# michigan ap – nu prelims

# r1 neg v. concordia nw

## 1nc

### 1nc t

#### The aff’s not topical—the resolution says solar power, not energy—solar power is a specific term referring to electricity generation, which they don’t advocate

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Lee, this is a question I get often, and believe it is worth addressing. Solar "power" usually means converting the sun's rays (photons) to electricity. The solar technologies could be photovoltaics, or the various concentrating thermal technologies: solar troughs, solar dish/engines, and solar power towers. Solar "energy" is a more generic term, meaning any technology that converts the sun's energy into a form of energy—so that includes the aforementioned solar power technologies, but also solar thermal for water heating, space heating and cooling, and industrial process heat. Solar energy includes solar daylighting and even passive solar that uses building orientation, design and materials to heat and cool buildings. Now in the early 1980's, I was Political Director of the Solar Lobby, formed by the big nine national environmental groups, that embraced all solar technologies—which we viewed as wind, hydropower, and biomass, along with the long list of traditional solar conversion technologies. The thesis, which is correct, is that the sun contributes to growing plants, wind regimes, and evaporation and rain (hydropower), so that all the renewables are part of the solar family. Now, of course, most would argue that geothermal, and tidal and wave (effected by the gravitational force of the moon) are not solar, but we included these technologies as well.

### 1nc presumption

#### Vote neg on presumption—

#### A) The 1ac is a meaningless fig leaf for their discussion of self-destruction as it relates to Bataille’s notion of sovereignty—none of this is a reason to vote aff, and it means there’s no actual debate, only discussion.

#### B) Even if they win their critique of utility, you can capture that by reflexively voting neg—2ac clarification doesn’t substitute for the lack of 1ac advocacy.

#### C) Don’t do any work for them—if you have to infer meaning from sentences like “the scrutinized sun can be identified with mental ejaculation, foam on the lips, and an epileptic crisis” to discern an actual argument, you should also be willing to project all the neg reasons why this is philosophy babble against it.

### 1nc framework

#### The resolution indicates affs should advocate topical government change

**Ericson 3** (Jon M., Dean Emeritus of the College of Liberal Arts – California Polytechnic U., et al., The Debater’s Guide, Third Edition, p. 4)

The Proposition of Policy: Urging Future Action In policy propositions, each topic contains certain key elements, although they have slightly different functions from comparable elements of value-oriented propositions. 1. An agent doing the acting ---“The United States” in “The United States should adopt a policy of free trade.” Like the object of evaluation in a proposition of value, the agent is the subject of the sentence. 2. The verb should—the first part of a verb phrase that urges action. 3. An action verb to follow should in the should-verb combination. For example, should adopt here means to put a program or policy into action though governmental means. 4. A specification of directions or a limitation of the action desired. The phrase free trade, for example, gives direction and limits to the topic, which would, for example, eliminate consideration of increasing tariffs, discussing diplomatic recognition, or discussing interstate commerce. Propositions of policy deal with future action. Nothing has yet occurred. The entire debate is about whether something ought to occur. What you agree to do, then, when you accept the affirmative side in such a debate is to offer sufficient and compelling reasons for an audience to perform the future action that you propose.

#### Specific, limited resolutions ensure mutual ground which is key to sustainable controversy without sacrificing creativity or openness

**Steinberg & Freeley 8** \*Austin J. Freeley is a Boston based attorney who focuses on criminal, personal injury and civil rights law, AND \*\*David L. Steinberg , Lecturer of Communication Studies @ U Miami, Argumentation and Debate: Critical Thinking for Reasoned Decision Making pp45-

Debate is a means of settling differences, so there must be a difference of opinion or a conflict of interest before there can be a debate. If everyone is in agreement on a tact or value or policy, there is no need for debate: the matter can be settled by unanimous consent. Thus, for example, it would be pointless to attempt to debate "Resolved: That two plus two equals four," because there is simply no controversy about this statement. (Controversy is an essential prerequisite of debate. Where there is no clash of ideas, proposals, interests, or expressed positions on issues, there is no debate. In addition, debate cannot produce effective decisions without clear identification of a question or questions to be answered. For example, general argument may occur about the **broad topic** of illegal immigration. How many illegal immigrants are in the United States? What is the impact of illegal immigration and immigrants on our economy? What is their impact on our communities? Do they commit crimes? Do they take jobs from American workers? Do they pay taxes? Do they require social services? Is it a problem that some do not speak English? Is it the responsibility of employers to discourage illegal immigration by not hiring undocumented workers? Should they have the opportunity- to gain citizenship? Docs illegal immigration pose a security threat to our country? Do illegal immigrants do work that American workers are unwilling to do? Are their rights as workers and as human beings at risk due to their status? Are they abused by employers, law enforcement, housing, and businesses? I low are their families impacted by their status? What is the moral and philosophical obligation of a nation state to maintain its borders? Should we build a wall on the Mexican border, establish a national identification can!, or enforce existing laws against employers? Should we invite immigrants to become U.S. citizens? Surely you can think of many more concerns to be addressed by a conversation about the topic area of illegal immigration. Participation in this "debate" is likely to be emotional and intense. However, it is not likely to be productive or useful without focus on a particular question and identification of a line demarcating sides in the controversy. To be discussed and resolved effectively, controversies must be stated clearly. **Vague understanding** results in unfocused deliberation and poor decisions, frustration, and emotional distress, as evidenced by the failure of the United States Congress to make progress on the immigration debate during the summer of 2007.

Someone disturbed by the problem of the growing underclass of poorly educated, socially disenfranchised youths might observe, "Public schools are doing a terrible job! They are overcrowded, and many teachers are poorly qualified in their subject areas. Even the best teachers can do little more than struggle to maintain order in their classrooms." That same concerned citizen, facing a complex range of issues, might arrive at an unhelpful decision, such as "We ought to do something about this" or. worse. "It's too complicated a problem to deal with." Groups of concerned citizens worried about the state of public education could join together to express their frustrations, anger, disillusionment, and emotions regarding the schools, but without a focus for their discussions, they could easily agree about the sorry state of education **without** finding points of clarity or potential solutions. A gripe session would follow. But if a precise question is posed—such as "What can be done to improve public education?"—then a more profitable area of discussion is opened up simply by placing a focus on the search for a concrete solution step. One or more judgments can be phrased in the form of debate propositions, motions for parliamentary debate, or bills for legislative assemblies. The statements "Resolved: That the federal government should implement a program of charter schools in at-risk communities" and "Resolved: That the state of Florida should adopt a school voucher program" more clearly identify specific ways of dealing with educational problems in a manageable form, suitable for debate. They provide specific policies to be investigated and aid discussants in identifying points of difference.

To have a productive debate, which facilitates effective decision making by directing and placing limits on the decision to be made, the basis for argument should be clearly defined. If we merely talk about "homelessness" or "abortion" or "crime'\* or "global warming" we are likely to have an interesting discussion but not to establish profitable basis for argument. For example, the statement "Resolved: That the pen is mightier than the sword" is debatable, yet fails to provide much basis for clear argumentation. If we take this statement to mean that the written word is more effective than physical force for some purposes, we can identify a problem area: the comparative effectiveness of writing or physical force for a specific purpose.

Although we now have a general subject, we have not yet stated a problem. It is still too broad, too loosely worded to promote well-organized argument. What sort of writing are we concerned with—poems, novels, government documents, website development, advertising, or what? What does "effectiveness" mean in this context? What kind of physical force is being compared—fists, dueling swords, bazookas, nuclear weapons, or what? A more specific question might be. "Would a mutual defense treaty or a visit by our fleet be more effective in assuring Liurania of our support in a certain crisis?" The basis for argument could be phrased in a debate proposition such as "Resolved: That the United States should enter into a mutual defense treatv with Laurania." Negative advocates might oppose this proposition by arguing that fleet maneuvers would be a better solution. This is not to say that debates should completely avoid creative interpretation of the controversy by advocates, or that good debates cannot occur over competing interpretations of the controversy; in fact, these sorts of debates may be very engaging. The point is that debate is best facilitated by the guidance provided by **focus on a particular point of difference**, which will be outlined in the following discussion.

#### Two impacts:

#### 1. Decisionmaking skills—having to taking a stance in favor of the resolution is key to deliberative reasoning and pragmatic opportunity cost assessment—debate should not be purely academic discussion

**Gutmann and Thompson 1996** – \*president of Penn, former professor at Princeton, \*\* Alfred North Whitehead Professor of Political Philosophy at Harvard (Amy and Dennis, “Democracy and disagreement”, p. 1)

OF THE CHALLENGES that American democracy faces today, none is more formidable than the problem of moral disagreement. Neither the theory nor the practice of democratic politics has so far found an adequate way to cope with conflicts about fundamental values. We address the challenge of moral disagreement here by developing a conception of democracy that secures a central place for moral discussion in political life.

Along with a growing number of other political theorists, we call this conception deliberative democracy. The core idea is simple: when citizens or their representatives disagree morally, they should continue to reason together to reach mutually acceptable decisions. But the meaning and implications of the idea are complex. Although the idea has a long history, it is still in search of a theory. We do not claim that this book provides a comprehensive theory of deliberative democracy, but we do hope that it contributes toward its future development by showing the kind of delib-eration that is possible and desirable in the face of moral disagreement in democracies.

Some scholars have criticized liberal political theory for neglecting moral deliberation. Others have analyzed the philosophical foundations of deliberative democracy, and still others have begun to explore institutional reforms that would promote deliberation. Yet nearly all of them stop at the point where deliberation itself begins. None has systematically examined the substance of deliberation—the theoretical principles that should guide moral argument and their implications for actual moral disagreements about public policy. That is our subject, and it takes us into the everyday forums of democratic politics, where moral argument regularly appears but where theoretical analysis too rarely goes.

Deliberative democracy involves reasoning about politics, and nothing has been more controversial in political philosophy than the nature of reason in politics. We do not believe that these controversies have to be settled before deliberative principles can guide the practice of democracy. Since on occasion citizens and their representatives already engage in the kind of reasoning that those principles recommend, deliberative democracy simply asks that they do so more consistently and comprehensively. The best way to prove the value of this kind of reasoning is to show its role in arguments about specific principles and policies, and its contribution to actual political debates. That is also ultimately the best justification for our conception of deliberative democracy itself. But to forestall possible misunderstandings of our conception of deliberative democracy, we offer some preliminary remarks about the scope and method of this book.

The aim of the moral reasoning that our deliberative democracy pre-scribes falls between impartiality, which requires something like altruism, and prudence, which demands no more than enlightened self-interest. Its first principle is reciprocity, the subject of Chapter 2, but no less essential are the other principles developed in later chapters. When citizens reason reciprocally, they seek fair terms of social cooperation for their own sake; they try to find mutually acceptable ways of resolving moral disagreements.

The precise content of reciprocity is difficult to determine in theory, but its general countenance is familiar enough in practice. It can be seen in the difference between acting in one's self-interest (say, taking advantage of a legal loophole or a lucky break) and acting fairly (following rules in the spirit that one expects others to adopt). In many of the controversies dis-cussed later in the book, the possibility of any morally acceptable resolution depends on citizens' reasoning beyond their narrow self-interest and considering what can be justified to people who reasonably disagree with them. Even though the quality of deliberation and the conditions under which it is conducted are far from ideal in the controversies we consider, the fact that in each case some citizens and some officials make arguments consistent with reciprocity suggests that a deliberative perspective is not Utopian.

To clarify what reciprocity might demand under non-ideal conditions, we develop a distinction between deliberative and nondeliberative disa-greement. Citizens who reason reciprocally can recognize that a position is worthy of moral respect even when they think it morally wrong. They can believe that a moderate pro-life position on abortion, for example, is morally respectable even though they think it morally mistaken. (The abortion example—to which we often return in the book—is meant to be illustrative. For readers who deny that there is any room for deliberative disagreement on abortion, other political controversies can make the same point.) The presence of deliberative disagreement has important implications for how citizens treat one another and for what policies they should adopt. When a disagreement is not deliberative (for example, about a policy to legalize discrimination against blacks and women), citizens do not have any obligations of mutual respect toward their opponents. In deliberative disagreement (for example, about legalizing abortion), citizens should try to accommodate the moral convictions of their opponents to the greatest extent possible, without compromising their own moral convictions. We call this kind of accommodation an economy of moral disagreement, and believe that, though neglected in theory and practice, it is essential to a morally robust democratic life.

Although both of us have devoted some of our professional life to urging these ideas on public officials and our fellow citizens in forums of practical politics, this book is primarily the product of scholarly rather than political deliberation. Insofar as it reaches beyond the academic community, it is addressed to citizens and officials in their more reflective frame of mind. Given its academic origins, some readers may be inclined to complain that only professors could be so unrealistic as to believe that moral reasoning can help solve political problems. But such a complaint would misrepresent our aims.

To begin with, we do not think that academic discussion (whether in scholarly journals or college classrooms) is a model for moral deliberation in politics. Academic discussion need not aim at justifying a practical decision, as deliberation must. Partly for this reason, academic discussion is likely to be insensitive to the contexts of ordinary politics: the pressures of power, the problems of inequality, the demands of diversity, the exigencies of persuasion. Some critics of deliberative democracy show a similar insensitivity when they judge actual political deliberations by the standards of ideal philosophical reflection. Actual deliberation is inevitably defective, but so is philosophical reflection practiced in politics. The appropriate comparison is between the ideals of democratic deliberation and philosophical reflection, or between the application of each in the non-ideal circumstances of politics.

We do not assume that politics should be a realm where the logical syllogism rules. Nor do we expect even the more appropriate standard of mutual respect always to prevail in politics. A deliberative perspective sometimes justifies bargaining, negotiation, force, and even violence. It is partly because moral argument has so much unrealized potential in dem-ocratic politics that we believe it deserves more attention. Because its place in politics is so precarious, the need to find it a more secure home and to nourish its development is all the more pressing. Yet because it is also already part of our common experience, we have reason to hope that it can survive and even prosper if philosophers along with citizens and public officials better appreciate its value in politics.

Some readers may still wonder why deliberation should have such a prominent place in democracy. Surely, they may say, citizens should care more about the justice of public policies than the process by which they are adopted, at least so long as the process is basically fair and at least minimally democratic. One of our main aims in this book is to cast doubt on the dichotomy between policies and process that this concern assumes. Having good reason as individuals to believe that a policy is just does not mean that collectively as citizens we have sufficient justification to legislate on the basis of those reasons. The moral authority of collective judgments about policy depends in part on the moral quality of the process by which citizens collectively reach those judgments. Deliberation is the most appropriate way for citizens collectively to resolve their moral disagreements not only about policies but also about the process by which policies should be adopted. Deliberation is not only a means to an end, but also a means for deciding what means are morally required to pursue our common ends.

#### Decisionmaking skills gained from debate are key to problem solving in all facets of life—outweighs the case

**Steinberg & Freeley 8** \*Austin J. Freeley is a Boston based attorney who focuses on criminal, personal injury and civil rights law, AND \*\*David L. Steinberg , Lecturer of Communication Studies @ U Miami, Argumentation and Debate: Critical Thinking for Reasoned Decision Making pp. 9-10

If we assume it to be possible **without** recourse to violence to reach agreement on all the problems implied in the employment of the idea of justice we are granting the possibility of formulating an ideal of man and society, valid for all beings endowed with reason and accepted by what we have called elsewhere the universal audience.14

I think that the only discursive methods available to us stem from techniques that are not demonstrative—that is, conclusive and rational in the narrow sense of the term—but from argumentative techniques which are not conclusive but which may tend to demonstrate the reasonable character of the conceptions put forward. It is this recourse to the rational and reasonable for the realization of the ideal of universal communion that characterizes the age-long endeavor of all philosophies in their aspiration for a city of man in which violence may progressively give way to wisdom.13

Whenever an individual controls the dimensions of" a problem, he or she can solve the problem through a personal decision. For example, if the problem is whether to go to the basketball game tonight, if tickets are not too expensive and if transportation is available, the decision can be made individually. But if a friend's car is needed to get to the game, then that person's decision to furnish the transportation must be obtained.

Complex problems, too, are subject to individual decision making. American business offers many examples of small companies that grew into major corporations while still under the individual control of the founder. Some computer companies that began in the 1970s as one-person operations burgeoned into multimillion-dollar corporations with the original inventor still making all the major decisions. And some of the multibillion-dollar leveraged buyouts of the 1980s were put together by daring—some would say greedy—financiers who made the day-to-day and even hour-to-hour decisions individually.

When President George H. W. Bush launched Operation Desert Storm, when President Bill Clinton sent troops into Somalia and Haiti and authorized Operation Desert Fox, and when President George W. Bush authorized Operation Enduring Freedom in Afghanistan and Operation Iraqi Freedom in Iraq, they each used different methods of decision making, but in each case the ultimate decision was an individual one. In fact, many government decisions can be made only by the president. As Walter Lippmann pointed out, debate is the only satisfactory way the exact issues can be decided:

A president, whoever he is, has to find a way of understanding the novel and changing issues which he must, under the Constitution, decide. Broadly speaking ... the president has two ways of making up his mind. The one is to turn to his subordinates—to his chiefs of staff and his cabinet officers and undersecretaries and the like—and to direct them to argue out the issues and to bring him an agreed decision…

The other way is to sit like a judge at a hearing where the issues to be decided are debated. After he has heard the debate, after he has examined the evidence, after he has heard the debaters cross-examine one another, after he has questioned them himself he makes his decision…

It is a much harder method in that it subjects the president to the stress of feeling the full impact of conflicting views, and then to the strain of making his decision, fully aware of how momentous it Is. But there is no other satisfactory way by which momentous and complex issues can be decided.16

John F. Kennedy used Cabinet sessions and National Security Council meetings to provide debate to illuminate diverse points of view, expose errors, and challenge assumptions before he reached decisions.17 As he gained experience in office, he placed greater emphasis on debate. One historian points out: "One reason for the difference between the Bay of Pigs and the missile crisis was that [the Bay of Pig\*] fiasco instructed Kennedy in the importance of uninhibited debate in advance of major decision."18 All presidents, to varying degrees, encourage debate among their advisors.

We may never be called on to render the final decision on great issues of national policy, but we are constantly concerned with decisions important to ourselves for which debate can be applied in similar ways. That is, this debate may take place in our minds as we weigh the pros and cons of the problem, or we may arrange for others to debate the problem for us. Because we all are increasingly involved in the decisions of the campus, community, and society in general, it is in our intelligent self-interest to reach these decisions through reasoned debate.

#### Outweighs their critique of calculation—meaningful decisions require reason and utility logic, or else we bury our heads in the sand

Revesz 2008 Richard L. Revesz (Dean and Lawrence King Professor of Law at New York University School of Law, JD Yale Law School) and Michael A Livermore. (JD NYU School of Law, Executive Director of the Institute for Policy Integrity, and Managing director of the NYU Law Review). Retaking Rationality How Cots-Benefit Analysis Can Better protect the Environment and Our Health. 2008. P. 1-4.

