. Yet, the creation of a sense of urgency to act – even on some issues that may not have some impact for years or even decades to come– is perhaps the only appropriate first response. The real cost of not investing in the right way and early enough in the places where trends and effects are accelerating in the wrong direction is likely to be decades and decades of economic and political frustration – and, potentially, military engagement. Rather than justifying intervention (especially military), we ought to be justifying investment. Simply addressing the immensities of these challenges is not enough. Radical improvements in public infrastructure and support for better governance, particularly in states and municipalities (especially along the Lagos–Cairo–Karachi–Jakarta arc), will both improve security and create the conditions for shrinking the gap between expectations and opportunity. A real debate ought to be taking place today. Rather than dismissing ‘alternative’ security foci outright, a larger examination of what forms of security are relevant and right among communities, states, and regions, and which even might apply to a global rule-set – as well as what types of security are not relevant – seems appropriate and necessary. If this occurs, a truly remarkable tectonic shift might take place in the conduct of international relations and human affairs. Perhaps, in the failure of states and the international community to respond to such approaches, what is needed is the equivalent of the 1972 Stockholm conference that launched the global environmental movement and estab lished the United Nations Environmental Programme (UNEP), designed to be the environmental conscience of the United Nations. Similarly, the UN Habitat II Conference in Istanbul in 1996 focused on the themes of finding adequate shelter for all and sustaining human development in an increas ingly urbanized world. Whether or not these programs have the ability to influence the future’s direction (or receive wide international support) is a matter of some debate. Yet, given that the most powerful states in the world are not currently focusing on these issues to a degree sufficient to produce viable implementation plans or development strategies, there may well need to be a ‘groundswell’ of bottom-up pressure, perhaps in the form of a global citizenry petition to push the elusive world community toward collective action. Recent history suggests that military intervention as the first line of response to human security conditions underscores a seriously flawed approach. Moreover, those who advocate that a state’s disconnectedness from globalization is inversely proportional to the likelihood of military (read: US) intervention fail to recognize unfolding realities (Barnett, 2003, 2004). Both middle-power and major-power states, as well as the international com munity, must increasingly focus on long-term creeping vulnerabilities in order to avoid crisis responses to conditions of extreme vulnerability. Admittedly, some human security proponents have recently soured on the viability of the concept in the face of recent ‘either with us or against us’ power politics (Suhrke, 2004). At the same time, and in a bit more positive light, some have clearly recognized the sheer impossibility of international power politics continuing to feign indifference in the face of moral categories. As Burgess (2004: 278) notes, ‘for all its evils, one of the promises of globalization is the unmasking of the intertwined nature of ethics and politics in the complex landscape of social, economic, political and environmental security’. While it is still not feasible to establish a threshold definition for human security that neatly fits all concerns and arguments (as suggested by Owen, 2004: 383), it would be a tragic mistake to assume that national, human, and environmental security are mutually harmonious constructs rather than more often locked in conflictual and contested opposition with each other. Moreover, aspects of security resident in each concept are indeed themselves embedded with extraordinary contradictions. Human security, in particular, is not now, nor should likely ever be, the mirror image of national security. Yet, these contradictions are not the crucial recognition here. On the contrary, rather than focusing on the security issues themselves, we should be focusing on the best multi-dimensional approaches to confronting and solving them. One approach, which might avoid the massive tidal impact of creeping vulnerabilities, is to sharply make a rudder shift from constant crisis intervention toward strategic planning, strategic investment, and strategic attention. Clearly, the time is now to reorder our entire approach to how we address – or fail to address – security.

#### Turn – traditional security studies *incorrectly deflate* threats – the affirmative is necessary to reverse this trend.

**Schweller 4**

[Randall L. Schweller, Associate Professor in the Department of Political Science at The Ohio State University, “Unanswered Threats A Neoclassical RealistTheory of Underbalancing,” International Security 29.2 (2004) 159-201, Muse]