Governmental decisions are also fundamentally different from personal decisions in that they often affect people in the aggregate. In our individual lives, we come into contact with at least some of the consequences of our decisions. If we fail to consult a map, we pay the price: losing valuable time driving around in circles and listening to the complaints of our passengers. We are constantly confronted with the consequences of the choices that we have made. Not so for governments, however, which exercise authority by making decisions at a distance. Perhaps one of the most challenging aspects of governmental decisions is that they require a special kind of compassion—one that can seem, at first glance, cold and calculating, the antithesis of empathy. The aggregate and complex nature of governmental decisions does not address people as human beings, with concerns and interests, families and emotional relationships, secrets and sorrows. Rather, people are numbers stacked in a column or points on a graph, described not through their individual stories of triumph and despair, but by equations, functions, and dose-response curves. The language of governmental decisionmaking can seem to—and to a certain extent does—ignore what makes individuals unique and morally important. But, although the language of bureaucratic decisionmaking can be dehumanizing, it is also a prerequisite for the kind of compassion that is needed in contemporary society. Elaine Scarry has developed a comparison between individual compassion and statistical compassion.' Individual compassion is familiar—when we see a person suffering, or hear the story of some terrible tragedy, we are moved to take action. Statistical compassion seems foreign—we hear only a string of numbers but must comprehend "the concrete realities embedded there."' Individual compassion derives from our social nature, and may be hardwired directly into the human brain.' Statistical compassion calls on us to use our higher reasoning power to extend our natural compassion to the task of solving more abstract—but no less real—problems. Because compassion is not just about making us feel better—which we could do as easily by forgetting about a problem as by addressing it—we have a responsibility to make the best decisions that we can. This book argues that cost-benefit analysis, properly conducted, can improve environmental and public health policy. Cost-benefit analysis—the translation of human lives and acres of forest into the language of dollars and cents—can seem harsh and impersonal. But such an approach is also necessary to improve the quality of decisions that regulators make. Saving the most lives, and best protecting the quality of our environment and our health—in short, exercising our compassion most effectively—requires us to step back and use our best analytic tools. Sometimes, in order to save a life, we need to treat a person like a number. This is the challenge of statistical compassion. This book is about making good decisions. It focuses on the area of environmental, health and safety regulation. These regulations have been the source of numerous and hard-fought controversies over the past several decades, particularly at the federal level. Reaching the right decisions in the areas of environmental protection, increasing safety, and improving public health is clearly of high importance. Although it is admirable (and fashionable) for people to buy green or avoid products made in sweatshops, efforts taken at the individual level are not enough to address the pressing problems we face—there is a vital role for government in tackling these issues, and sound collective decisions concerning regulation are needed. There is a temptation to rely on gut-level decisionmaking in order to avoid economic analysis, which, to many, is a foreign language on top of seeming cold and unsympathetic. For government to make good decisions, however, it cannot abandon reasoned analysis. Because of the complex nature of governmental decisions, we have no choice but to deploy complex analytic tools in order to make the best choices possible. Failing to use these tools, which amounts to abandoning our duties to one another, is not a legitimate response. Rather, we must exercise statistical compassion by recognizing what numbers of lives saved represent: living and breathing human beings, unique, with rich inner lives and an interlocking web of emotional relationships. The acres of a forest can be tallied up in a chart, but that should not blind us to the beauty of a single stand of trees. We need to use complex tools to make good decisions while simultaneously remembering that we are not engaging in abstract exercises, but that we are having real effects on people and the environment. In our personal lives, it would be unwise not to shop around for the best price when making a major purchase, or to fail to think through our options when making a major life decision. It is equally foolish for government to fail to fully examine alternative policies when making regulatory decisions with life-or-death consequences. This reality has been recognized by four successive presidential administrations. Since 1981, the cost-benefit analysis of major regulations has been required by presidential order. Over the past twenty-five years, however, environmental and other progressive groups have declined to participate in the key governmental proceedings concerning the cost-benefit analysis of federal regulations, instead preferring to criticize the technique from the outside. The resulting asymmetry in political participation has had profound negative consequences, both for the state of federal regulation and for the technique of cost-benefit analysis itself. Ironically, this state of affairs has left progressives open to the charge of rejecting reason, when in fact strong environmental and public health pro-grams are often justified by cost-benefit analysis. It is time for progressive groups, as well as ordinary citizens, to retake the high ground by embracing and reforming cost-benefit analysis. The difference between being unthinking—failing to use the best tools to analyze policy—and unfeeling—making decisions without compassion—is unimportant: Both lead to bad policy. Calamities can result from the failure to use either emotion or reason. Our emotions provide us with the grounding for our principles, our innate interconnectedness, and our sense of obligation to others. We use our powers of reason to build on that emotional foundation, and act effectively to bring about a better world.

#### 2. Agonistic games require rules like topicality—opposing the structures that enable clash is a reactive gesture hostile to struggle and competition

**Acampora 2002** – philosophy professor at Hunter College of the City University of New York (Fall, Christa Davis, International Studies in Philosophy, 34.3, “Of Dangerous Games and Dastardly Deeds”, http://christaacampora.com/uploads/news/id18/Dangerous%20Games.pdf)

**The agonistic game** is organized around the test of a specific quality the persons involved possess. When two runners compete, the quality tested is typically speed or endurance; when artists compete, it is creativity; craftsmen test their skills, etc.. The contest has a specific set of **rules and criteria** for determining (i.e., measuring) which person has excelled above the others in the relevant way. What is tested is a quality the individual competitors themselves possess; and external assistance is not permitted. (This is not to say that agonistic games occur only between individuals and that there can be no cooperative aspects of agonistic engagement. Clearly individuals can assert themselves and strive against other individuals within the context of a team competition, but groups can also work collectively to engage other groups agonistically. In those cases what is tested is the collective might, creativity, endurance, or organizational ability of the participating groups.) Ideally, agonistic endeavors draw out of the competitors the best performance of which they are capable. Although agonistic competition is sometimes viewed as a "zero-sum game," in which the winner takes all, in the cases that Nietzsche highlights as particularly productive agonistic institutions, all who participate are enhanced by their competition. **Winning must be a significant goal** of participation in agonistic contests, but it would seem that winning might be only one, and not necessarily the most important one, **among many reasons to participate** in such a competition. In his later writings, Nietzsche appears to be interested in thinking about how the structures of contests or struggles can facilitate different possibilities for competing well within them. In other words, he questions whether the structure of the game might limit the way in which one might be able to compete. His study of slavish morality illuminates well that concern.

II. Dastardly Deeds

The so-called "Good Eris," described in "Homer's Contest," supposedly allowed the unavoidable urge to strive for preeminence to find expression in perpetual competition in ancient Greek culture. In On the Genealogy of Morals, Nietzsche seeks to critique Christianity for advocating a kind of altruism, or selflessness, that is essentially self-destructive, and for perverting the urge to struggle by transforming it into a desire for annihilation. Read in light of "Homer's Contest," Nietzsche's Genealogy enables us to better grasp his conception of the value of contest as a possible arena for the revaluation of values, and it advances an understanding of the distinctions Nietzsche draws between creative and destructive forms of contest and modes of competing within them.

Nietzsche's On the Genealogy of Morals, a Streitschrift—a polemic, a writing that aims to provoke a certain kind of fighting—portrays a battle between "the two opposing values 'good and bad,' 'good and evil'." Nietzsche depicts slavish morality as that which condemns as evil what perpetuates the agon—namely, self-interest, jealousy, and the desire to legislate values— but rather than killing off the desire to struggle, slavish morality manipulates and redirects it. **Prevention of struggle** **is** considered by Nietzsche to be **hostile to life**: an "order thought of as sovereign and universal, not as a means in the struggle between power-complexes but as a means of preventing all struggle in general—... would be a principle hostile to life, an agent of the dissolution and destruction of man, an attempt to assassinate the future of man, a sign of weariness, a secret path to nothingness" (GM II:11). "The 'evolution' of a thing, a custom, an organ is [...] a succession of [...] more or less mutually independent processes of subduing, plus the resistances they encounter, the attempts at transformation for the purpose of defense and reaction, and the results of successful counteractions"(GM II:12). For Nietzsche, human beings, like nations, acquire their identity in their histories of struggles, accomplishments, and moments of resistance. The complete cessation of strife, for Nietzsche, robs a being of its activity, of its life.

In the second essay of the Genealogy, Nietzsche identifies the notion of conscience, which demands a kind of self-mortification, as an example of the kind of contest slavish morality seeks: "Hostility, cruelty, joy in persecuting, in attacking, in change, in destruction—all this turned against the possessors of such instinct: that is the origin of the 'bad conscience'" (GM II:16). Denied all enemies and resistances, finding nothing and no one with whom to struggle except himself, the man of bad conscience:

impatiently lacerated, persecuted, gnawed at, assaulted, and maltreated himself; this animal that rubbed itself raw against the bars of its cage as one tried to 'tame' it; this deprived creature... had to turn himself into an adventure, a torture chamber, an uncertain and dangerous wilderness — this fool, this yearning and desperate prisoner became the inventor of the 'bad conscience.' But thus began the gravest and uncanniest illness... a declaration of war against the old instincts upon which his strength, joy, and terribleness had reached hitherto (GM II:16).

Bad conscience functions in slavish morality as a means of self-flagellation, as a way to vent the desire to hurt others once external expressions of opposition are inhibited and forbidden. "Guilt before God: this thought becomes an instrument of torture to him" (GM II:22). In that case, self-worth depends upon the ability to injure and harm oneself, to apply the payment of selfmaltreatment to one's irreconcilable account with God. It is the effort expended in one's attempt to make the impossible repayment that determines one's worth. xi The genuine struggle, that which truly determines value for the ascetic ideal is one in which one destructively opposes oneself—one's value increases as one succeeds in annihilating oneself. Slavish morality is still driven by contest, but the mode of this contest is destructive. It mistakes self-inflicted suffering as a sign of strength. The ascetic ideal celebrates cruelty and torture—it revels in and sanctifies its own pain. It is a discord that wants to be discordant, that enjoys itself in this suffering and even grows more self-confident and triumphant the more its own presupposition, its physiological capacity for life decreases. 'Triumph in the ultimate agony': the ascetic ideal has always fought under this hyperbolic sign; in this enigma of seduction, in this image of torment and delight, it recognized its brightest light, its salvation, its ultimate victory (GM III:28).

Slavish morality, particularly in the form of Pauline Christianity, redirects the competitive drive and whips into submission all outward expressions of strife by cultivating the desire to be "good" xii in which case being good amounts abandoning, as Nietzsche portrays it, both the structure of the contests he admired in "Homer's Contest" and the productive ways of competing within them. It does not merely redirect the goal of the contest (e.g., struggling for the glory of Christ rather than competing for the glory of Athens), rather **how one competes well is** also **transformed** (e.g., the "good fight" is conceived as tapping divine power to destroy worldly strongholds xiii rather than excelling them). In other words, the ethos of contest, the ethos of the agon is transformed in slavish morality. xiv

III. Dangerous Games

Moralities effect contests in two ways: 1) they articulate a structure through which the meaning of human being (e.g., excellence, goodness, etc.) can be created and meted out, and 2) they simultaneously cultivate a commitment to a certain way of competing within those structures. By cultivating not only a desire to win but a desire to compete well (which includes respect for one's competitor and the institutions that sets forth the terms of the engagement), xv we can establish a culture capable of deriving our standards of excellence internally and of renewing and revaluing those standards according to changes in needs and interests of our communities. This is the legacy that Nietzsche strives to articulate in his "Homer's Contest," one that he intends his so-called "new nobility" to claim. If the life of slavish morality is characterized by actions of annihilation and cruelty, Nietzsche's alternative form of valuation is marked by its activity of surmounting what opposes, of overcoming opposition by rising above (erheben) what resists, of striving continually to rise above the form of life it has lived. As a form of spiritualized striving, self-overcoming, must, like Christian agony, be selfdirected; its aim is primarily resistance to and within oneself, but the agony—that is, the structure of that kind of painful struggle—differs both in how it orients its opposition and in how it pursues its goals . Self-overcoming does not aim at self-destruction but rather at selfexhaustion and self-surpassing. It strives not for annihilation but for transformation, and the method of doing so is the one most productive in the external contests of the ancient Greeks: the act of rising above. Self-overcoming asks us to seek hostility and enmity as effective means for summoning our powers of development. Others who pose as resistances, who challenge and test our strength, are to be earnestly sought and revered. That kind of reverence, Nietzsche claims, is what makes possible genuine relationships that enhance our lives. Such admiration and cultivation of opposition serve as "a bridge to love" (GM I:10) because they present a person with the opportunity to actively distinguish himself, to experience the joy and satisfaction that comes with what Nietzsche describes as "becoming what one is." xvi

This, Nietzsche suggests, is what makes life worth living—it is what permits us to realize a certain human freedom to be active participants in shaping our own lives. xvii

Agonists, in the sense that Nietzsche has in mind, do not strive to win at all costs. Were that their chief or even highly prominent goal we would expect to see even the best contestants hiding from their serious challengers to their superiority or much more frequently resorting to cheating in order to win. Rather, agonists strive to claim maximal meaning for their actions. (That's the good of winning.) They want to perform in a superior manner, one that they certainly hope will excel that of their opponent. In other words, the best contestants have a foremost commitment to excellence, a disposition that includes being mindful of the structure through which their action might have any meaning at all—the rules of the contest or game. xviii

What makes this contest dangerous?xix

To be engaged in the process of overcoming, as Nietzsche describes it, is to be willing to risk oneself, to be willing to risk what one has been— the meaning of what one is—in the process of creating and realizing a possible future. The outcome is not guaranteed, that a satisfactory or "better" set of meanings and values will result is not certain. And when the contest is one in which rights to authority are in play, even the Nietzschean contest always runs the risk of supporting tyranny—of supplying the means by which the tyrannical takes its hold. Nietzsche is, of course, mindful of this danger, which is why in his account of the Greek agon he finds it important to discuss the alleged origin of ostracism as the mechanism for preserving the openness of contest. xx

Nietzsche claims agonistic institutions contribute to the health of individuals and the culture in which these institutions are organized because agon provides the means for attaining personal distinction and for creating shared goals and interests. Pursuit of this activity, Nietzsche claims, is meaningful freedom. Late in his career, Nietzsche writes, "How is freedom measured in individuals and peoples? According to the resistance which must be overcome, according to the exertion required, to remain to top. The highest type of free men should be sought where the highest resistance is constantly overcome: five steps from tyranny, close to the threshold of the danger of servitude" (TI, "Skirmishes," 38). Nietzsche believes that it is **only when our strength is tested** that it will develop. Later in the passage just cited, Nietzsche continues, "Danger alone acquaints us with our own resources, our virtues, our armor and weapons, our spirit, and forces us to be strong. First principle: one must need to strong—otherwise one will never become strong" (TI, "Skirmishes," 38). Nietzsche takes upon himself, in his own writing, the task of 11 making these kinds of challenges for his readers. Nietzsche's critiques of liberal institutions, democracy, feminism, and socialism should be read in the context of his conception of human freedom and the goal he takes for himself as a kind of liberator. Read thus, we could very well come to see the relevance of agonistic engagement as a means of pursuing a kind of democracy viewed **not as** a **static preservation of some artificial** and stultifying sense of **equality**, but as a process of pursuing meaningful liberty, mutual striving together in pursuit of freedom conceived not as freedom from the claims of each other but as the freedom of engagement in the process of creating ourselves. xxi

IV. A Nietzschean ethos of agonism

In a recent essay, Dana R. Villa examines the general thrust of arguments of those advocating agonistic politics. These "contemporary agonists," xxii he claims, largely look to Nietzsche and Foucault (cast as Nietzsche's heir, at least with regard to his conception of power and contest) for inspiration as they make their "battle cry of 'incessant contestation'," which is supposed to create the space a radical democratic politics. These theorists, remind us that the public sphere is as much a stage for conflict and expression as it is a set of procedures or institutions designed to preserve peace, promote fairness, or achieve consensus. They also (contra Rawls) insist that politics and culture form a continuum, where ultimate values are always already in play; where the content of basic rights and the purposes of political association are not the objects of a frictionless 'overlapping consensus' but are contested every day in a dizzying array of venues. xxiii

Villa would commend them for this reminder, but he claims that "recent formulations of an agonistic politics […] have tended to celebrate conflict, and individual and group expression, a bit too unselectively". xxiv

He argues that "Nietzsche-inspired" agonists would do better to look to Arendt's conception of the agon and its place in political life for pursuing democratic aims, because she stipulates "that action and contestation must be informed by both judgment and a sense of the public if they are to be praiseworthy. The mere expression of energy in the form of 12 political commitment fails to impress her." "'Incessant contestation,' like Foucauldian 'resistance,' is essentially reactive." What such a politics boils down to is "merely fighting"; so conceived, "politics is simply conflict". xxv

Placing the expression of energies of the individual, multiplicities of selves, or groups at the center of an agonistic politics that lacks some aim beyond just fighting does not advance the aims of democracy. Without specifying an agonistic ethos that crafts a sense of "care for the world—a care for the public realm," politics as the socalled "contemporary agonists" conceive it cannot be liberatory. Arendt, Villa argues, supplies such an ethos in a way that Nietzsche does not. My goal here has been to argue that Nietzsche does supply us with an agonistic ethos, that despite the fact that the advocates of "incessant contestation" might fail to distinguish agonistic conflict from "mere fighting" or "simply conflict" Nietzsche does. My aim is more than mere point-scoring. I am not interested in supporting a case that Nietzsche's views are better than Arendt's. I do think Nietzsche's work offers conceptual resources useful for amplifying and clarifying agonistic theories that are pervasive in numerous fields, including political science, moral psychology, and literary criticism. If we are attentive to how Nietzsche distinguishes different kinds of contests and ways of striving within them we can construct an ethos of agonism that is potentially valuable not only for the cultivation of a few great men but which also contributes to the development of a vibrant culture. By way of concluding, I shall draw on the distinctions developed in Nietzsche's conception of agon and sketch the outlines of a productive ethos of agonism.

Some competitions bring with them entitlements and rewards that are reserved for the sole winner. Nearly all of these can be described as zero-sum games: in order for someone to win, others must lose. Further, if I choose to help you to prepare your dossier for your promotion application for the only available post, I risk reducing my own chances for success. Let's call these kinds of competitions antagonistic ones, in which the competitors are pitted against each other in an environment hostile to cooperation.

We can also imagine competitions that are not zero-sum games, in which there is not a limited number of resources. Such contests would allow us to enact some of the original meanings at the root of our words for competition and struggle. The Latin root of compete means "to meet," "to be fitting," and "to strive together toward." The Greek word for struggle, which also applied to games and competitions, is agon, which in its original use meant "gathering together." xxvi

Practicing an agonistic model of competition could provide results of shared satisfaction and might enable us to transform competitions for fame and status that inform so much of our lives into competitions for meeting cooperatively and provisionally defined standards of aesthetic and intellectual excellence. xxvii

If we can revive the sense of agon as a gathering together that vivifies the sense of **competition** that initiates a striving together toward, we can better appreciate the unique relational possibilities of competition. Recalling the definitions of agon and competition provided above, from which I tried to indicate a sense of competition that could facilitate a process of gathering to strive together toward, consider another example. When two runners compete in order to bring out the best performances in each, their own performances become inextricably linked. When I run with you, I push you to pull me, I leap ahead and call you to join me. When you run faster, I respond to your advance not by wishing you would run slower or that you might fall so that I could surge ahead. I do not view your success as a personal affront, rather I respond to it as a call to join you in the pursuit. When in the course of running with me, you draw from me the best of which I am capable, our performances serve as the measure of the strength in both of us. Neither achievement finds its meaning outside of the context in which we created it. When two (or more) compete in order to inspire each other, to strive together toward, the gathering they create, their agon, creates a space in which the meaning of their achievements are gathered. When your excellent performance draws mine out of me, together we potentially unlock the possibilities in each. For this we can certainly be deeply indebted to each other. At the same time, we come to understand and appreciate ourselves and our own possibilities in a new way. Furthermore, this way of coming to understand and appreciate our difference(s), and 14 of recognizing perhaps their interdependence, might be preferable, to other ways in which differences might be determined. Although surely not appropriate in all circumstances, agonistic endeavors can provide an arena for devising a more flexible and creative way of measuring excellence than by comparison with some rigid and externally-imposed rule. xxviii

Agonism is not the only productive way of relating to each other, and we can certainly play in ways that are not agonistic, but I do think such an ethos of agonism is compatible with recognition of both the vulnerability of the other and one's dependence upon others for one's own identity. It incorporates aggression, instructive resistance, as well as cooperation, and it is compatible with the practice of generosity. It cultivates senses of yearning and desire that do not necessarily have destructive ends. It requires us to conceive of liberation as something more than freedom from the constraints of others and the community, but as a kind of freedom— buttressed with active support—to be a participant in the definition and perpetual recreation of the values, beliefs, and practices of the communities of which one is a part. That participation might entail **provisional restraints**, limitations, and norms **that mark** out the **arenas in which such recreations occur**.

At his best, I think Nietzsche envisions a similar form for the agonistic life. Competitive "striving together toward" can be a difficult condition to create and a fragile one to maintain. It requires the **creation of a common ground** from which participants can interact. It needs a **clearly defined** goal that is appropriately demanding of those who participate. It requires that the goal and the acceptable means of achieving it are cooperatively defined and clearly articulated, and yet it must allow for **creativity within those rules**. It demands systematic support to cultivate future participants. And it must have some kind of mechanism for keeping the competition open so that **future play can be anticipated**. When any one of the required elements is disrupted, the competition can deteriorate into alternative and non-productive modes of competition and destructive forms of striving. But when agonistic contest is realized, it creates enormous opportunities for creative self-expression, for the formation of individual and communal identity, for acquiring self-esteem and mutual admiration, and for achieving individual as well as 15 corporate goals. It is one of the possibilities that lie not only beyond good and evil but also beyond the cowardly and barbarous.

#### Limits are key—it’s not a constraint on perspective but a way to channel difference toward effective contest

**Glover 2010** – professor of political science at U Conn (Robert, Philosophy and Social Criticism, 36, “Games without Frontiers?: Democratic Engagement, Agonistic Pluralism, and the Question of Exclusion”)

Recent democratic theory has devoted significant attention to the question of how to revitalize citizen engagement and reshape citizen involvement within the process of collective political decision-making and self-government. Yet these theorists do so with the sober recognition that more robust democratic engagement may provide new means for domination, exploitation- intensification of disagreement, or even the introduction of fanaticism into our public debates.1 Thus, numerous proposals have attempted to define the **acceptable boundaries** of our day-to-day democratic discourse and establish regulative ideals whereby we restrict the **types of justifications** that can be employed in democratic argumentation. This subtle form of exclusion delineates which forms of democratic discourse are deemed to be legitimate—worthy of consideration in the larger democratic community, and morally justifiable as a basis for policy. As an outgrowth of these concerns, this newfound emphasis on political legitimacy has provoked a flurry of scholarly analysis and debate."

Different theorists promote divergent conceptions of what ought to count as acceptable and legitimate forms of democratic engagement, and promote more or less stringent normative conceptions of the grounds for exclusion and de-legitimization. One of the most novel approaches to this question is offered by agonistic pluralism, a strain of democratic theory advanced by political theorists such as William Connolly, Bonnie Honig, Ernesto Laclau, Chantal Mouffe, and James Tully. Agonistic pluralism, or simply agonism, is a theory of democracy rooted in the ancient Greek notion of the agon, a public struggle or contest between adversaries. While recognizing **the necessity of** placing **restrictions** upon democratic discourse, agonistic pluralists also call upon us to guard against the naturalization of such exclusion and the coercive act of power which it implies. Rather, we must treat these actions as contingent, subject to further scrutiny, critique, and re-articulation in contentious and widely inclusive democratic spaces.

In so doing, agonistic pluralism offers us a novel means of approaching democratic discourse, receptive to the claims of new actors and identities while also recognizing that there must be some, albeit minimal, restrictions placed on the form that such democratic engagement takes. In short, the goal of agonists is **not to 'eradicate** the use of **power in social relations but to acknowledge its ineradicable nature** and attempt to modify power in ways that are compatible with democratic values'.5 This is democracy absent the 'final guarantee\* or the 'definitive legitimation.'4 As one recent commentator succinctly put it, agonistic pluralism forces democratic actors to '...relinquish all claims to finality, to happy endings../.5

Yet while agonistic pluralism offers valuable insights regarding how we might reshape and revitalize the character of our democratic communities, it is a much more diverse intellectual project than is commonly acknowledged. There are no doubt continuities among these thinkers, yet those engaged in agonistic pluralism ultimately operate with divergent fundamental assumptions, see different processes at work in contemporary democratic politics, and aspire towards unique political end-goals. To the extent that we do not recognize these different variants, we risk failing to adequately consider proposals which could positively alter the character of our democratic engagement, enabling us to reframe contemporary pluralism as a positive avenue for social change and inclusion rather than a crisis to be contained.

This piece begins by outlining agonistic pluralism's place within the larger theoretical project of revitalizing democratic practice, centered on the theme of what constitutes 'legitimate" democratic discourse. Specifically, I focus on agonism's place in relation to 'participatory' and 'deliberative' strains of democratic theory. I then highlight the under-examined diversity of those theorists commonly captured under the heading of agonistic pluralism, drawing upon Chantal Mouffe\*s recent distinction between 'dissociative' and 'associative' agonism. However, I depart from her assertion that 'associative agonists' such as Bonnie Honig and William Connolly offer us no means by which to engage in the 'negative determination of frontiers\* of our political spaces. Contra Mouffe, **I defend these theorists as offer**ing **the most valuable formulation** of agonism, due to their articulation of the civic virtues and democratic (re)education needed to foster greater inclusivity and openness, while retaining the recognition that democratic **discourse must operate with limits** and frontiers.

### 1nc buddhism k

#### Buddhism!

#### The 1ac views the body as a category of identification -- the best solution is to stop holding onto the body – instead recognize the impermanence of our bodies

**Albahari 2k6** (Miri asst prof phil @ U western Australia “Analytical Buddhism The Two-Tiered Illusion of Self” <http://www.misterdanger.net/books/Buddhism%20Books/Analytic%20buddhism.pdf>)

(a) Suppose that a ‘person’ – which I think is most usefully analysed in this context as a subject – ‘assumes’ various khandha¯s – aspects of the associated body or mind – to ‘be the self’. I take this to mean that the subject identifies itself with various aspects of the body or mind (or perhaps with all of them together), such that the aspect(s) somehow seems, from the subject’s perspective, to be at one with the subject as a whole. Most basically, this will involve the subject – the witnessing as it presents from a psycho-physical perspective – identifying with those very khandha¯s (objects of awareness) that contribute, however subtly, to the impression of a hemmed-in perspective from which the world is witnessed. In Chapter 1, I mentioned that a person is likely to assume that witnessing and a particular psycho-physical perspective (together comprising the subject) are a psychologically basic unit: that witnessing must always present through such a perspective. On the Buddhist analysis, such an impression is actually the upshot of a primal identification on the part of witnessing-from-a-perspective. Through identification, the witnessing assumes its outlook to be intrinsically confined to such a perspective, rather than, as an Arahant would view it, extrinsically confined (with the possibility of being free from it). ‘The self’, in this context, would thus refer to those perspective-lending khandha¯s as assimilated with the witnessing that shows through them. What other groups of khandha¯ are likely targets of identification as a self? The body (viz., a khandha¯ of the type ‘form’) is a typical candidate. Suppose one thinks ‘I feel healthy today’. By identifying itself with the healthy body, the subject takes the body to be self, a single entity in which subject and body are fused. Common sense supports this analysis. When saying ‘I feel healthy’ it does not seems right to analyse this as either ‘the body feels healthy’ or ‘the witnessing-from-a-perspective feels healthy’. The ‘I’ that claims to feel healthy seems to be a hybrid, namely, the body-as-subject. A subject might alternatively identify itself with khandha¯s of the type ‘mental formation’, perhaps through some assumed integration with an intellectual capacity, as borne out through such thoughts as ‘I am smart’ or ‘I am stupid’. Again, this fits with common sense; for it does not seem right to analyse the statement as either ‘the witnessing perspective is smart’ or ‘the intellectual capacity (or an idea of it) is smart’. The thing that purports to feel smart (or stupid) is rather something like the ‘intellectual-capacity-assubject’. Through these reflexive assumptions, therefore, the subject will implicitly and reflexively feel as if various aspects of the body or mind are assimilated to itself in such a manner that those aspects qua subject are implicitly assumed to be a singular ‘me’ or ‘self’. While analysis of other suttas in this chapter will depict this identified-as self to have further features, we can already surmise from SN XXII.99 that the identified-as self will be implicitly presented, through a subject’s act of identification, as something gestalt (in its seeming unification with the various khandha¯s), not merely as the haphazard addition of a subject to various khandha¯s (more on this later). Furthermore, it will seem to the subject as if the status of selfhood is not created, but reflected or revealed through an act of identification; although Buddhism contends, importantly, that the supposed self is in fact created through repeated acts of identification on the part of a subject (hence the alleged possibility of a subject being able to practice at undoing identification and the resultant sense of self). When a subject ‘assumes [various khandha¯s] to be the self’ we can say, therefore, that a subject through identifying itself with various aspects of the body–mind, assumes itself to be more than just (the contingently confined) witnessing-from-a-perspective; it identifies itself, in this capacity, as a singular, integrated self or me. The ‘self’, as something that the subject identifies itself as being, minimally designates a subject to which aspects of the body–mind are somehow assimilated. ‘Sense of self’ (in this context) designates the feeling/assumption: ‘I am this aspect of body–mind, this aspect of body–mind is what I am’.10 (b) When various khandha¯s are assumed to be the self, such an assumption will often be evidenced through a particular concern taken in the relation between ‘subject qua bodily/mental self’ and various khandha¯s that are owned in what I have stipulated to be a possessive or perspectival sense. This now relates to the part of the sutta that speaks of ‘the self as possessing khandha¯s’ – and from here a definition of personal ownership can be surmised. The sense of a <self qua body/mind-as-subject> (held on the part of the subject) will give rise to such assumptions as personally owning other khandha¯s in relation to this assumed identity. Suppose one buys a pair of trousers that fits very well – a fact that one delights in. One’s prior identification as a bodily self now feeds a sense of my-ness towards the trousers that is suggestive of more than just possessive ownership. It is a sense of personal my-ness which reflects the subject’s identification as a somebody who is the proud owner of the flattering trousers. In this capacity, a subject identifies with the possessive owner of the trousers and hence as their personal owner. More precisely, by identifying with those aspects of body–mind (khandha¯s) that feed into the idea of possessively owning the trousers – including the feelings of pride that arise from how the trousers appear on the pre-identified-as self – the subject identifies as the personal owner of the trousers. ‘The self’ in this context refers to me as personal owner of the trousers: the possessive owner as assimilated with the subject. Not only are the new trousers possessively owned; there is also, through feelings of pride in its possessive ownership, a sense of personal ownership or my-ness towards the trousers – and it is this kind of ‘possession’ to which the sutta seems to allude. Take another example: suppose that one really dislikes the feelings of nervousness that arise before having to give a speech. Having already identified as a self by taking various aspects of the mind to be ‘me’, an intimate and personal sense of ‘my-ness’ is extended towards those nervous feelings that is suggestive of more than just perspectival ownership. By thinking ‘I wish I wasn’t feeling nervous’ a subject implicitly identifies with those aspects of the mind that stand the subject in a relation of perspectival ownership towards the nerves and hence, in this capacity, as their personal owner. Emerging from this analysis, then, is a definition of personal ownership in terms of identification. Whenever a subject has feelings of personal ‘my-ness’ towards any object, bodily or mental, then the subject implicitly identifies with whatever group of mental and bodily khandha¯s serve to stand it in a relation of possessive or perspectival ownership towards the object in question. (This analysis will be expanded upon in Chapter 4.) (c) Suppose that the possessive trouser-owner now decides that her messy hair (in particular) is quite out of keeping with her smart image. The kind of attitude towards the messy hair in particular, may be borne of assuming ‘khandha¯s … in the self’. The subject does not merely view the hair as any old hair, but views the hair as a part of the self, that is, as an integral part of the body–mind-as-subject that ‘I’ want to change. (d) After the new hairdo, we can suppose that one now reflects: ‘Finally I fit into the corporation; I am properly a part of it’. This is assuming the ‘self as in the khandha¯s’, where the subject is identifying itself with some further set of khandha¯s, those that make up the corporation. While this account of identification requires further elaboration – a task postponed until Chapter 4 – we will have gained some initial idea of what is meant by the notion of ‘identification’ in relation to SN XXII.99. The kind of self that the subject identifies itself as being will, on the Buddhist account, minimally pick out a subject that is, in various capacities, identified (viz., assimilated) with various khandha¯s.

**And, the body is constantly changing – we need to let that change happen – they attempt to control it through self-effacement – prefer our method**

**Richmond 2011** (Lewis “Buddhist Thoughts on Impermanence, Plutonium and Beauty”)

One evening, after my Zen teacher [Shunryu Suzuki](http://en.wikipedia.org/wiki/Shunryu_Suzuki)had finished his talk, a student raised his hand. "You've been talking about Buddhism for nearly an hour," he said with some agitation, "and I haven't been able to understand a thing you said. Could you say one thing about Buddhism I can understand?" Suzuki waited patiently until the nervous laughter died down and then quietly said, "Everything changes." A scientist might say, "Gold does not change,[plutonium](http://en.wikipedia.org/wiki/Plutonium) has a half-life of 24,000 years. Not everything changes; some things change very slowly." But Suzuki was speaking not as a scientist, but as a religious teacher. From his religious point of view, "everything changes" means that everything and everyone we love and care about, including our own precious selves, is bound to age, pass away and disappear. Because we cling to what we love, we suffer. This is the First Noble Truth, and the starting point of all Buddhist teaching. But there is another, more positive aspect of change. In [Zen Mind, Beginner's Mind](http://www.amazon.com/Zen-Mind-Beginners-Shunryu-Suzuki/dp/1590308492/ref=sr_1_1?ie=UTF8&qid=1301780561&sr=8-1), Suzuki also says: "'That things change' is the reason why you suffer in this world and become discouraged. [But] when you change your understanding and your way of living, then you can completely enjoy your life in each moment. The evanescence of things is the reason you enjoy your life." What a startling thought: that the very evanescence of things can be a cause for joy, and a way to see this ever-changing, ever-aging world as a thing of beauty. A plastic flower is superficially pleasing, but only the living flower, shedding its petals and fading away at the very peak of its blossoming, is truly beautiful. This insight is the aesthetic dimension of Buddhist teaching and also a source of its ethics. When we appreciate every person and thing as fragile and precious, we don't want to hurt them. Instead, we practice the first precept -- non-harm -- and aspire to be more careful and kind. In this regard, I am reminded of the legend of [King Midas](http://en.wikipedia.org/wiki/Midas). According to Greek myth, Midas, granted one wish by the god Bacchus, wished that everything he touched might be turned to gold. He soon discovered, of course, that this gift was really a curse. He couldn't eat or drink; the food and water turned to gold as soon as he touched them. Even the thing he loved and cared for the most -- his own daughter -- turned to gold when he touched her. "Midas' touch" was really the touch of death. Gold has been a standard of wealth and value from ancient times to the present day, precisely because it seems never to change. But it isn't alive. In that sense, when Suzuki said that "everything changes," he simply meant that everything is alive. Midas, like each of us, wanted wealth, security and happiness, but he was looking in the wrong place. He didn't understand that the "evanescence of things is the reason you enjoy your life." In the end, Midas gave up his power to make things unchanging and permanent. He realized that true happiness could not be found there.

#### The karmic unsettlement outlined in the 1AC culminates in extinction

**Epstein** Prof Religion @ Berkley **1988** (Ron, “C H O I C E S Living Consciously Buddhist Ideas for Attaining World Peace” http://www.bodydharma.org/choices/violence/epstein.html)

The doctrine of karma teaches that force and violence, even to the level of killing, never solves anything. Killing generates fear and anger, which generates more killing, more fear, and more anger, in a vicious cycle without end. If you kill your enemy in this life, he is reborn, seeks revenge, and kills you in the next life. When the people of one nation invade and kill or subjugate the people of another nation, sooner or later the opportunity will present itself for the people of the conquered nation to wreak their revenge upon the conquerors. Has there ever been a war that has, in the long run, really resolved any problem in a positive manner? In modern times the so-called 'war to end all wars' has only led to progressively larger and more destructive wars.

The emotions of killing translate into more and more deaths as the weapons of killing become more and more sophisticated. In prehistoric times, a caveman could explode with anger, take up his club, and bludgeon a few people to death. Nowadays, if, for example, the President of the United States loses his temper, who can tell how many will lose their lives as the result of the employment of our modern weaponry. And in the present we are on the brink of a global war that threatens to extinguish permanently all life on the planet. When will that happen? Perhaps when the collective selfishness of individuals to pursue their own desires — greed for sex, wealth and power; the venting of frustrations through anger, hatred and brutal self-assertion — overcomes the collective compassion of individuals for others, overcomes their respect for the lives and aspirations of others. Then the unseen collective pressure of mind on mind will tip the precarious balance, causing the finger, controlled ostensibly by an individual mind, to press the button that will bring about nuclear Armageddon. When the individual minds of all living beings are weighted, if peaceful minds are more predominant, the world will tend to be at peace; if violent minds are more predominant, the world will tend to be at war.