Despite the historical frequency of underbalancing, little has been written on the subject. Indeed, Geoffrey Blainey's memorable observation that for "every thousand pages published on the causes of wars there is less than one page directly on the causes of peace" could have been made with equal veracity about overreactions to threats as opposed to underreactions to them.92 Library shelves are filled with books on the causes and dangers of exaggerating threats, ranging from studies of domestic politics to bureaucratic politics, to political psychology, to organization theory. By comparison, there have been few studies at any level of analysis or from any theoretical perspective that directly explain why states have with some, if not equal, regularity underestimated dangers to their survival. There may be some cognitive or normative bias at work here. Consider, for instance, that there is a commonly used word, paranoia, for the unwarranted fear that people are, in some way, "out to get you" or are planning to do oneharm. I suspect that just as many people are afflicted with the opposite psychosis: the delusion that everyone loves you when, in fact, they do not even like you. Yet, we do not have a familiar word for this phenomenon. Indeed, I am unaware of any word that describes this pathology (hubris and overconfidence come close, but they plainly define something other than what I have described). That noted, international relations theory does have a frequently used phrase for the pathology of states' underestimation of threats to their survival, the so-called Munich analogy. The term is used, however, in a disparaging way by theorists to ridicule those who employ it. The central claim is that the naïveté associated with Munich and the outbreak of World War II has become an overused and inappropriate analogy because few leaders are as evil and unappeasable as Adolf Hitler. Thus, the analogy either mistakenly causes leaders [End Page 198] to adopt hawkish and overly competitive policies or is deliberately used by leaders to justify such policies and mislead the public. A more compelling explanation for the paucity of studies on underreactions to threats, however, is the tendency of theories to reflect contemporary issues as well as the desire of theorists and journals to provide society with policyrelevant theories that may help resolve or manage urgent security problems. Thus, born in the atomic age with its new balance of terror and an ongoing Cold War, the field of security studies has naturally produced theories of and prescriptions for national security that have had little to say about—and are, in fact, heavily biased against warnings of—the dangers of underreacting to or underestimating threats. After all, the nuclear revolution was not about overkill but, as Thomas Schelling pointed out, speed of kill and mutual kill.93 Given the apocalyptic consequences of miscalculation, accidents, or inadvertent nuclear war, small wonder that theorists were more concerned about overreacting to threats than underresponding to them. At a time when all of humankind could be wiped out in less than twenty-five minutes, theorists may be excused for stressing the benefits of caution under conditions of uncertainty and erring on the side of inferring from ambiguous actions overly benign assessments of the opponent's intentions. The overwhelming fear was that a crisis "might unleash forces of an essentially military nature that overwhelm the political process and bring on a war thatnobody wants. Many important conclusions about the risk of nuclear war, and thus about the political meaning of nuclear forces, rest on this fundamental idea."94 Now that the Cold War is over, we can begin to redress these biases in the literature. In that spirit, I have offered a domestic politics model to explain why threatened states often fail to adjust in a prudent and coherent way to dangerous changes in their strategic environment. The model fits nicely with recent realist studies on imperial underand overstretch. Specifically, it is consistent with Fareed Zakaria's analysis of U.S. foreign policy from 1865 to 1889, when, he claims, the United States had the national power and opportunity to expand but failed to do so because it lacked sufficient state power (i.e., the state was weak relative to society).95 Zakaria claims that the United States did [End Page 199] not take advantage of opportunities in its environment to expand because it lacked the institutional state strength to harness resources from society that were needed to do so. I am making a similar argument with respect to balancing rather than expansion: incoherent, fragmented states are unwilling and unable to balance against potentially dangerous threats because elites view the domestic risks as too high, and they are unable to mobilize the required resources from a divided society. The arguments presented here also suggest that elite fragmentation and disagreement within a competitive political process, which Jack Snyder cites as an explanation for overexpansionist policies, are more likely to produce underbalancing than overbalancing behavior among threatened incoherent states.96 This is because a balancing strategy carries certain political costs and risks with few, if any, compensating short-term political gains, and because the strategic environment is always somewhat uncertain. Consequently, logrolling among fragmented elites within threatened states is more likely to generate overly cautious responses to threats than overreactions to them. This dynamic captures the underreaction of democratic states to the rise of Nazi Germany during the interwar period.97 In addition to elite fragmentation, I have suggested some basic domestic-level variables that regularly intervene to thwart balance of power predictions.