#### The alternative is to vote negative to detach yourself from the body – move beyond their conception of reality

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(“Wisdom” http://www.buddhanet.net/fundbud8.htm)

Essentially, ignorance is the idea of a permanent, independent self. It is this conception of an "I" opposed and separate from the people and things around us. Once we have the notion of an "I", we have an inclination to favour those things that sustain this "I" and to be averse to those things that we think threaten this "I". It is this conception of the self that is the fundamental cause of suffering, the root of the various negative emotions - desire, anger, ill-will, envy, greed and jealousy. It is ignorant of the fact that the so-called "I", the self, is just a convenient name for a collection of ever-changing, dependent, contingent factors. Is there a forest apart from the trees? The self is just a convenient name for a collection of processes. The self is a cause of suffering and fear. In this context the self is likened to mistaking a rope for a snake in the semi-darkness. If we come upon a rope in the darkness, we may assume the rope is in fact a snake and this assumption is a cause of fear. Similarly, in ignorance we take the impersonal, impermanent processes of feelings, perceptions, and so forth to be a self, and as a result we respond to situations with hope and fear. We desire certain things, we are averse to others. We are fond of certain people, we dislike others. So ignorance in this sense is the mistaken notion of a permanent ego, of a real self.

This teaching of not-self does not contradict the law of moral responsibility, the Law of Karma. In fact, you will recall that we described Right Understanding in terms of two aspects, understanding the Law of Karma, and here in terms of seeing things as they really are, understanding the nature of existence. Once this egoism is removed, once this erroneous notion of the self is dispelled by Right Understanding, greed, anger and the rest do not occur. When this is stopped the end of suffering is gained. I do not expect this to be completely clear to everyone immediately. We shall be spending several sessions in the next few weeks deepening and expanding the examination of the nature of ignorance.

Let us go on to the next part of the path that belongs to the wisdom group and that is Right Thought. Here we begin to see the reintegration, the reapplication of the wisdom group to the sphere of good conduct because thought has an immense influence on one’s behaviour. The Buddha has said if one acts and speaks with a pure mind, then happiness follows as one’s shadow that never leaves. And if one speaks and acts with an impure mind, then suffering follows as the wheel follows the hoof of the ox. Thought has a tremendous influence on one’s behaviour. Right Thought means avoiding desire and ill-will. So you can see how important wisdom is because the cause of suffering is described in terms of desire, ill-will and ignorance. Right Understanding removes ignorance. Right Thought removes desire and ill-will. So Right Understanding and Right Thought remove the causes of suffering.

To remove desire and greed we need to cultivate renunciation or detachment. To remove ill-will, we need to cultivate loving-kindness and compassion. How does one cultivate the attitudes of renunciation, loving-kindness and compassion which will act as antidotes for desire and ill-will? Firstly, renunciation is cultivated by meditating upon the unsatisfactory nature of existence, particularly the unsatisfactoriness of pleasures of the senses. We liken pleasures of the senses to salt water. A thirsty man who drinks salt water only finds that his thirst increases. He achieves no satisfaction. The Buddha also likened pleasures of the senses to a certain fruit called the Kimbu fruit. It is a fruit that is very pleasant in appearance. It has an attractive skin. It is fragrant and tasty. But it causes disaster as it is poisonous when eaten. Similarly, pleasures of the senses are attractive, enjoyable and yet they cause disaster. So in order to cultivate detachment, one has to consider the undesirable consequences of pleasures of the senses. In addition, one has to contemplate, to understand that the nature of samsara is suffering. That no matter where one may be born within the confines of the cycle of birth and death, that situation is pervaded by suffering. The nature of samsara is suffering just as the nature of fire is heat. Through understanding the unsatisfactory nature of existence, and through recognizing the undesirable consequences of pleasures of the senses one can cultivate detachment. One can cultivate loving-kindness and compassion through recognizing the essential equality of all living beings. All fear death, all tremble at punishments. Recognizing this, one should not kill or cause others to be killed. All desire happiness, all fear pain. In this, we are all alike. All living beings are alike. Recognizing this, one should not place oneself above others, one should not regard oneself differently from the way in which one would regard others. This recognition of the fundamental equality of all living beings is basic to the cultivation of loving-kindness and compassion. All want happiness just as I want happiness. Understanding this, one ought to regard all living beings with loving-kindness and compassion. One ought to cultivate this wish that all living beings may be happy. Just as I fear suffering and pain, and wish to avoid it, so do all living beings fear suffering and pain, and wish to avoid it. Understanding this, one develops and cultivates an attitude that wishes to see all living beings free from suffering. In this way, we can develop and cultivate the attitudes of renunciation, loving-kindness and compassion which between them counteract and eventually eliminate greed and anger. Finally through wisdom, having eliminated ignorance, greed and anger, having purified ourselves of those three defilements, we can attain freedom, the final goal that is the purpose of the Noble Eightfold Path, the bliss of Nirvana.

### 1nc case

#### Stoekl goes neg—their celebration of excess and non-utility rests on the assumption that energy is excessively abundant because of the sun. This is wrong, and it means they undermine conservation needed to prevent mass suffering and death

Allan **STOEKL '7**, 200**7**, Professor of French and Comparative Literature – Penn State University, “Excess and Depletion: Bataille’s Surprisingly Ethical Model of Expenditure” in Reading Bataille Now edited by Shannon Winnubst, p. 254-8

To think about the use-value of Bataille, we must first think about the nature of energy in his presentation. For Bataille, excessive energy is natural: it is first solar (as it comes to us from the sun), then biological (as it passes from the sun to plants and animals to us), then human (as it is wasted in our monuments. artifacts, and social rituals). The movement from each stage to the next involves an ever-greater wasting: the sun spends its energy without being repaid; plants take the sun's energy, convert it, and throw off the excess in their wild proliferation; and animals burn off the energy conserved by plants (carnivores are much less "efficient" than herbivores), all the way up the food chain. "On the surface of the globe, *for living matter in general*, energy is always in excess, the question can always be posed in terms of extravagance [*luxe*], the choice is limited to how wealth is to he squandered {*le mode de la dilapidation des richesses*}" (1976a, 31; 1988, 23, italics in original). There never is or will be a shortage of energy; it can never be used up by man or anything else because it comes, in endless profusion, from the sun. Georges Ambrosino, Bataille's friend, a nuclear scientist, is credited in the introduction of *The Accursed Share* (1976a, 23; 1988, 191) as the inspiration for a number of the theses worked out in the book. In some unpublished "notes preliminary to the writing of *The Accursed Share*" (1976a, 465-69), Ambrosino sets out very clearly some of the ideas underlying Bataille's work: *We affirm that the appropriated energies produced during a period are superior in quantity to the appropriated energies that are strictly necessary to their production*. For production rigor of the thesis, it would be necessary to compare the appropriated energies of the same quality. The system produces all the appropriated energies that are necessary to it, it products them in greater quantities than are needed, and finally it even produces appropriated energies that its maintenance at the given level does not require. In an elliptical form, but more striking, we can say that *the energy produced is superior to the energy necessary for its production*. (I 976a, 469)4 Most striking here is the rather naive faith that, indeed, there always will be an abundance of energy, and that spending energy to get energy inevitably results in a surplus of energy. Ambrosino, in other words, projects a perpetual surplus of energy return on energy investment (EROEI).5 One can perhaps imagine how a nuclear scientist, in the early days of speculation about peaceful applications of atomic energy, might have put it this way. Or a petroleum geologist might have thought the same way, speculating on the productivity of the earth shortly after the discovery of a giant oil field.6 Over fifty years later it is much harder to think along these lines. Indeed, these assumptions are among those most contested by current energy theorists and experts. First, we might question the supposition that, since all energy in the biosphere ultimately derives from the sun, and the sun is an inexhaustible source of energy (at least in relation to the limited life spans of organisms), there will always be a surplus of energy. The correctness of this thesis depends on the perspective from which we view the sun's energy. From the perspective of an ecosystem—say, a forest—the thesis is true: them will always be more than enough solar energy so that plants can grow luxuriantly (provided growing conditions are right: soil. rainfall, etc.) and in that way supply an abundance of biomass, the excess of which will support a plethora of animals and, ultimately, humans. All living creatures will in this way always absorb more energy than is necessary for their strict survival and reproduction; the excess energy they (re)produce will inevitably, somehow, have to be burned of. If we shift this perspective slightly, however, we will see that an excess of the sun's energy is not always available. It is (and will continue to be) extremely difficult to achieve a positive energy return directly from solar energy.7 As an energy form, solar energy has proven to be accessible primarily through organic (and fossilized) concentration: wood, coal, and oil. In human society, at least as it has developed over the last few millennia, these energy sources have been tapped and have allowed the development of human culture and the proliferation of human population. It has often been argued that this development/proliferation is not due solely to technological developments and the input of human labor; instead, it is the ability to utilize highly concentrated energy sources that has made society's progress possible. Especially in the last two hundred years, human population has expanded mightily, as has the production of human wealth. This has been made possible by the energy contributed to the production and consumption processes by the combust ion of fuels in ever more sophisticated mechanical devices: first wood and then coal in steam engines, and then oil and its derivatives (including hydrogen, via natural gas) in internal combustion engines. Wealth, in other words, has its origins not just in the productivity of human labor and its ever more sophisticated technological refinements, as both the bourgeois and Marxist traditions would argue, but in the energy released from (primarily) fossil fuels through the use of innovative devices. In the progress from wood to coal, and from coal to oil, there is a constant progression in the amount of energy produced from a certain mass of material. Always more energy, not necessarily efficiently used: always more goods produced, consumers to consume them, and energy-based fertilizers to produce the food needed to feed them. The rise of civilization as we know it, then, is tied directly to the type of fuels used to power and feed it.8 Certainly BataiIle, following Ambrosino, would see in this ever-increasing energy use a continuation—but on a much grander scale—of the tendency of animals to expend energy conserved in plant matter. Indeed, burning wood is nothing more than that. But the fact remains that by tapping into the concentrated energy of fossil fuels, humans have at their disposal (ancient) solar energy—derived from fossil plants (coal) and algae (oil)—in such a concentrated form that equivalent amounts of energy could never be derived from solar energy alone.9 In a limited sense, then, Bataille and Ambrosino are right: all the energy we use ultimately derives from the sun. They are wrong in ignoring the fact that for society as we know it to function, with our attendant leisure made possible by "energy slaves," energy derived from fossil fuels, with their high EROEI, will be necessary for the indefinite future.10 There is simply no other equally rich source of energy available to us; moreover, no other source will likely be available to us in the future. Bataille's theory, on the other hand, ultimately rests on the assumption that energy is completely renewable, that there will always be a high EROEI, and that, for that reason, we need not worry about our dependence on finite (depletable) energy sources. *The Accursed Share* for this reason presents us with a strange amalgam of awareness of the central role energy plays in relation to economics (not to mention life in general) and a willful ignorance concerning the social-technological modes of energy delivery and use, which are far more than mere technical details. We might posit that the origin of this oversight in Bataille's thought is to be found in the economic theory, and ultimately philosophy, both bourgeois and Marxist, of the modern period, where energy resources and raw materials do not enter into economic (or philosophical) calculations, since they are taken for granted: the earth makes human activity possible, and in a sense we give the earth meaning, dignity, by using resources that otherwise would remain inert, unknown, insignificant (one thinks of Sartre's "in-itself" here). Value has its origin, in this view, not in the "natural" raw materials or energy used to produce things, but in human activity itself. Bataille merely revises this model by characterizing human activity—in other words, production—as primarily involving gift giving and wasting, rather than production and accumulation. We can argue, then, that solar energy is indeed always produced, always in excess (at least in relation to the limited life spans of individuals, and even species): but it is fossil fuels that best conserve this energy and deliver it in a rich form that we humans can effectively use. Unfortunately; these fuels can be depleted, indeed, are in the process of being depleted. **Why is this important in the context of Bataille?** For a very simple reason: if Bataille does not worry about energy cost and depletion, he need not worry about energy conservation. Virtually every contemporary commentator on energy use sees only one short-term solution: conservation. Since fossil fuels are not easily replaceable by renewable sources of energy, our only option is to institute radical plans for energy conservation—or risk the complete collapse of our civilization when, in the near future, oil, coal, and natural gas production declines, and the price of fuel necessarily skyrockets.11 Indeed, some commentators, foreseeing the eventual complete depletion of Fossil energy stores, predict a return to feudalism (Perelman 1981), or simply a quasi-Neolithic state of human culture, with a **radically reduced global population** (Price 1995). Without a theory of depletion, then, Bataille can afford to ignore conservation in all senses: not only of resources and energy, but also in labor, wealth, and so on. He can also ignore (perhaps alarmist) models of cultural decline. In Bataille's view, energy will always reproduce itself with a surplus: thus, the core problem of our civilization is how we waste this excess. We need never question the existence of the "energy slaves" that make this squandering of the products of human labor, and of our own time and effort, possible. Nor will there need to be any consideration of the fact that these virtual energy slaves may very well, in the not-so-distant future, have to be replaced by real human slaves. (Who or what else would do the work?)

#### Their theory is un-falsifiable bullshit—rigorous anthropology scholarship refutes it—their focus on radical difference trades off with social unity and makes it impossible to prevent violence

**Olson**, Allegheny College, **1994** [Carl, “Eroticism, violence, and sacrifice: A postmodern theory of religion and ritual,” *Method & Theory in the Study of Religion* 6.3, p. 237-238, 241-248]

4. Eroticism and death **Without giving any historical proof** for his position, Bataille asserts that the origin of eroticism can be traced prior to the division of humanity into those who were free and those who were slaves. It's origins can be found m pre- historic signs of erotic life embodied by figures with large breasts and erect penises, but its foundation is the sexual act itself (Bataille 1989a: 66). The knowledge of death plays an important role m the origin of eroticism. **Al-though his claim cannot be refuted or proven**, Bataille asserts that prehistoric beings were aware of death, an awareness that gave nse to an awareness of eroticism. The knowledge of death is essential because it gives rise to a sensibility that m turn stimulates eroticism, an extreme emotion that sepa- rates the sexuality of humans from that of animals (Bataille 1989a: 31-32, 23).5 The difference between humans and animals is more precisely defined when he states that "eroticism differs from the animal sexual impulse m that it is, m principle, just as work is, the conscious searching for an end, for sensual pleasure." (Bataille 1989a: 44) There is also an anticipation by the participants m erotic play that it will culminate with sensual pleasure. In the pleasure of erotic play one does not gain anything or become enriched, unlike [continues…] 6. Bataille's theory and the Sun Dance Bataille failed to test his theory of sacrifice by applying it to actual examples of sacrifice m the religions of the world. Havmg defined the nature of sacnfice for Bataille, it is therefore necessary to compare it to an actual sacnfice. In order **to demonstrate the shortcomings of Bataille's theory** of sacrifice **I have chosen to apply it to the Sun Dance** of the Sioux. Following this example, I suggest that, contrary to Bataille's theory, a more reasonable interpretation of the Sun Dance can be attained by concentratmg on its symbolism. This approach is suggested by the theoretical work of Clifford Geertz (1971) and Victor Turner (1967; 1968; 1975), the latter of whom refers to a symbol as the smallest umt of ntual or as storage umts of dynamic entities. My account of the Sun Dance relies on the work James R. Walker (1980) because his information was gathered from several different sources, and it represents the most authoritative account available to us of the rite in one period of its history My approach presupposes that the nte and its meaning have continued to change m response to new circumstances for the Sioux. By selectmg this nte, I am bemg eminently fair to Bataille, from one perspective, because the erotic and violent features of the Sun Dance could be used to prove the validity of his theory The complexity of the Sun Dance makes it difficult to interpret. Although he does not consider the Sun Dance of the Sioux, Jorgensen (1972: 206, 236) interprets, for mstance, the Ute and Shoshone nte as an acquisition of power that transforms the person and allows him to gain power, status, and autonomy From another perspective, Melody (1976) interprets the Sun Dance of the Sioux as a commemoration of tribal virtues expressed m the dance, a celebration of the people, an acknowledgment of the generative power of the sun, and a celebration of renewal. The rejoicing over renewal of the world is close to Hultkrantz's mterpretation (1981. 238) of the nte as a recreation of the cosmos. According to Hassnck (1967' 238, 248), the Sun Dance represents a socially umfymg activityactivity and a chance to resolve a conflict between an individual ego and the adjustment to the physical and social forces. And Lewis (1972: 47) mterprets the Sun Dance in terms of its various functions: umfymg force; maintaining tribal traditions; insuring tribal well-bemg in huntmg and warfare; offering to the dancer perpetual prestige. I propose offenng a different mterpretive approach for the Sun Dance that cntically reflects on Bataille's theory According to this interpretation, the Sun Dance of the Sioux exhibits a threefold significance: existential, social, and cosmic. In other words, if one examines the many symbols associated with the nte, one will see that this sacnfice enables one to attain three levels of being. While the sacred pole was bemg pamted, mstructors and students sat m a circle around the black painted figures of a buffalo and man, each de- picted with exaggerated gemtals, m order to impart to the man the potency of Iya, patron-god of libertmism, and to the buffalo the potency of Gnaski, the crazy buffalo and patron-god of licentiousness (Walker 1980: 107-108). According to Black Elk's non-nsqué interpretation of the images, the buffalo represented all the four-legged animals on the earth, and the figure of the man signified all people (Brown 1979' 79). In contrast, Bataille would be quick to seize on the erotic connections of the patron gods of libertinism and licentiousness. However, if the erotic is a quest for sensual pleasure, repre- sents a realm of play, and reveals a foretaste of continuity, it cannot be used to interpret the meaning of Iya and Gnaski because within the context of the Sun Dance they more powerfully suggest the renewal and recreation motifs of the rite. Bataille's concept of eroticism also would not fit into an insightful interpretation of the Sun Dance as a dominant theme of the rite because of its anti-social character as a solitary activity accomplished m secret. The heterological method of Bataille is intended to alleviate the contra- dictions of life and free the individual from the homogeneity of the world. In contrast to Bataille's insistence on a search for radical difference, the world- view of the Sioux, embodied m the symbolic aspects of the Sun Dance con-ceived as an offering of body and soul to Wakan-Tanka (the Great Spmt), suggests a homogeneous view of the cosmos. The umverse, for mstance, is represented by the round form of the ceremomal drum, whose steady beat is the throbbmg at the centre of the cosmos (Brown 1979' 69). Within the context of the Sun Dance, the cosmic pillar of the umverse is represented by the cottonwood tree, which further represents the enemy who is symbolically killed and transported back to the centre of the campcamp by means of sticks because human hands are not allowed to touch the body The ntual partic- ipants consecrate the tree with the stem of the sacred pipe, another symbol of the earth, the buffalo, and everything that lives and grows on the earth. Once the tree is trimmed of its branches and its sides and branch tips are painted red, the rawhide effigies of a man and a buffalo are suspended from the crosspiece of the sacred tree, which is then placed into a hole at the centre of the camp. The sacred tree not only suggests a umversal pillar, but it also represents the wayway of the people (Brown 1979 69, 75-76). Other cosmic symbols are the sun and earth signified by a red circle, symbolic of all that is sacred. In the centre of the circle representing the sun is a blue circle which suggests Wakan-Tanka, the centre of the cosmos and all existence (Brown 1979' 71-72). Moreover, the lodge of the Sun Dance is composed of twenty- eight poles, each signifying an object of creation, and staked m a circle that represents the entire created world (Brown 1979' 80). It is difficult to find anything excessive or transgressme in these cosmic symbols of the Sioux that would support Bataille's position. Rather than achieving the differentiation that Bataille's theory advocates, the sun dancer symbolically acquires the cosmos. According to the ethno- logical report of Walker (1980: 114), the candidate who dances the most excruciatingly painful form of the dance with the intention of becoming a shaman is given a small hoop by his mentor. This hoop is symbolic of the sky, the four winds, time, all things that grow, and all circular thmgs made by the tribe. After his successful completion of the dance, the sun dancer is allowed to place this symbol on his tipi. This privilege suggests that he attams all that the hoop symbolizes. Contrary to Bataille's theory, the highest aspiring sun dancer does not find that the cosmos becomes other for him, and he does not stand as an individual sovereign within the cosmos. He rather becomes part of the whole, and he acquires the cosmos. Instead of perceiving the cosmic symbolism associated with the most painful performance of the rite, Bataille's writings suggest that he would stress its sadistic and masochistic aspects. Sadism, an excessive violation of modesty and a violent excretion, is not onlyonly an eruption of excremental forces, but it also forms a limitation by subjugating whatever is opposed to such an eruption (Bataille 1970-1988: II, 56). If masochism is an enjoyment of pain, the violence exercised on the flesh of the sun dancers would be viewed by Bataille as a transgression and violation of the participant's flesh, which also calls attention to the flesh itself and connects it to the erotic. Bataille also mamtams (1984: 91) that violence agamst the flesh is an external manifestation of the internal violence of the sacnficial participant, which is perceived as a loss of blood and vanous forms of ejaculations. Moreover, for Bataille the cuttingcutting of the flesh would be suggestive of the discontinuity of the self. Unlike the solitary activity of eroticism for Bataille, the sun dancer of the Sioux rite does not distinguish or divorce himself from his society because he represents the people and suffers on their behalf during the rite. After punfymg themselves, their clothing, and the equipment to be used m the nte, the participants crycry at the centre of the campcamp and assume the suffering of the people, which enables other tribal members to gain understanding and strength (Brown 1979' 72, 78). If there is present the discontinuity charac-tenstic of Bataille's profane human society among the Sioux, the Sun Dance bridges any social divisions by uniting the social bonds of a particular tribe and umtmg them with different Indian tribes. By means of an invitation from the tribe initiating the nte prior to its begmnng, other Indian tribes are invited to participate m the nte, even though some of the visitors may be hereditary enemies (Dorsey 1894: 452). This scenano enhances the social solidarity of the Indian nation and builds a closer relationship with the things of the um- verse ; the sacred centre created by the dancers is alleged always to be with them throughout the remainder of their existence. There is no evidence of transgressme or excessive social behaviour by the sun dancers m Bataille's sense. Moreover, the dancers have acquired a sacred power dunng the nte that they may later share with other members of their societysociety According to Powers (1977' 100), the acquired power of the sun dancers may be mvested m those who are sick by the placement of the dancers' hands on the less fortunate. Thereby the sacred power is shared to cure the sick, and enter into communion with others. In comparison to Bataille's theory, the sun dancers do not differentiate themselves from their society They share a sacred power that can benefit every member of the tribe. **Bataille's** heterological method and its **stress on finding radical difference** prevents him from seeing the socially unifying possibilities of a rite such as the Sun Dance. According to Bataille, violence is inevitable because human beings can- not totally reject it. In contrast to Bataille's theory, the Sun Dance represents a threefold sacrifice of which the initial two sacrificial actions are symbolic: cutting down the cottonwood tree which is symbolic of the enemy; shooting at the effigies of a man and buffalo suspended from the crosspiece of the sacred tree, and the final action of the actual sacrifice of human flesh on the fourth day of the rite. The second symbolic killing of the effigies of a man and buffalo, amid much rejoicing by the participants, represents the hope for future success m hunting and victory in war (Powers 1977' 98). These sym-bolic killings by the Sioux violates Bataille's assertion that violence cannot be controlled. Rather, the symbolic nature of the Sioux killings suggests a limiting and eventual termination of violence and not a promoting of any cycle of violence. Although Bataille is right to emphasize the importance of violence m sacrifice, **there does not appear to be any danger that the contagious violence of the sacred will overflow** and overwhelm the Sioux and other tribes. There are certainly martial features to the Sun Dance, but their symbolic nature suggests a containment of violence rather than any overflow- ing of it. Bataille's theory does make clear, however, that the Sioux accept violence, even though they try to reject or control it. Within the drama of the Sun Dance, there is a hint of an inherent prestige associated with victims who choose to perform the sacrifice in the most painful and violent manner. The actual sacnficial victims, for instance, can choose to dance m any of four ways-ways: gazing at the sun from dawn to dusk; having wooden skewers, tied to rawhide ropes secured about half wayway up the sacred pole, mserted into their breasts; having wooden skewers mserted mto the breasts and then being suspended about one foot off the ground; or having wooden skewers inserted which then are attached with thongs to one or more buffalo skull(s) that must be dragged along the dance area (Powers 1977' 98-99). The Sun Dance is not completed until the flesh of the victim has been torn through, representing the death and rebirth of the victim. It is permissible for others to assist by pulling on the ropes to end the victim,' agony As well, the multiple number of sun dancers contradicts Bataille's assertion (1988a: 59) that a victim represents a surplus of communal wealth and substitutes for other members of the commumty Neither is the victim an accursed share destmed for violent destruction. Bataille is nght, however, to emphasize the importance of death m sacnfice, which possesses the power to return one to continuity by means of eroticism. What he fails to see is the connection between death and spintual rebirth. And due to his notion of eroticism, which represents a disequilibrmm that stimulates a person consciously to call one's being into question, Bataille is not able to recogmze that the sun dancer is actually actually able to find his identity Although Bataille's theory of sacrifice does not account for the Sun Dance in its entirety, the rite does adhere to his theory to some extent because it calls attention to the flesh and reveals external violence and the internal violence of the subject. The violation and breaking of the sun dancer's flesh does suggest the usefulness of Bataille's observation about the intimate connection between human flesh and violence. However, by giving pieces of their flesh, the sun dancers impugn Bataille's claim that the violation of the victim's flesh connotes a connection to a sexual act. At this point, Bataille's theory is problematic because it lacks consistent sense m the context of the Sun Dance. Bataille's need to reintroduce eroticism blinds him to the facts or drama of an actual sacrifice. The flesh of the sacrificial victim m the Sun Dance represents ignorance (Brown 1979' 85) and not the dispossession of the self, an anti-social aspect of eroticism for Bataille. From an existential perspective, to be freed from the ropes tied to the skewers symbolizes freedom from the bonds of the flesh and not some erotic urge. The lack of an erotic emotion is evident m the symbolism of donning rabbit skins on the dancer's arms and legs. The rabbit is a symbol of humility, a virtue with which one must approach Wakan-Tanka. The victim is also equated symbolically with the sacred pipe that stretches from heaven to earth (Brown 1979. 74). In this context, the sacred pipe mdicates the transcending of earthlyearthly flesh. The dancer becomes the centre of the world m which the four directions meet when he is tied at the centre of the four poles, so that the four directions converge m his body (Brown 1979' 95). Within the drama of the Sun Dance, elements of eroticism, violence, and death are evident. This does not mean, however, that these features of sacrifice necessarily involve stressing separation, difference, transgression, and excess. Although it is possible to find these features in the Sun Dance to some degree, the Sioux nte stresses finding one's identity within a religious and social tradition. By successfully completmg the nte, a sun dancer does not separate himself from the group or become distinct from other things; rather, he often assumes a position of leadership within the tribe. And, as already noted, the sun dancer is intimately related to his mentor, ntual assistant or second, and other members of the tribe who play various roles m the nte. All this suggests the socially unifying nature of the nte. Moreover, within a tribal society such as the Sioux, the individual's identity is sociallysocially defined, even though one's visions and dreams help one to define oneself and one's place within a wider social context. Besides being a form of human sacnfice, the Sun Dance also functions as an initiation rite. The dancer, having died to his former ignorant condition, attains a totally new existential status of enlightenment and responsibility The ordeal that one endures is often accompanied by visions of the divine; the successful completion of the nte is a prereqmsite if one aspires to become a shaman. Walker (1980: 182) notes that after the successful completion of the Sun Dance the victim is eligible for leadership of a war party or for chieftamship. The candidate receives new meamng and status which is symbolized by the red design, drawn on his chest by the shaman as a symbol of all that is sacred. Furthermore, the victim is equated throughout the nte with the moon, which waxes and wanes, lives and dies, like all things (Brown 1979- 71). 7 Concluding remarks The significance of the Sun Dance enables us to see that **there is an alternative** interpretation **to Bataille's theory** that is more faithful to the actual evidence and is **not simply imposed on the ritual activities by the creative imagination of a theorist**. This interpretive analysis of the Sun Dance is suggested by the patterns exhibited by the nte itself and reflects more accurately the actual nte and its religious and symbolic context. Bataille, however, includes a personal agenda because he wants to re-introduce the erotic into religion. In other words, Bataille's theoretical speculation about eroticism shapes his theory of religion and sacnfice. Thus, his theoretical world-view **takes precedence** over the religious phenomena that he examines. With his involvement in the Surrealist movement, his emphasis on em- bracing bodily waste, his anal and erotic obsessions, the role of the ambiguous pineal eye in his works, and composition of excessively obscene novels, all suggest an explicit advocacy of decadence by Bataille. In his work entitled My Mother, the socially excessive theme is mcest. His novel The Blue of Noon, for mstance, focuses on the nauseous and squalid aspects of human life where its characters are engaged m endless orgies, vomiting, and unnat- mg. The erotic and death are contmually united in his Story of the Eye when, for example, the two leading libertmes of the novel have sexual mtercourse next to the cadaver of a young girl they have driven to death. Two further dramatic examples are the rape of a priest by the female protagomst and his death by strangulation and simultaneous sexual orgasm, and the death of the distracted matador gorged through his eye by the hom of a bull as he is distracted and blinded by the obscene antics of the female protagomst. Bataille's hermeneutical method of heterology is designed to lead to ex- cess and decadence. Trymg to explain his mithode de meditataon used m his book on religious expenence, Bataille wntes (1954: 216), "I think like a girl takes off her dress. At its most extreme pomt, thought is immodesty, obscen- ity itself." This kind of statement seems to suggest de Sade or Mephistopheles becommg Faust. In his work on heterology, Pefams summarily states (1991. 41) that the works of Bataille are "a theater of the excremental m whose scenes one may glimpse golden threads." Frednc Jameson (1991. 382), a self-admitted Amencan adherent of postmodern literary cnticism, affirms that decadence is a charactenstic of postmodermsm: "'Decadence' is thus in some way the very premonition of the postmodern itself, but under condi- tions that make it impossible to predict that aftermath with any sociological or cultural accuracy, **thereby divertmg the vague sense of a future into more fantastic forms**, all borrowed from the misfits and eccentrics, the perverts and the Others, or aliens, of the present (modem) system." And if, as sug- gested by Rosen (1987' 142), this decadence originates in political despair, Bataille's hermeneutical program is a political manifesto and not an apt tool for interpretmg religious phenomena. From a more positive perspective, Bataille's theory of religion does call attention to neglected elements in the study of religion in the form of bodily waste: excrement, saliva, tears, unne, mucus, dirt, skin, and so forth. Al- though his distinction between the sacred and the profane cannot be applied consistently as a useful hermeneutical device with the religious phenomena or world-view of Native Amencan Indians, his emphasis on the difference within the sacred itself is suggestive. He is also nght to stress the violent aspects of sacrifice and their sexual implications. Although violence is certainly present m the Sun Dance, the Sioux rite appears to move in the direction of nonviolence - by symbolically killing an enemy represented by a tree, for instance - that undermines Bataille's opinion that violence cannot be contained. By offering his body and soul, the Sioux sun dancer points to a renewal and continuance of cosmic generative forces. The Sun Dance also joins Indian societies together and provides for social continuity by allowing others to share m the sacred power engendered by the rituals. Moreover, the rite enables the sun dancer to become ontologically transformed by being reborn and being set free of his mortal flesh. Although there is a sense in which the sun dancer is distinctive, the emphasis of the nte is unity with societysociety and social well-being rather than stressing the differences between the sacrificial victim and society .

#### Their form of questioning makes action impossible—obsessing with the fundamental assumptions that guide social action is a recipe for passivity

**Loewy 91** Erich, associate professor of medicine at the University of Illinois and associate professor of humanities, “Suffering and the Beneficent Community: Beyond Libertarianism,” p. 17-21

All of our judgments and decisions ultimately must be grounded in nonverifiable assumptions. The fundamentalist may deny this; but the fundamentalist grounds her judgments and decisions either in a religious belief based on revealed truth or, at least, on the assumption that “somewhere out there” truth exists and that we, in the human condition, can know it. Ultimately, or at least up to this point in time, absolute verification eludes man. At the extreme of this point of view, there are those who claim that truth is not only knowable, but is in fact, known and only the stubborn recalcitrance of the uninitiated prevents it from being generally accepted. This point of view claims not only that morality exists as a discoverable truth, an absolute not fashioned by men but unchanging and immutable, but also that truth has in fact been discovered. Rights and wrongs exist quite apart from the stage on which their application is played out. Situations may differ but, at most, such differences force us to reinterpret old and forever valid principles in a new light. Those who believe themselves to know the truth, furthermore, oftentimes feel compelled not only to persuade others to their point of view but feel morally justified in using considerable force to do so. On the other hand, some of us would deny the existence of immutable truth or, what is not quite the same thing, deny at least that it is knowable in the human condition. Those who flatly deny the existence of unalterable truth find themselves in much the same pickle as do those who flatly assert it: Both lack a standard of truth to which their affirmations can be appealed. Those who concede the possibility that truth exists but not the possibility that man in the human condition can be privy to it, have modified the position without greatly improving it. Their affirmation that man in the human condition can never know absolute truth seems more reasonable but is, once again, not verifiable. Who can know with certainty that tomorrow someone will not discover a way of “getting at” absolute truth and, in addition, be able to provide a simple and brilliant proof which other mortals to date have missed? Only an absolutist could deny such a possibility! That leaves us with a more pragmatic answer: Holding that, in the human condition, truth is not—or at least is not currently—accessible to us leaves more options open and does not fly in the face of the undeniable fact that, unlikely as it seems, our knowing absolute truth may be just around the corner. Outside the religious sphere, no one has ever convinced most thinking people that they are the possessors of absolute truth. Truth, whenever accepted at least for daily use, is invariably hedged. If we accept the fact that absolute truth (at least so far) is unknown to us and accept as an axiom that it may well be unknowable, we are left with a truth which for everyday use is fashioned rather than discovered. What is and what is not true or what is and what is not morally acceptable, therefore, varies with the culture in which we live. This claim (the claim on which, as we shall see, cultural relativism relies) rests on the assertion that there are many ways of looking at truths and that such truths are fashioned by people. Depending on our vantage point, there are many visions of reality,1 a fact which the defenders of this doctrine hold to be valid in dealing with the concrete, scientific reality of chemistry and physics.2 Such a claim, it would seem, is even more forceful when dealing with morals. As Engelhardt puts it so very well: “Our construals of reality exist within the embrace of cultural expectations.”3 And our “construals of reality” include our vision of the moral life. Furthermore, not only do our “visions of reality occur within the embrace of cultural expectations,” the limits of what we as humans can and what we cannot culturally (or otherwise) expect are biologically framed by the totality of our bodies and their capacities as well as (and inseparable from the rest of the body of which it is a part) by our minds. All human judgments and decisions, then, are inevitably grounded to prior assumptions which we accept and do not question for now. There is a story about William James which illustrates the point. James was giving a lecture dealing with the universe at a Chattauqua: one of those events so popular at the turn of the century, which has, regrettably, been replaced by talk shows. At the end of his well-received lecture, a little old lady came up to him and said: “I enjoyed your talk, Mr. James, but you know you are making an error: The universe rests on the back of a tortoise!” “Very well,” James said, “I can accept that. But tell me, what in turn does that other tortoise rest upon?” “It’s no use, Mr. James, it’s tortoises all the way down.” And so it goes: Every assumption rests on the back of another assumption and if we are to examine all before proceeding with our everyday judgments and decisions we would get hopelessly mired in mud. The quest is necessarily endless. Ethical theories, like all other human activities, inevitably rest on prior assumptions. Indeed, one cannot reason without a framework of reasoning, and similarly, one cannot reason about reasoning without such a prior framework. The question, it seems, is not the necessary acceptance of an assumption, for that is inevitable, but the depth and universality of the assumption taken. One needs steer between Scylla and Charybdis: on one side too-easy acceptance of a superficial assumption, on the other an endless and almost neurotic quest for ever more basic assumptions. Crashing on the other condemns one to eternal philosophical backpedaling, inactivity, and to leaving the original problem, whose immediate resolution may be critically needed, entirely unresolved. That some framework of reasoning is necessary was recognized by Kant when he claimed that, thanks to the “common structure of our mind,” thought processes inevitably divided the sensible world into categories which we then use to deal with it.4 Rationality requires ways of dealing with the world and reasoning without categories is evidently not possible. The reason why there is no disagreement among persons about some logical propositions is that the common structure of our mind compels us to see certain things in certain ways and to reason along certain lines made inevitable by the very way in which our minds are structured. Even if, later on, we may discover that our universally agreed-upon proposition was wrong, we make this discovery using the same tools. We merely discover that some crucial fact was missing, some critical point not considered. The same basic method of reasoning and the same biological substrate for reasoning (the common structure of our mind) has been used to discover our error. I do not claim that our common biology and the common structure of our minds constitutes a way of discovering absolute truth. What such a common biology and such a common structure imply is that we inevitably will approach problems, see truth, and derive our judgments within such a bodily framework. We are condemned (or blessed) to know the sensible world and to reason from the data presented to us and organized by us in certain and not in other ways. That does not reveal truth to us, but it presents us with a working model to be used, adapted, and learned from. The belief that there are no absolutes (or that, at the very least, they are inaccessible to us in the human condition) can lead to a moral nihilism in which no firm judgments can be made and no decisions or actions can be undertaken. Such a moral nihilism claims that truths are fashioned by people and however a person may choose to fashion his truths serves no better than does any other way of constructing truths. The fashioning of truths, in that point of view, lacks its own frame of reference. It does not necessarily follow from this, however, that since our “construals of reality” occur purely within the “embrace of cultural expectations,” all visions of reality that are necessarily of equal worth, or that there are no generally useful standards that we can employ in judging either what we conceive to be physical or ethical reality. One can, for example, claim that some visions of reality are clearly and demonstrably wrong, and support such a claim by empirical observation or by showing that certain visions of reality simply do not work That is the stronger claim. In rejoinder, it can be said that empirical observations and “what works” are themselves part of the framework and that, therefore, such a claim lacks validity. On the other hand, one can make the somewhat weaker claim that certain visions, in the context of a given society and historical epoch, seem less valid than others because they confound careful observation or because they simply fail to work when applied to real situations occurring in real current societies.5 This leaves room for a form of modified cultural relativism. Such a move does not deny that our “visions of reality occur within the embrace of cultural expectations.” But while such a move affirms that there are many realities of similar worth, it also suggests that within the context of such cultural expectations some realities have little, and others have much, validity. Some realities work (have explanatory power translatable into action and are, therefore, usable) in the context of our experience and community, while some do not, and some work better than do others. Such a view neither throws up its hands and grants automatic equal worth nor rigidly enforces one view: It looks upon the problem as one of learning and growth in which realities (both empirical and ethical) are neither rigidly fixed nor entirely subject to ad hoc interpretation. Ethical certitude, no more than certitude about anything else, is not possible in the human condition. The “ut in pluribus,” the generally and for the most part true of which St. Thomas Aquinas speaks, is the best we can hope for in science as well as in ethics. Since, however, we must inevitably act (nonaction being as much action as action itself), we must be prepared to act on less than complete certitude. Truth cannot, in a Cartesian sense, be expected to be apodictic; rather truth (whether it is scientific or moral truth) is to be worked with, shaped and developed as we experience, learn, and grow.