#### Their fears of epistemological bias are unfounded and exaggerated – *even if* our claims aren’t perfect, *they are likely accurate* and wholesale rejection is the worst approach\*

Martin, Professor of Geography at Cambridge, ‘1

[Ron, “Geography and public policy: the case of the missing agenda”, Progress in Human Geography, 25: 2, 2001

<http://geography.fullerton.edu/550/public%20policy.pdf>, RSR]

A second source of the prejudice against policy study, however, is the charge that it all too readily becomes hijacked or subverted by the organizations, research grant bodies and government departments that commission and fund it. The complaint is that through their funding, and their selection and assessment procedures, these institutions set the agenda, define the issues, control access to data and even influence the nature of policy research. After all, critics argue, no government or other policy-making body is likely to commission or welcome research which it believes could be strongly critical of its policy programmes. In this sense, it is claimed, government-funded policy research is likely to be compromised in its scope and orientation from the very start. At the same time, attempts by government and research funding agencies to define what are ‘socially relevant’ (or even worse, ‘socially useful’) fields of research are seen as prone to bias or even blatant instrumentalism (see Johnston, 1997, on a related point). To compound matters, the complaint goes, research that is critical of government policy or runs counter to what the government wants to hear, is either ignored or may even be used to attack the academics who produced it. For many, therefore, policy studies threaten the very independence of interest, thought and method that is the hallmark of academic research. As Harvey (1974) and Leach (1974) bemoaned, in the earlier debate on geography and policy referred to above, the fear is that public policy and other social-problem orientated research simply becomes subservient to the state, and thereby serves to preserve and strengthen the status quo. Few would deny the reality of these problems, but they can also be exaggerated and too easily used as an excuse not to engage in policy research at all. Public policy research does not mean the surrender of intellectual independence and integrity. It does not mean that research becomes subservient to the particular political interests of the state. What § Marked 14:43 § it does mean, however, is that to be persuasive, research has to be relevant and practical and, above all, backed up by persuasive empirical investigation and clear and logical argument. Policy-makers are less able to ignore or reject policy research – even if it is highly critical of policies – if that research is well founded methodologically and empirically. And it is also easier to shift policy-makers’ views if criticism is constructive, that is accompanied with positive suggestions for improving or changing policy. Taking issue with, and winning over, policy-makers is not easy, but is precisely part of the reason why this sort of academic activity needs to be undertaken. To engage in this activity, however, geographers need to expunge the ‘purity’ versus ‘policy’ mentality that permeates the discipline. They need to elevate the academic quality, and hence the status, of policy-relevant research. And they also need to identify where they stand with respect to the key issues in terms of which public policies should be judged (social equity and inclusion, social justice, citizenship, democracy, and so on), and how ‘geography’ and ‘place’ matter for the conduct and content of policy discourse.

## 1AR

### Warming

#### CO2 fert is temporary and offset by negative climate effects

Hatfield 11 (J.L. Hatfield, Laboratory Director, National Laboratory for Agriculture and the Environment; K.J. Boote, Agronomy Department, University of Florida; B.A. Kimball, USDA-ARS, U.S. Arid-Land Agricultural Research Center; L.H. Ziska, USDA Crop Systems and Global Change Laboratory; R.C. Izaurralde, Joint Global Change Research Institute, Pacific Northwest National Laboratory, University of Maryland; D.R. Ort, USDA/ARS, Photosynthesis Research Unit, University of Illinois; A. M. Thomson, Joint Global Change Research Institute, Pacific Northwest National Laboratory, University of Maryland; David W. Wolfe, Department of Horticulture, Cornell University, 2011, “Climate Impacts on Agriculture: Implications for Crop Production,” Agronomy Journal, Volume 103, Issue 2)

Climate change, either as increasing trends in temperature, CO2, precipitation (decreasing as well as increasing), and/or O3, will have impacts on agricultural systems. Production of annual and perennial crops will be affected by changes in the absolute values of these climatic variables and/or increased variation. Episodic temperature changes exceeding the thresholds during the pollination stage of development could be quite damaging to crop production because of the sensitivity of crop plants to temperature extremes during this growth stage. These changes coupled with variable precipitation that places the plant under conditions of water stress would exacerbate the temperature effects. Warmer temperatures during the night, especially during the reproductive period, will reduce fruit or grain size because the rapid rate of development and increased respiration rates. A recent analysis by Ko et al. (2010), using the CERES–Wheat 4.0 module in the RZWQM2 model, evaluated the interactions of increasing CO2 obtained from a FACE experiment along with temperature, water, and N. They found the effects of water and N were greater than CO2 effects on biomass and yield and that temperature effects offset the CO2 effects. These results further confirm the concept that there are counterbalancing effects from different cli- mate variables and that development of adaptation or mitigation strategies will have to account for the combined effects of climate variables on crop growth, development, and yield. In an effort to examine potential solutions to low yields in sub-Saharan Africa, Laux et al. (2010) evaluated planting dates under climate change scenarios to evaluate the effect of increasing CO2 and higher temperature on groundnut (peanut) and maize. They found the positive effect of CO2 would offset the temperature response in the next 10 to 20 yr but would be overcome by higher temperatures by 2080. Changing planting dates were beneficial for the driest locations because of the more effective use of precipitation and avoidance of high temperature stresses. Both of these types of analyses will have to be conducted to evaluate potential adaptation strategies for all cropping regions. Increases in CO2 concentrations offer positive impacts to plant growth and increased WUE. However, these positive impacts may not fully mitigate crop losses associated with heat stress, increases in evaporative demand, and/or decreases in water availability in some regions. The episodic variation in extremes may become the larger impact on plant growth and yield. To counteract these effects will require management systems that offer the largest degree of resilience to climatic stresses as possible. This will include the development of management systems for rainfed environments that can store the maximum amount of water in the soil profile and reduce water stress on the plant during critical growth periods.