#### They over-determine aesthetics—this leads to autocracy and valorization of sacrifice

**Castronovo 3** (Russ, Jean Wall Bennett Professor of English and American Studies – University of Wisconsin–Madison, boundary 2, 30(3))

When aesthetic criteria determine the course of political action, violence often ensues. Yet violence can be reshaped into beautiful forms: the freedom that seemed so threatening in revolutionary France is channeled into art, where it acquires order and predictability. As Lutz Koepnick argues, "Aesthetics are meant to give a differentiated apparatus of domination the look of unified and resolute action." 23 But not only does art clean up the traces of domination; it also acts as domination. Coherence, unity, and beauty contribute to an artwork's perfection, but these same qualities invite authoritarian control when translated to a political register. Schiller uses the analogy of a sculptor and a block of stone to suggest the dangers of conducting politics with an eye toward the overarching unity of form. To lend form to the "formless block," the sculptor resorts to violence, splintering and chipping away at parts of the stone deemed incongruent with the ideal design housed in the artist's brain (AE, 32). At a governmental level, this concern with form sacrifices the citizen to the ideal of the State. In order to achieve perfect functionality and unity, the State "must ruthlessly trample underfoot any such hostile individuality" (AE, 33). The annihilation of particularity is the trade-off for political unity. Once the final product—either in the form of artwork or the State—is unveiled, all traces of violence disappear. The sculptor who chisels the [End Page 166] block "only forbears to show" his attack upon formlessness (AE, 32). Gentle lines and polished curves erase memory of the fragments cut away from the marble, shards swept up as so much trash. The State, in turn, forgets its trampling of individuality by celebrating the aftereffects of the struggle for social order, taking pleasure in the sight of a regulated and coordinated citizenry. The State behaves as ruthlessly as the sculptor insofar as each metonymically represents the whole at the expense of the part. Unlike Schiller's mechanical artist who labors without an idea of the total artwork and cannot see beyond the individual parts, the fine artist ignores the broken parts scattered on the floor and instead concentrates on the whole. So, too, the State is "able to produce unity only by suppressing variety": aesthetics and politics are incommensurate, and permitting them to appear as equivalent expressions is to court violence and then to destroy all evidence of that trespass (AE, 32)

#### Creates an aesthetics of self-fascination which allows external coercion

**Biskowski 95** Lawrence J., Assistant Professor of Political Science at the University of Georgia, 19,Politics Versus Aesthetics: Arendt’s Critiques of Nietzsche and Heidegger, The Review of Politics, Vol. 57, No. 1, Winter 1995, pg 64-66

Style, however, is not beauty. Even aesthetics insofar as it was formerly concerned with supposedly objective, public, or at least widely shared standards of beauty is undermined among contemporary intellectuals by the same radical histo ricism which, by undermining other logics, institutions, understandings, and so forth, provided the conditions for its expansion and elevation. Standards of beauty are no more objective and universa l than standards of justice, virtue, and truth; their adoption is always an imposition underwritten by some manifestation of power . With all such public standards discredited, individuals are thrown back on themselves or, rather, on their will and , more typically, on their impulses , as their only grounds for practical choices . Coupled with a n incr ea sing re cognition of how ide ntity is formed and stabilized, this experience leads to a diminished sense of the unity and consistency of the self, " whic h in turn leads to the enormo us surge in interest amo ng contemp orary theorists in the politics of identity, the nature of the self, and the political and moral implications of a de-centered subjectivity. Thus in at least some significant respects, and for good or for ill, the aestheticism being proffered in somewhat different ways in both public and intellectual life is an aestheticism of self fascination and self- absorption. The self, understood as a multiplicity, must be at the center of all authentic choices and values (which ma y, of course, be contradicted at any time), or the criteria for such choices at least should come f r o m within. Moral or aesthetic or political criteria imposed upon the individual from the outside cannot be legitimate. Of paramount concern, therefore, are the forces of external coercion , including, especially, the surreptitious and intrusive socialization technologies by which the self and its various understandings and values have heretofore been shaped, and the means by which these technologies may be overcome so that one may finally be free to be what one authentically is, if indeed one believes this goal remains within the realm of the possible.

#### Turns their impact—turns people into passive objects of manipulation and administration.

**Biskowski 95** Lawrence J., Assistant Professor of Political Science at the University of Georgia, 19,Politics Versus Aesthetics: Arendt’s Critiques of Nietzsche and Heidegger, The Review of Politics, Vol. 57, No. 1, Winter 1995, pg 64-66

Arendt believed that one of the chief problems facing the modern world was its growing inability to make sense of, experience, and talk about what once was considered to be freedom. This incapacity, she feared, might eventually result in the loss of what has distinctively human about human beings. Such a loss would mean the complete subjection of human beings to the logics of economic, biological, and other types of processes, and consequently their transformation from potentially acting, choosing, and willing subjects into merely passive objects of manipulation, administration, and various forces beyond their conscious control. A very similar concern is, of course, an integral part of the contemporary appeal of aestheticized politics, and Arendt herself has recourse to Kantian aesthetics in formulating her theory of political judgment, but only as an illustration of an alternative to customary or traditional thinking about judgment. Political judgment resembles aesthetic judgment in several regards, most importantly in that it often is not determinate or subsumptive, but the former, Arendt makes abundantly clear, cannot simply be reduced to the latter. 14 Thus it is no t Arendt's claim (nor mine on her behalf) that aesthetics is irrelevant to politics." The problem , rather, resides in the collapsing of one category into the other. From Arendt's perspective, the conflation of aesthetics and politics is only the latest manifestation of a growing modern alienation from what she considered to be authentic politics, another indication of our increasing incapacity even to recognize the vital and distinctive ontological elements and possibilities present in political action and freedom . Postmodern aestheticism is an alternative to modern ways of thinking about politics and freedom, 16 but an alternative that would be unacceptable to Arendt , insofar as this way of thinking is based at best on o n l y a dim s e mi -awareness of the authentically political relationship between self, others, and world. As such, it also brings with it a host of dangers.

## 2nc

### 2nc topicality

#### Solar power is the conversion of sunlight into electricity

**West, ‘8** engineer, artist, father, and cook (Robert L. West, 2008, “Solar Energy vs. Solar Power,” http://ezinearticles.com/?Solar-Energy-Vs-Solar-Power&id=1496154)//CC

The terms solar power and solar energy are used interchangeably, however the terms have different definitions. Solar Energy is utilizing the radiant energy from the Sun. Solar Power is the conversion of sunlight into electricity, either by photovoltaics and concentrating solar thermal devices, or the utilization of thermoelectric converters, solar chimneys or solar ponds. (some of the latter are experimental) When we consider building design, solar energy (and shading) are considerations. In order to conserve heat that the Sun delivers, thermal mass is used.

#### Precision outweighs if we’re going to discuss energy

Gene Whitney (Section Research Manager at the Congressional Research Service), Carl E. Behrens (Specialist in Energy Policy at the CRS) and Carol Glover (Information Research Specialist at the CRS) November 2010 “U.S. Fossil Fuel Resources:

Terminology, Reporting, and Summary” http://epw.senate.gov/public/index.cfm?FuseAction=Files.view&FileStore\_id=04212e22-c1b3-41f2-b0ba-0da5eaead952

Terminology A search for energy statistics in the literature quickly reveals a large number of terms used to describe amounts of fossil fuels. Most of these terms have precise and legitimate definitions, and even a careful comparison of statistics for diverse forms of fossil fuels can become quite difficult to reconcile or understand. Not only do oil, natural gas, and coal occur in many diverse geologic environments, but each commodity may occur in different modes or in different geologic settings that impose vastly different economics on their recovery and delivery to market. A vocabulary of terms has developed over the decades to capture the nature of deposits in terms of their likelihood of being developed and their stage of development.

### consumption turn

#### We’ve cut off the internal link from their celeberation of the non-utility of self-sacrifice to meaningful protest of the types of dangerous consumption they critique—it’s a purely inferential conclusion that they can stop the latter with the former

Shaviro, 90 (Steven, PhD from Yale, professor at Wayne State University, former professor at University of Washington, “Passion and Excess,” The Florida State University Press, pg. 40-41)

The extremism of Benjamin's and Bataille’s formulations makes it difficult to see how they can be applied to concrete situations of social struggle. It is easy to point out the absurdity of Acéphale‘s projects of voluntary self-sacrifice and communal ecstasy. But this is an "absurdity” on which Bataille himself was the Hrst to insist. Absurdity, for Bataille, is not the negative condition it is regarded as by telcological thinkers and existentialists. It is an affirmation that opposes the capitalist logic of putting all productive forces to work. “[L’homme] est libre de ressembler E1 tout ce qui n’est pas lui dans l`univers. ll peut écarter la pensée que c’est lui ou Dieu qui empéche le reste des choses d’étre absurde [(Man) is free to resemble everything that is not himself in the universe. He can set aside the thought that it is he or God who keeps the rest of things from being absurd]" (OC, 1:445; VE, 180). The problem, then, is not how to give meaning and force to otherwise absurd and inefficacious acts. It is rather how to prevent sacrifice and expenditure from becoming (as is the case in fascism) new grounds of power or signification.

#### They have to be accountable for the scale-up of this narrative—think of the social implications of affirming Bataille—the lesson drawn from communicating their 1ac wouldn’t be that we should celebrate non-utility to protest the symbolic coordinates of capitalism, it would be that ritual sacrifice and senseless consumption are awesome—this means they have a bad starting point, even if the goal of their aff is good

Plontisky, 95 (Arkady, Professor of English and Theory and Cultural Studies, Purdue University, “On Bataille: Critical Essays,” State University of New York Press, pg. 111)

Indeed, as Bataille's discourse shows with extraordinary power, it is the economic insistence on consumption at the multiple and often interacting levels of theoretical economies—economic, political, conceptual—that is most problematic. The theoretical problem is a metaphoric loss of the economy of loss and thus of the general economy. It is not that consumption and the pleasure of consumption are not important or theoretically and otherwise pleasurable. To reverse the configuration absolutely and to privilege expenditure unconditionally would be just as untenable. As I indicated earlier, Bataille's heavy insistence on waste and expenditure must be seen as problematic in this respect, and is "saved" only by the enormous labyrinthine complexity of Bataille's inscription of these concepts.

#### The impact outweighs—material violence and death always outweighs metaphorical nonsense, because you can recover from all that

Johnson ‘03 – David, DPhil. in English and Related Literature (York University), an MA (Distinction) in Continental Philosophy (Warwick University) and a BA (Hons) in Literature and Philosophy (Middlesex Polytechnic) (Why View All Time from the Perspective of Time's End? Time & Society, 2003, Sage, MCL)

Life is a serious business of highly charged temporal stakes, involving a being’s struggle to secure for itself the experience of pleasure time/free time rather than pain time/slave time. Since lived time is a living stake, death is not the profound phenomenon that Bataille thinks it is. For one who is racked by drawn-out pain, the pain of death situated at the end of time is an irrelevance. And for one who is caught up in the throes of extended pleasure, the dubious pleasure of death is likewise irrelevant. Death, far from being profound, may simply provide a pragmatic escape from a life of pain and toil, or a simple halt to a life of pleasure and freedom. We can see death as important to time in that it is the end of the great game of time, the great flow. But death is relative in importance to time for the same reason; it is simply the end of the great game of time, a game without which it would be pure abstraction. However, we are not suggesting that death has absolutely no importance for living beings. On the contrary. By countering Bataille’s view of death, which tries to domesticate death through attempting to engage it in ‘intimate’ dialogue, and which tries to make political gain out of death, we can see death as a real, non-negotiable phenomenon. Death can no longer be thought of as an ambiguous but essentially accessible deity, but must instead be seen as that which wipes out real substantial time with no hope of appeal. Death can now be viewed as a certain element in the game of time, as something to be dreaded or desired as the end of time, but which has no fixed moral or political meaning in itself. By affirming the reality of time we are in fact affirming the reality of death, and so we are proposing a more tragic philosophy than the one Bataille proposes – which is ironic, given that Bataille is considered by most postmodernist/ post-structuralist philosophers to be perhaps the cruellest thinker.

#### Their theory is wrong—the whole open economy stuff is physically inaccurate

**Daly 1996** – professor of ecological economics at the University of Maryland, Senior Research Scholar at the University of Maryland, School of Public Affairs and a member of the Board of Directors at Carrying Capacity Network, former econ professor at LSU (Herman, The Case Against the Global Economy, “Sustainable Growth? No Thank You”, p. 192-4)

IMPOSSIBILITY STATEMENTS are the very foundation of science. In science, many things are impossible: traveling faster than the speed of light; creating or destroying matter-energy; building a perpetual motion machine, and so on. By respecting impossibility theorems we avoid wasting resources on projects that are bound to fail. Economists should therefore be very interested in impossibility theorems, especially the one we demonstrate in this chapter: Namely, that it is impossible for the world economy to grow its way out of poverty and environmental degradation. In other words, sustainable growth is impossible. In its physical dimensions, the economy is an **open subsystem of the** earth's **ecosystem**, which is finite, nongrowing, and materially closed. As the economic subsystem grows, it incorporates an ever greater proportion of the total ecosystem into itself and must reach a limit at 100 percent, if not before. Therefore its growth is not sustainable. The term sustainable growth when applied to the economy is a bad oxymoron — self-contradictory as prose and unevocative as poetry. Economists will complain that growth in GNP is a mixture of quantitative and qualitative increase and therefore not strictly subject to physical laws. They have a point. Quantitative and qualitative changes are very different and so best kept separate and called by the different names al- ready provided in the dictionary. To grow means "to increase naturally in size by the addition of material through assimilation or accretion." To develop means "to expand or realize the potentials of to bring gradually to a fuller, greater, or better state." When something grows it gets bigger. When something develops it gets different. The earth's ecosystem develops (evolves) but does not grow. Its subsystem, the economy, must eventually stop growing but can continue to develop. The term sustainable development therefore makes sense for the economy but only if understood as development without growth — qualitative improvement of a physical economic base that is maintained in a steady state by a throughput of matter-energy that is within the regenerative and assimilative capacities of the ecosystem. Currently, the term sustainable development is used as a synonym for the oxymoronic sustainable growth. It must be saved from this perdition. It is very difficult politically to admit that growth, with its almost religious connotations of ultimate goodness, must be limited. But it is precisely the nonsustainability of growth that gives urgency to the concept of sustainable development. The earth will not tolerate the doubling of even one grain of wheat sixty-four times, yet in the past two centuries we have developed a culture dependent on exponential growth for its economic stability. Sustainable development is a cultural adaptation made by society as it becomes aware of the emerging necessity of nongrowth. Even "green growth" is not sustainable. There is a limit to the population of trees the earth can support, just as there is a limit to the populations of humans and of automobiles. To delude ourselves into believing that growth is still possible and desirable if only we label it sustainable or color it green will just delay the inevitable transition and make it more painful. If the economy cannot grow forever, then by how much can it grow? Can it grow by enough to give everyone in the world a standard of per capita resource use equal to that of the average American? That would turn out to be a factor of seven, a figure that is neatly bracketed by the Brundtland Commission (The United Nations' Commission on Environ- ment and Development [UNCED], headed by Mrs. Gro Brundtland) in its call for the expansion of the world economy by a factor of five to ten. The problem is that even expansion by a factor of four is impossible if Vitousek and others (1986) are correct in their calculation that the human economy currently preempts one-fourth of the global net primary product (NPP) of photosynthesis. We cannot go beyond 100 percent, and it is unlikely that we will increase NPP, since historical tendency up to now is for economic growth to reduce global photosynthesis. Since land-based ecosystems are the more relevant, and we preempt 40 percent of land- based NPP, even the factor of four is an overestimate. Also, reaching 100 percent is unrealistic, since we are incapable of bringing under direct human management all the species that make up the ecosystems upon which we depend. Furthermore, it is ridiculous to urge the preservation of biodiversity without being willing to halt the eco- nomic growth that requires human takeover of all places in the sun now occupied by other species. If growth up to the factor of five to ten recommended by the Brundt- land Commission is impossible, then what about just sustaining the pre- sent scale — that is, what about zero net growth? Every day we read about stress-induced feedbacks from the ecosystem to the economy, such as greenhouse buildup, ozone layer depletion, acid rain, and so on, which constitute evidence that even the present scale is unsustainable. How then can people keep on talking about "sustainable growth" when (t) the present scale of the economy shows clear signs of unsustain- ability, (2) multiplying that scale by a factor of five to ten, as recommended by the Brundtland Commission, would move us from unsustainability to imminent collapse, and (3) the concept itself is logically self-contradictory in a finite, nongrowing ecosystem? Yet sustainable growth is the buzzword of our time. Occasionally it becomes truly ludicrous, as when writers gravely speak of "sustainable growth in the rate of increase of economic activity." Not only must we grow forever, we must accelerate forever! This is hollow political verbiage, totally disconnected from reality.

#### Key distinction—Bataille doesn’t apply to late capital

Goux et al 90 (Jean-Joseph, the Lawrence Favrot professor of French and chair of French studies at Rice University, Kathryn Ascheim, PhD and editor of Nature Biotech, Rhonda Garelick, taught at Yale, University of Colorado at Boulder, and Columbia, critic of literature and politics, PhD in comparative literature, “General Economics and Postmodern Capitalism,” Yale French Studies No. 78 On Bataille, pp. 206-224)

Where do we situate Bataille’s claim? What happens to the demand of the sacred in capitalist society? How do we reconcile the affirmation that capitalism represents an unprecedented break with all archaic [precapitalist] forms of expenditure and the postulate of the necessary universality of spending as pure loss? This is the difficulty Bataille wants to maintain as a general anthropological principle the necessity of unproductive expenditure while simultaneously upholding the historic singularity of capitalism with regard to this expenditure. Bourgeois society corresponds to a “general atrophy of former sumptuary processes” (41). An anomaly whereby loss is not absent (which would contradict the general principle) but virtually unreadable: “Today, the great and free social forms of unproductive expenditure have disappeared. Nevertheless, we should not conclude from this that the very principle of expenditure is no longer situated at the end of economic activity” (37). So what happens to ostentatious expenditure in capitalism? And can we really believe, furthermore, that the even more radical desacralization effected by communism could become a libertarian affirmation of sovereignty – the feast of self-consciousness, without divinities and myths? Everything suggests that Bataille was unable to articulate the mystical tension toward sovereign self-consciousness “without form and mode,” “pure expenditure” (224) with a utopia of social life that would make it possible, nor to explain in a developed capitalist society the consumption of the surplus beyond its reinvestment in production. Now it is quite clear that today’s capitalism has come a long way from the Calvinist ethic that presided at its beginning. The values of thrift, sobriety, and asceticism no longer have the place that they held when Balzac could caricature the dominant bourgeois mentality with the characters of pére Grandet or the usurer Gobseck. It is doubtful that the spirit of capitalism, which according to Weber is expressed with an almost classical purity in Benjamin Franklin’s principles [“he who kills a five shilling coin assassinates all that it could have produced: entire stacks of sterling pounds”] [cited by Bataille, 163], could today be considered the spirit of the times. Undoubtedly, the pace at which all residual sacred elements inherited from feudalism are eliminated has quickened. but **hasn’t contemporary society undergone a transformation of the ethic of consumption**, desire, and pleasure **that renders the classical [Weberian] analyses** of the spirit of capitalism [**to which Bataille subscribes] inadequate**? If the great opposition between the sacred and the profane no longer structures social life, if communal, sacrificial, and glorious expenditure has been replaced by private expenditure, it is no less true that advanced capitalism seems to exceed the principle of restricted economy and utility that presided at its beginning. No society has “wasted” as much as contemporary capitalism. What is the form of this waste, of this excess?

### unity turn

#### They are a form of radical individualism

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Bataille believes that an affirmation of transience is politically liberating, that transience is a vital force that renders absurd the coerc¶ ive, long-term projects of the bourgeoisie. Yet pro-transience takes away any real consciousness of political stakes when it annihilates a sense of life’s rich duration. Indeed, a sense of transience cannot authentically liberate people from co¶ ercive projects, since such projects are themselves generated by a sense of transience. People want to gain lingering pleasure and freedom, and to avoid long periods of pain a¶ nd slavery. Bataille’s pro-transience view, on the other hand, evades any sense of these irreducible durations; it therefore evades a sense of the world of time as a world of stakes, as involving elements to be either avoided at all costs or seized! Through this evasion of real time, Bataille’s thought is politically neutered. Against Bataille, I insist that only an affirmation of real time can be politically progressive. For Bataille, the full engagement with the truth of transience generates a form of wild abandon (which unfetters forces that would otherwise be invested in conservative projects), but if we see pro-transience as an end game, as a pointless act of looking through the wrong end of a telescope, this view of time is shown to be about as exuberant as nostalgia TV. Pro-transience is in fact less audacious than a priest’s remorse, a slave’s regret.

**The argument that inscribing meaning is violent is patently bullshit – IN FACT, their refusal to inscribe meaning is the key link. The purpose of debate is advancing argumentation in search of Truth, if we win any of our link arguments then they lose**

**Russell ’12** Bertrand, philosopher and activist, founder of analytic philosophy “The Value of Philosophy” http://www.skepdic.com/russell.html

Apart from its utility in showing unsuspected possibilities, philosophy has a value -- perhaps its chief value -- through the greatness of the objects which it contemplates, and the freedom from narrow and personal aims resulting from this contemplation. The life of the instinctive man is shut up within the circle of his private interests: family and friends may be included, but the outer world is not regarded except as it may help or hinder what comes within the circle of instinctive wishes. In such a life there is something feverish and confined, in comparison with which the philosophic life is calm and free. The private world of instinctive interests is a small one, set in the midst of a great and powerful world which must, sooner or later, lay our private world in ruins. Unless we can so enlarge our interests as to include the whole outer world, we remain like a garrison in a beleagured fortress, knowing that the enemy prevents escape and that ultimate surrender is inevitable. I

n such a life there is no peace, but a constant strife between the insistence of desire and the powerlessness of will. In one way or another, if our life is to be great and free, we must escape this prison and this strife. One way of escape is by philosophic contemplation. Philosophic contemplation does not, in its widest survey, divide the universe into two hostile camps -- friends and foes, helpful and hostile, good and bad -- it views the whole impartially. Philosophic contemplation, when it is unalloyed, does not aim at proving that the rest of the universe is akin to man. All acquisition of knowledge is an enlargement of the Self, but this enlargement is best attained when it is not directly sought. It is obtained when the desire for knowledge is alone operative, by a study which does not wish in advance that its objects should have this or that character, but adapts the Self to the characters which it finds in its objects. This enlargement of Self is not obtained when, taking the Self as it is, we try to show that the world is so similar to this Self that knowledge of it is possible without any admission of what seems alien. The desire to prove this is a form of self-assertion and, like all self-assertion, it is an obstacle to the growth of Self which it desires, and of which the Self knows that it is capable. Self-assertion, in philosophic speculation as elsewhere, views the world as a means to its own ends; thus it makes the world of less account than Self, and the Self sets bounds to the greatness of its goods. In contemplation, on the contrary, we start from the not-Self, and through its greatness the boundaries of Self are enlarged; through the infinity of the universe the mind which contemplates it achieves some share in infinity. For this reason greatness of soul is not fostered by those philosophies which assimilate the universe to Man. Knowledge is a form of union of Self and not-Self; like all union, it is impaired by dominion, and therefore by any attempt to force the universe into conformity with what we find in ourselves. There is a widespread philosophical tendency towards the view which tells us that Man is the measure of all things, that truth is man-made, that space and time and the world of universals are properties of the mind, and that, if there be anything not created by the mind, it is unknowable and of no account for us. This view, if our previous discussions were correct, is untrue; but in addition to being untrue, it has the effect of robbing philosophic contemplation of all that gives it value, since it fetters contemplation to Self. What it calls knowledge is not a union with the not-Self, but a set of prejudices, habits, and desires, making an impenetrable veil between us and the world beyond. The man who finds pleasure in such a theory of knowledge is like the man who never leaves the domestic circle for fear his word might not be law.

## 1nr

### AT: We Meet

#### That violates the phrase USFG in the resolution which means the federal government in DC Dictionary of Government and Politics 98 (Ed. P.H. Collin, p. 292)

United States of America (USA) [ju:’naitid ‘steits av e’merike] noun independent country, a federation of states (originally thirteen, now fifty in North America; the United States Code = book containing all the permanent laws of the USA, arranged in sections according to subject and revised from time to time COMMENT: the federal government (based in Washington D.C.) is formed of a legislature (the Congress) with two chambers (the Senate and House of Representatives), an executive (the President) and a judiciary (the Supreme Court). Each of the fifty states making up the USA has its own legislature and executive (the Governor) as well as its own legal system and constitution

Violates the word should and the impact was explained in the overview

#### A course of action is key—otherwise vote neg on inherency because they already did the aff

**Parcher 2001** (Jeff, Former Debate Coach at Georgetown University, February, http://www.ndtceda.com/archives/200102/0790.html)

(1) Pardon me if I turn to a source besides Bill. American Heritage Dictionary: Resolve: 1. To make a firm decision about. 2. To decide or express by formal vote. 3. To separate something into constituent parts See Syns at \*analyze\* (emphasis in original) 4. Find a solution to. See Syns at \*Solve\* (emphasis in original) 5. To dispel: resolve a doubt. - n 1. Frimness of purpose; resolution. 2. A determination or decision. (2) The very nature of the word "resolution" makes it a question. American Heritage: A **course of action** determined or decided on. A formal statement of a decision, as by a legislature. (3) The resolution is obviously a question. Any other conclusion is utterly inconceivable. Why? Context. The debate community empowers a topic committee to write a topic for ALTERNATE side debating. The committee is not a random group of people coming together to "reserve" themselves about some issue. There is context - they are empowered by a community to do something. In their deliberations, the topic community attempts to craft a resolution which can be ANSWERED in either direction. They focus on issues like ground and fairness because they know the resolution will serve as the basis for debate which will be resolved by determining the policy desireablility of that resolution. That's not only what they do, but it's what we REQUIRE them to do. We don't just send the topic committtee somewhere to adopt their own group resolution. It's not the end point of a resolution adopted by a body - it's the prelimanary wording of a resolution sent to others to be answered or decided upon. (4) Further context: the word resolved is used to emphasis the fact that it's policy debate. Resolved comes from the adoption of resolutions by legislative bodies. A resolution is either adopted or it is not. It's a question before a legislative body. Should this statement be adopted or not. (5) The very terms 'affirmative' and 'negative' support my view. One affirms a resolution. Affirmative and negative are the equivalents of 'yes' or 'no' - which, of course, are answers to a question.

#### AND, their use of Van Gogh as a metaphor isn’t the same - they neglect core issues and this invocation is carried too far and makes the topic infinite

**Hart 6** (Hart, Geoff, September 2006, “Editorial: Overextending metaphors”, Scientific Communication, Vol. 13 No. 1, http://www.stcsig.org/sc/newsletter/html/2006-3.htm)FS

One problem with metaphors is that they can be carried too far: because a metaphor is only a simulation of reality, it does not precisely or fully match that reality, and each mismatch can potentially lead to misunderstanding. Consider, for example, the trash can used to delete files in most graphical user interfaces. The Macintosh interface designers who chose this metaphor to describe how users discard files chose an obvious and effective metaphor because just about everyone understands how a trash can works. But unfortunately, a great many users took that metaphor places its designers never intended. When this interface choice was first made, many Macintosh owners used their computer at home or in a small graphics studio rather than in a large corporate workplace, and thus used their experience with trash cans to make the following assumption: "When I throw something in the trash, it's going to stay there forever, or at least until I can persuade someone to take out the trash." Unfortunately, the first implementation of the Macintosh trash can automatically emptied the trash when you shut down your computer. That was clearly a problem for anyone who expected the discarded files to still be there waiting for them the next day when they turned on their computer. So many people complained about losing precious files (never mind that these files should never have been in the trash in the first place) that Apple changed the interface. Version two of the trash can accounted for this problem by leaving deleted files in the trash until someone specifically told the computer to empty the trash. That's a great idea, except by then, the world had moved on and more Macintosh users were using their computer in the workplace, where a janitor could be relied on to empty the trash each night after the workers went home. Since that wasn’t the way the software actually worked, the inevitable consequence was that files accumulated in the trash until they took over the entire computer; in other cases, people deleted files that were potentially embarrassing, not realizing the files were still there to be discovered by anyone who went poking around in the trash. Clearly, another small interface failure; unlike a spouse or roommate, the Macintosh operating system doesn't remind you to empty your trash periodically. A future iteration of the interface will presumably strike the right balance between versions one and two by retaining information in the trash until you specifically delete it, but also by periodically providing a gentle reminder to empty the trash. This example illustrates an important rule for successful use of metaphors: you must strive to **understand the consequences of the metaphor** by asking yourself what users will think when they encounter it, and thus, how they can be expected to behave. Where some behaviors will prove damaging, we need to clearly communicate the problem and its solution in our documentation. Better still, we need to report the problem to the designers of a product so they can take appropriate measures to protect users from their own instincts. Another significant problem with metaphors is that they rely on certain assumptions, and those assumptions bias how we think about reality. One of the most famous (some might say infamous) relates to a favorite device of science fiction writers: time travel. Science fiction writer René Barjavel, in pondering the implications of time travel, wondered about what quickly became known as the grandfather paradox: What would happen if you traveled back in time to a date before your parents were born, and killed one of your grandparents? Clearly, this means that one of your parents would never have lived, and thus could not have conceived you; the result, a few years into the future, is that you would never exist to return and kill that grandparent. But because you did not kill the grandparent, your parent would be born, leading to your birth and your subsequent desire to travel back in time and become a murderer. Round and round we go until we give up in frustration and choose a convenient way to avoid the problem—declare that time travel is impossible. Whether or not time travel really is impossible, that would be an unfortunate choice, because paradoxes are crucially important in science: they reveal when we don't understand a process nearly as clearly as we thought we did. If we did understand fully, there would be no paradox. The grandfather paradox presupposes that we understand how the physics of time travel would really work, namely that there is an indestructible connection between the past and the future and that changing the past would inevitably change the future. Should we stop there, no one would ever examine time travel in more detail to see whether other possibilities exist, and that would rob us of a much richer understanding of our world. One consequence might be the elimination of the branch of mathematics that examines the "many worlds" hypothesis, in which a whole new universe is hypothesized to spring into existence as soon as we change the past. In the case of the grandfather paradox, this means that two universes (one in which you are born and one in which you are not) would move forward through time from that point onwards. In writing a story, I once proposed a different metaphor: that time is more like a VHS tape, and that if you go back and change something, this is no different from recording over an old program you've already watched. The future (the part of the tape after the new recording) isn't changed because you haven't overwritten it yet. Both metaphors may be entirely incorrect (as seems likely based on our modern understanding of physics), but their correctness is not the important issue here: what's important is how each metaphor biases the way we think and predetermines the kind of analysis we're prepared to consider. Thus, a second rule of successful use of metaphors is that we must take great pains to understand the constraints they place on our thoughts. If we're aware of those constraints, we can attempt to work around them; if not, we won't make that effort, and that may prevent us from making crucial new discoveries. A third problem arises if we oversimplify our description of reality and thus neglect key issues. Consider, for example, the issue of fighting forest fires. Because mature forests develop over time spans longer than the typical human life, it's natural for us to think of them as eternal. Because we now understand the value of "untouched" nature, the inevitable consequence is that we want to preserve old forests and protect them against fires. This belief is epitomized in the public consciousness by Smokey the Bear and the "only you can prevent forest fires" slogan. Although it's true that human-originated fires are a serious problem, and should often be fought, the often part is neglected. In particular, the limited worldview offered by Smokey the Bear ignores the fact that fires are a crucial part of natural ecosystems and that some forest ecosystems only develop after fires, and will eventually disappear from the landscape if natural fires are not allowed to burn. The more general point is captured by the cliché that "the only constant is change". Ecosystems, including forests, aren't truly stable; instead, they exhibit what is known as metastability, in which what seems stable from the outside is actually changing continuously. In a forest, old trees die, unlucky trees are felled by lightning or windstorms, and new trees sprout to take their place. Rather than perfect stability, a mature forest is in equilibrium: individual components change, but the overall ecosystem stays close to its current state. Yet these equilibrium states also change; if the environment changes, or if disturbances such as fire are prevented, natural processes will lead the ecosystem to change into something new, and a new equilibrium will develop. For example, in the absence of fire, boreal jack pine forests will be replaced by shade-tolerant decidous trees that grow in the limited light beneath the forest canopy. As the older trees die, they are replaced by younger decidous trees, which produce so much shade when mature that the pines can no longer survive. The problem with describing ecosystems as stable is that it conceals the important concept of dynamic equilibrium, and the consequence that any equilibrium will eventually shift to a new type of equilibrium. This means we can never preserve a specific ecosystem in its current state forever, and that we probably should not try. Instead, it is more important to preserve the conditions that allow a given site to evolve naturally from one equilibrium state to another ("succession"), while altering conditions elsewhere to permit the development of the desired ecosystem. Communicating more of the complexity provides the necessary bounds on the metaphor, permits a more complete understanding, and lets us choose wiser management strategies. A third rule for successful use of metaphors is thus that we must identify critical points of failure—places where the metaphor is insufficiently complete that it leads our audience astray—and must provide the missing complexity that will prevent this misunderstanding. We must recognize that the purpose of a metaphor is to facilitate understanding, but once that understanding exists, we must build on it to provide any missing details that explain the true complexity. As scientific communicators, we often resort to metaphors because of their power to facilitate understanding. But to use metaphors successfully, we must be conscious of the problems I've identified in this essay: we must identify mismatches with reality, implicit and explicit assumptions, and places where the metaphor is too simplistic. Understanding these three problems lets us help our audience to understand the mismatches between the metaphor and reality, remind them of the assumptions behind the metaphor so that they can challenge those assumptions and make conceptual breakthroughs, and recognize where we have oversimplified a complex reality. That oversimplification is only acceptable if it provides an initial understanding that we can subsequently build upon to create a deeper, richer understanding

### rationality

#### Rationality is good – 1ac Jay evidence says that the ultimate source of truth is bad our argument doesn’t purport to be an ultimate truth claim, but we make lower T truth claim – our statements aren’t a total embrace of utility, but some things exist and reason is good – this doesn’t devolve into hegemonic instrumentality

**Rowland 1995** – professor of communication at the University of Kansas (10/1, Robert, Philosophy & Rhetoric, 28.4, “In defense of rational argument: A pragmatic justification of argumentation theory and response to the postmodern critique”, BESCO, credit to LDK)