#### Best studies prove that overall yield decreases.

Ainsworth and Ort 10 (Elizabeth A. Ainsworth and Donald R. Ort, Global Change and Photosynthesis Research Unit, United States Department of Agriculture Agricultural Research Service, October 2010, “How Do We Improve Crop Production in a Warming World?,” Plant Physiology, Volume 154, Number 2, online)

Future agricultural production will encounter multifaceted challenges from global climate change. Carbon dioxide (CO2) and other greenhouse gases are accumulating in the atmosphere at unprecedented rates, causing increased radiative forcing (Le Quéré et al., 2009; Shindell et al., 2009). Continued emissions of greenhouse gases will increase annual temperatures by 2.5°C to 4.3°C in important crop-growing regions of the world by 2080 to 2099, according to the Intergovernmental Panel on Climate Change (IPCC) A1B scenario (Christensen et al., 2007). Growing season temperatures are expected to warm more than the annual averages, with reduced precipitation expected to accompany higher temperatures in some regions. Additionally, heat waves are expected to increase in frequency, intensity, and duration (Tebaldi et al., 2006; Christensen et al., 2007), and end-of-century growing season temperatures in the tropics and subtropics may exceed even the most extreme seasonal temperatures measured to date (Battisti and Naylor, 2009). Despite these dramatic predictions for rising global temperatures and extreme temperature events, the latest IPCC assessment report predicts that adaptation of agriculture will result in increased yields of cereal crops (maize [Zea mays], wheat [Triticum spp.], and rice [Oryza sativa]) in mid- to high-latitude regions with modest increases in temperature across a range of CO2 concentrations and precipitation changes (Easterling et al., 2007). With warming temperatures of 1°C to 3°C, yields at lower latitudes are predicted to decrease, although global food production is predicted to increase (Easterling et al., 2007). The IPCC projections assume that yield improvements from the latter half of the 20th century will continue into the future; however, based on historical temperature-crop yield relationships, potential ceilings to crop yields, and limitations to expansion of agricultural lands, that assumption may not be sound (Long and Ort, 2010). In fact, the relative rates of yield increase for all of the major cereal crops are already declining (Fischer and Edmeades, 2010). In a global analysis of crop yields from 1981 to 2002, there was a negative response of wheat, maize, and barley (Hordeum vulgare) yields to rising temperature, costing an estimated $5 billion per year (Lobell and Field, 2007). An analysis of maize and soybean (Glycine max) production in the northern Corn Belt region of the United States found that productivity was adversely affected by rising growing season temperatures from 1976 to 2006 (Kucharik and Serbin, 2008). The response of maize and soybean to temperature is also nonlinear, and the decline in yields above the temperature optimum is significantly steeper than the incline below it (Schlenker and Roberts, 2009). Based on the nonlinearity of the temperature response, U.S. maize and soybean yields were predicted to decrease by 30% to 46% before the end of the century under the IPCC scenario with the slowest warming trend (Schlenker and Roberts, 2009). In addition to these historical trends, record crop yield losses were reported in 2003, when Europe experienced a heat wave with July temperatures up to 6°C above average and annual precipitation 50% below average (Ciais et al., 2005). Such extreme events are not well characterized in the IPCC assessment simulations (Easterling et al., 2007). Therefore, increased global temperatures and more frequent temperature extremes will greatly challenge agriculture in this century. Here, we identify regional priorities and biological targets for adaptation of agriculture to rising temperature.

#### Ecosystems are on the brink now, and are key to sustaining life

Black 10 (Richard Black, environment correspondent for BBC, October 18, 2010, “'Ten years' to solve nature crisis, UN meeting hears,” http://goo.gl/4l6c)

The two-week gathering aims to set new targets for conserving life on Earth. Japan's Environment Minister Ryo Matsumoto said biodiversity loss would become irreversible unless curbed soon. Much hope is being pinned on economic analyses showing the loss of species and ecosystems is costing the global economy trillions of dollars each year. Ahmed Djoghlaf, executive secretary of the UN Convention on Biological Diversity (CBD), described the meeting in Nagoya, Japan, as a "defining moment" in the history of mankind. "[Buddhist scholar] Daisetsu Teitaro Suzuki said 'the problem of nature is the problem of human life'. Today, unfortunately, human life is a problem for nature," he told delegates in his opening speech. Referring to the target set at the UN World Summit in 2002, he said: "Let's have the courage to look in the eyes of our children and admit that we have failed, individually and collectively, to fulfil the Johannesburg promise made by 110 heads of state to substantially reduce the rate of loss of biodiversity by 2010. "Let us look in the eyes of our children and admit that we continue to lose biodiversity at an unprecedented rate, thus mortgaging their future." Earlier this year, the UN published a major assessment - the Global Biodiversity Outlook - indicating that virtually all trends spanning the state of the natural world were heading downwards, despite conservation successes in some regions. “ Start Quote We are about to reach a threshold beyond which biodiversity loss will become irreversible” Ryo Matsumoto Japanese environment minister It showed that loss and degradation of forests, coral reefs, rivers and other elements of the natural world was having an impact on living standards in some parts of the world - an obvious example being the extent to which loss of coral affects fish stocks. In his opening speech, Mr Matsumoto suggested impacts could be much broader in future. "All life on Earth exists thanks to the benefits from biodiversity in the forms of fertile soil, clear water and clean air," he said. "We are now close to a 'tipping point' - that is, we are about to reach a threshold beyond which biodiversity loss will become irreversible, and may cross that threshold in the next 10 years if we do not make proactive efforts for conserving biodiversity." Climate clouds In recent years, climate change has dominated the agenda of environmental politics. And Achim Steiner, executive director of the UN Environment Programme, suggested there is a lack of understanding at political levels of why tackling biodiversity is just important. "This is the only planet in this Universe that is known to have this kind of life," he said. "This fact alone should give us food for thought, But more importantly, we are destroying the very foundations that sustain life on this planet; and yet when we meet in these intergovernmental fora, society somehow struggles to understand and appreciate what it is what we're trying to do here, and why it matters."

### Coal

#### Empirically proven – US doesn’t matter

Christopher J. Fettweis (Professor of national security affairs @ U.S. Naval War College) 2010 “Threat and Anxiety in US Foreign Policy,” Survival, Volume 52, Issue 2 April 2010 , pages 59 – 82

One potential explanation for the growth of global peace can be dismissed fairly quickly: US actions do not seem to have contributed much. The limited evidence suggests that there is little reason to believe in the stabilising power of the US hegemon, and that there is no relation between the relative level of American activism and international stability. During the 1990s, the United States cut back on its defence spending fairly substantially. By 1998, the United States was spending $100 billion less on defence in real terms than it had in 1990, a 25% reduction.29 To internationalists, defence hawks and other believers in hegemonic stability, this irresponsible 'peace dividend' endangered both national and global security. 'No serious analyst of American military capabilities', argued neo-conservatives William Kristol and Robert Kagan in 1996, 'doubts that the defense budget has been cut much too far to meet America's responsibilities to itself and to world peace'.30 And yet the verdict from the 1990s is fairly plain: the world grew more peaceful while the United States cut its forces. No state seemed to believe that its security was endangered by a less-capable US military, or at least none took any action that would suggest such a belief. No militaries were enhanced to address power vacuums; no security dilemmas drove insecurity or arms races; no regional balancing occurred once the stabilis-ing presence of the US military was diminished. The rest of the world acted as if the threat of international war was not a pressing concern, despite the reduction in US military capabilities. Most of all, the United States was no less safe. The incidence and magnitude of global conflict declined while the United States cut its military spending under President Bill Clinton, and kept declining as the George W. Bush administration ramped the spending back up. Complex statistical analysis is unnecessary to reach the conclusion that world peace and US military expenditure are unrelated.