The first step in developing a justifiable theory of rational argument that can account for the epistemological and axiological attacks is to recognize the **performative contradiction at the heart of the postmodern critique**. Postmodernists rely on rational argument in order to attack rational argument and they consistently claim that their positions are in some way superior to those of their modernist opponents. Writing of post-structuralism, Amanda Anderson notes "the incommensurability between its epistemological stance and its political aims, between its descriptions and its prescriptions, between the pessimism of its intellect and, if not the optimism, at least the intrusiveness of its moral and political will" (1992, 64).¶ The performative contradiction at the heart of postmodernism is nowhere more evident than in the epistemological critique of modernism. The two most important points made by postmodernists in relation to epistemology are that humans can understand the world only through their symbols and that there is no means of using "reality" to test a symbolic description. Advocates of traditional approaches to rationality have not been able to satisfactorily answer these positions, precisely because they seem to be "true" in some sense. This "truth," however, suggests that a theory of rational argument may be salvageable. If postmodernists can defend their views as in some sense "truer" than those of their modernist opponents, then there must be some standard for judging "truth" that can withstand the postmodern indictment. That standard is **pragmatic efficacy** in fulfilling a purpose in relation to a given problem.¶ Both modernists and postmodernists generally assume that truth and fact are equivalent terms. Thus, a "true" statement is one that is factually correct in all circumstances. By this standard, of course, there are no totally "true" statements. However, if no statement can be proved factually true, then a focus on facts is an inappropriate standard for judging truth.¶ I suggest that knowledge and truth should be understood **not as factual statements** that are **certain**, but as symbolic statements that function as **useful problem-solving tools**. When we say that a view is true, we really mean that a given symbolic description consistently solves a particular problem. Thus, the statement "the sun will come up tomorrow" can be considered "true," despite ambiguities that a postmodernist might point to in regard to the meaning of sun or tomorrow, because it usefully and consistently solves a particular epistemic problem.¶ **The standard for "truth" is pragmatic utility** in fulfilling a purpose in relation to a particular problem. A true statement is one that "**works" to solve the problem**. Both the nature of the problem and the arguer's purpose in relation to that problem infiuence whether a given statement is viewed as true knowledge. This explains why biological researchers and physicians often seem to have different definitions of truth in regard to medical practice. The researcher is concerned with fully understanding the way that the body works. His or her purpose dictates application of rigorous standards for evaluating evidence and causation. By contrast, the physician is concerned with treating patients and therefore may apply a much lower standard for evaluating new treatments. The pragmatic theory of argument I am defending draws heavily on the work of William James, who believed that "the only test of probable truth is what works" (1982, 225). Alan Brinton explains that for jEunes "the ultimate question of truth is a question about the concepts and their fruitfulness in serving the purposes for which they were created and imposed. Ideas are true insofar as they serve these purposes, and false insofar as they fail to do so" (1982, 163). Some contemporary pragmatists take a similar view. For example, Nicholas Rescher writes in relation to methodology that "the proper test for the correctness or appropriateness of anything methodological in nature is plainly and obviously posed by the paradigmatically pragmatic questions: Does it work? Does it attain its intended purposes?" (1977, 3). Similarly, Celeste Condit Railsback argues that "truth is . . . relative to the language and purposes of the persons who are using it" (1983, 358-59). At this point, someone like Derrida might argue that while the pragmatic approach accounts for the symbolic nature of truth, it does not deal with the inability of humans to get at reality directly. Although the postmodern critique denies that humans can directly experience "the facts," **it does not deny that a real-world exists**.¶ Thus, a pragmatist endorses a given scientific theory because the symbolic description present in that theory does a better job than its competitors of fulfilling a set of purposes in a given context. Because it fulfills those purposes, we call the theory "true." We cannot attain knowledge about "the facts," but we can test the relative adequacy of competing problem-solving statements against those facts. Michael Redhead, a professor of history and philosophy of science at Cambridge University, notes that "we can always conjecture, but there is some control. The world kicks back" (in Peterson 1992,175; emphasis added). Knowledge is not about "facts." It is about finding symbolic descriptions of the world that work, that is, avoiding nature's kicks in fulfilling a given purpose.¶ The foregoing suggests that a principled pragmatic theory of argument **sidesteps the postmodern critique**. Argumentation theory ¶ should be understood as a set of pragmatic rules of thumb about the kinds of symbolic statements that effectively solve ¶ problems. These statements exist at varying levels of generality. A consistency principle , for example, is really a rule of thumb stating something like "All other things being equal, consistent symbolic descriptions are more likely to prove useful for solving a particular problem in relation to a given purpose than are inconsistent descriptions." Other principles are linked to narrower purposes in more specific contexts. Thus, the standards for evaluating arguments in a subfield of physics will be tied to the particular purposes and problems found in that subfield. The key point is that all aspects of a theory of argument can be justified **pragmatically**, based on their value for producing **useful solutions to problems**

.¶ A pragmatic theory of argument can be understood as operating at three levels, all of which are tied to functionality. At the first or definitional level, argument is best understood as a kind of discourse or interaction in which reasons and evidence are presented in support of a claim. Argument as a symbolic form is valued based on its **ability to deal with problems**; the business of argument is **problem solving**. At a second or theoretical level, what Toulmin would call fieldinvariant, general principles of rational argument are justified pragmatically based on their **capacity to solve problems**. Thus, tests of evidence, general rules for describing argument, standards relating to burden of proof or presumption, and fallacies, all can be justified pragmatically based on the general problem-solving purpose served by all argument. For example, the requirement that claims must be supported with evidence can be justified as a general rule of thumb for distinguishing between strong and weak (that is, useful and useless) arguments. Certainly, there are cases in which unsupported assertions are "true" in some sense. However, the principle that any claim on belief should be supported with evidence of some type is a functional one for distinguishing between claims that are likely to be useful and those that are less likely to be useful.¶ At a third level, that of specific fields or subfields, principles of argumentation are linked to pragmatic success in solving problems in the particular area (see Rowland 1982). Thus, for instance, the rules of evidence found in the law are linked directly to the purposes served by legal argument. This explains why the burden of proof in a criminal trial is very different from that found in the civil law. The purpose of protecting the innocent from potential conviction requires that a higher standard of proof be applied in this area than elsewhere.¶ The pragmatic perspective I have described is quite different from that of interpretive pragmatists such as Richard Rorty (1979, 1982, 1985, 1987) and Stanley Fish (1980, 1989a, 1989b). Rorty, while denying the existence of legitimate formal or content-based standards for "proof" (1982,277), endorses a processual epistemology based on "the idea of [substituting] 'unforced agreement' for that of 'objectivity' " (41-42). Janet Home summarizes Rorty's views, noting that "the difference between 'certified knowledge' and 'mere belief is based upon intersubjective agreement rather than correspondence" (1989, 249). By contrast. Fish grounds reason in the practices of particular "interpretive communities" (1989b, 98). In this view, "Particular facts are firm or in question insofar as the perspective . . . within which they emerge is firmly in place, settled" (Fish 1989a, 308).¶ Unfortunately, a theory of argumentation cannot be salvaged merely by grounding reason in conversational practice or community assent. If there are no agreed upon standards, then how does one "rationally" test a claim intersubjectively or in process? Fish and Rorty beg the question when they ground reason in community and conversational process. Unlike Rorty and Fish, who reject the ideas of "truth" and "knowledge," I argue that those concepts must be redefined in relation to problem solving.¶ The pragmatic theory of argument that I have advanced provides a principled means of choosing among competing alternatives, regardless of the context. One always should ask whether or not a particular symbolic description of the world fulfills its purposes. In so doing, methodological principles for testing knowledge claims, such as tests of evidence, fallacies, and more precise field standards, can be justified, and then they can be applied within the conversation or by the community. The approach, therefore, provides standards to be applied in Rorty's process or by Fish's community and avoids the tautology that otherwise confronts those approaches. The perspective neatly **avoids the problems associated with modernism**, but also provides a principled approach to argument that does not lead to **relativism**.¶ In defense of rational argument¶ When argument is viewed as a pragmatic problem-solving tool, the power of the postmodern critique largely dissipates. At the most basic level, a pragmatic theory of argument is based on premises such as the following:¶ 'Statements **supported by evidence and reasoning** are more likely to be useful for satisfactorily solving a problem than ones that lack that support.¶ 'Consistent arguments are more likely to be generalizable than inconsistent ones.¶ **'Experts** are **more likely to have useful viewpoints** about technical questions tied to a particular field than nonexperts. These statements are **not "true" in the factual sense**, but they are universally recognized as useful, a point that is emphasized in the work of even the most committed postmodernist. Even someone like Derrida demands that his opponents support their claims with evidence and consistent reasoning. In so doing, Derrida clearly recognizes the functional utility of general standards for testing argument form and process.¶ Arguing should be understood as a **pragmatic process** for **locating solutions to problems**. The ultimate justification of argument as a discipline is that it produces useful solutions. Of course, not all arguments lead to successful solutions because the world is a complex place and the people who utilize the form/process are flawed. However, the general functional utility of argument as a method of ¶ invention or discovery and the method of justification is undisputed. The pragmatic approach to argument also provides a means of answering the axiological objections to traditional reason. Initially, the view that argument is often a means of enslaving or disempowering people is based on a misunderstanding of how argument as a form of discourse functions. In fact, the danger of symbolic oppression is less applicable to argument as a type of symbol use than to other forms. Argument tells us **how to solve problems**. It can be a force for enslavement only to the degree that a successful problem-solution is enslaving. This is a **rare event** in **any society** grounded in **democratic ethics**.¶ Additionally, argument as a form and process is inherently person-respecting because in argument it is not status or force that matters, but only the reasoning (see Brockriede 1972). In a pure argumentative encounter, it does not matter whether you are President of the United States or a college junior; all that is relevant is what you have to say. Of course, this ideal is rarely realized, but the principle that humans should test their claims against standards of argumentation theory that are tied to pragmatic problem solving (and not base conclusions on power) is one that recognizes the **fundamental humanity in all people**.¶ Furthermore, argument is one of the most important means of protecting society from symbolic oppression. Argument as an internal process within an individual and external process within society provides a method of testing the claims of potential oppressors. Therefore, training in argument should be understood as a means of providing pragmatic tools for breaking out of terministic or disciplinary prisons.¶ Against this view, it could be argued that pragmatism, because of its "practical" bent, inevitably degenerates into "hegemonic instrumental reason" in which technocratic experts control society. In Eclipse of Reason, Max Horkheimer takes the position that "in its instrumental aspect, stressed by pragmatism," reason "has become completely harnessed to the social process. Its operational value, its role in the domination of men and nations has been made the sole criterion" (1947, 21). Later, he notes that "pragmatism is the counterpart of modern industrialism for which the factory is the prototype of human existence" (50).¶ The claims that pragmatism reduces reason to a mere instrument of production or leads to undemocratic technocratic control of society are, however, **misguided**. Initially, it is worth noting that Horkeimer's aim is not to indict rationality per se, but to focus on the inadequacy of a purely instrumental form of rationality, which he labels "subjective reason." Near the conclusion of Eclipse of Reason, Horkheimer defends "objective reason": "This concept of truth—the adequation of name and thing—inherent in every genuine philosophy, enables thought to withstand if not to overcome the demoralizing and mutilating effects of formalized reason" (1947, 180). The goal of this essay, to develop a theory of rational argument that can withstand the postmodern indictment, is quite consistent with Horkheimer's view that humans need "objective reason" in order to "unshackle . . . independent thought" and oppose "cynical nihilism" (127, 174). While there can be no **purely "objective reason**," field-invariant and field-dependent principles of argumentation can be justified pragmatically to serve the aims that Horkheimer assigns to that form.¶ Moreover, a pragmatic theory of argument should not be confused with a decision-making approach based on mere practicality or self-interest. Principles of argument are justified pragmatically, that is, because they work consistently to solve problems. But after justification, the invariant and relevant field-dependent principles may be used to test the worth of any argument and are **not tied to a simple utilitarian benefit/loss calculus**. The misconception that a pragmatic theory of truth is tied to a simplistic instrumentalism is a common one. John Dewey notes, for instance, that William James's reference to the "cash value" of reasoning was misinterpreted by some "to mean that the consequences themselves of our rational conceptions must be narrowly limited by their pecuniary value" (1982, 33). In fact, pragmatism "concerns not the nature of consequences but **the nature of knowing**" (Dewey 1960,331). Or as James himself put it, "The possession of true thoughts means everywhere the possession of **invaluable instruments of action**" (1948, 161). Pragmatism "is a method only," which "does not stand for any special result" (James 1982, 213), but that method can be used to justify principles of argument that in turn can be used to **check the excesses of instrumental reason**. Moreover, a pragmatic approach to argument is **self-correcting**. According to James, pragmatism "means the open air and possibilities of nature, as **against dogma,** artificiality and the pretense of finality in truth" (213). Dewey makes the same point when he claims that pragmatic theory involves "the use of intelligence to **liberate and liberalize action**" (1917,63). **Nor does pragmatism necessarily lead to expert domination**. A pragmatic argumentation theory endorses deference to the opinion of experts **only on questions for which the expert possesses special knowledge** relevant to a particular problem. And even on such issues, the views of the expert would be subject to rigorous testing. It would be quite unpragmatic to defer to expert opinion, absent good reasons and strong evidence.¶ The previous analysis in no way denies the risks associated with technical reason. It is, however precisely because of such risks that a principled pragmatic theory of argument is needed. Given that we live in an advanced technological society, **it is inevitable that technical reason will play a role**. Postmodernism points to the dangers of technical reason, but provides **no means of avoiding those risks**. A pragmatic theory of argument, by contrast, **justifies principles of rationality** that can be used to **protect society** from the **nihilistic excesses** of a **purely instrumental reason**.¶ ¶

# round 4 neg v. george mason dm

## 1nc

### 1nc t

#### The aff develops SMRS – that production refers to extraction and conversion, but excludes research and development

Koplow 4 Doug Koplow is the founder of Earth Track in Cambridge, MA. He has worked on natural resource subsidy issues for 20 years, primarily in the energy sector "Subsidies to Energy Industries" Encyclopedia of Energy Vol 5 2004www.earthtrack.net/files/Energy%20Encyclopedia,%20wv.pdf

3. SUBSIDIES THROUGH THE FUEL CYCLE¶ Because no two fuel cycles are exactly the same, examining subsidies through the context of a generic fuel cycle is instructive in providing an overall framework from which to understand how common subsidization policies work. Subsidies are grouped into preproduction (e.g., R&D, resource location), production (e.g., extraction, conversion/generation, distribution, accident risks), consumption, postproduction (e.g., decommissioning, reclamation), and externalities (e.g., energy security, environmental, health and safety).¶ 3.1 Preproduction¶ Preproduction activities include research into new technologies, improving existing technologies, and market assessments to identify the location and quality of energy resources.¶ 3.1.1 Research and Development¶ R&D subsidies to energy are common worldwide, generally through government-funded research or tax breaks. Proponents of R&D subsidies argue that because a portion of the financial returns from successful innovations cannot be captured by the innovator, the private sector will spend less than is appropriate given the aggregate returns to society. Empirical data assembled by Margolis and Kammen supported this claim, suggesting average social returns on R&D of 50% versus private returns of only 20 to 30%.¶ However, the general concept masks several potential concerns regarding energy R&D. First, ideas near commercialization have much lower spillover than does basic research, making subsidies harder to justify. Second, politics is often an important factor in R&D choices, especially regarding how the research plans are structured and the support for follow-on funding for existing projects.¶ Allocation bias is also a concern. Historical data on energy R&D (Table III) demonstrate that R&D spending has heavily favored nuclear and fossil energy across many countries. Although efficiency, renewables, and conservation have captured a higher share of public funds during recent years, the overall support remains skewed to a degree that may well have influenced the relative competitiveness of energy technologies. Extensive public support for energy R&D may also reduce the incentive for firms to invest themselves. U.S. company spending on R&D for the petroleum refining and extraction sector was roughly one-third the multi-industry average during the 1956-1998 period based on survey data from the U.S. National Science Foundation. For the electric, gas, and sanitary services sector, the value was one-twentieth, albeit during the more limited 1995-1998 period.¶ 3.1.2 Resource Location¶ Governments frequently conduct surveys to identify the location and composition of energy resources. Although these have addressed wind or geothermal resources on occasion, they most often involve oil and gas. Plant siting is another area where public funds are used, primarily to assess risks from natural disasters such as earthquakes for large hydroelectric or nuclear installations. Survey information can be important to evaluate energy security risks and to support mineral leasing auctions, especially when bidders do not operate competitively. However, costs should be offset from lease sale revenues when evaluating the public return on these sales. Similarly, the costs of siting studies should be recovered from the beneficiary industries.¶ 3.2 Production¶ Energy production includes all stages from the point of resource location through distribution to the final consumers. Specific items examined here include resource extraction, resource conversion (including electricity), the various distribution links to bring the energy resource to the point of final use, and accident risks.

#### Vote neg:

#### 1. Limits—R&D enables obscure energy types and insulates the aff from incentives debating, which is the source of ground.

#### 2. Plan flaw—the aff gives money for a project, but they have no evidence the DOD would use it or apply the developed project—vote neg on presumption.

### 1nc politics

#### Obama pushing sequestration deal – key to avert economic collapse

Susa Crabtree 2/6 (writer for the Washington Times) February 6, 2013 “Obama ramps up pressure to resolve sequester;¶ Sets up another partisan battle” Lexis

Warning of serious repercussions for the economy and the military if Congress fails to halt the next round of $85 billion in budget cuts next month, President Obama on Tuesday called for replacing the automatic spending "sequesters" with a vague mix of smaller cuts and more tax increases.¶ At a time when many top Republicans have said the cuts should take effect, Mr. Obama's call renews the battle over spending that has dominated Washington for the past two years, but which seemed to cool after the January deal that raised taxes across the board.¶ The president said he would like another big tax reform that targets the wealthy, cutting deductions and loopholes, but said at the very least Congress should avert the sequester, which he called an avoidable self-inflicted economic wound.¶ "If they can't get a bigger package done by the time the sequester is scheduled to go into effect, then I believe they should at least pass a smaller package," he said. "There is no reason that the jobs of thousands of Americans who work in national security or education or clean energy - not to mention the growth of the entire economy - should be put in jeopardy."¶ His offer is a rehash of proposals he has made to end tax breaks and lower projected increases in health care spending, though the White House has yet to lay out a full list of deductions it wants Congress to target.¶ Even before Mr. Obama spoke, Republicans were rejecting his offer.¶ House Speaker John A. Boehner, Ohio Republican, issued a statement saying it was the president who came up with the sequester idea. He also said House Republicans have passed two bills to avert the sequesters, so Mr. Obama must lay out his own specific plan.¶ Still smarting from his "fiscal cliff" deal with Democrats in which Republicans agreed to increase taxes without spending cuts, the speaker made it clear that he was ruling out any need to increase taxes further.¶ "President Obama first proposed the sequester and insisted it become law. Republicans have twice voted to replace these arbitrary cuts with common-sense cuts and reforms that protect our national defense," he said. "We believe there is a better way to reduce the deficit, but Americans do not support sacrificing real spending cuts for more tax hikes.¶ "The president's sequester should be replaced with spending cuts and reforms that will start us on the path to balancing the budget in 10 years," he said.¶ Senate Minority Leader Mitch McConnell, Kentucky Republican, rebuked Mr. Obama for lecturing Congress about the need to avoid the cuts he proposed.¶ "If Democrats have ideas for smarter cuts, they should bring them up for debate," he said. "But the American people will not support more tax hikes in place of the meaningful spending reductions both parties already agreed to and the president signed into law."¶ Mr. McConnell also criticized Mr. Obama for failing to submit a budget by the statutory deadline this year.¶ "The clock is ticking. It's time to get serious," he added.¶ The White House first came up with the idea of the arbitrary, across-the-board spending cuts during budget talks in summer 2011 as a way to pressure Democrats and Republicans in Congress into coming up with their own spending cut plan to reduce the deficit over the next decade.¶ But partisan Washington gridlock quickly took hold and a supercommittee of lawmakers tasked with coming up with a plan to find alternative spending cuts to replace the sequester failed to reach a deal after negotiating for months.¶ As the country braced for the cuts to kick in and Washington to tumble off the fiscal cliff Jan. 1, lawmakers struck a last-minute deal that shifted the first two months of cuts into future spending bills and replaced the rest with an increase in the way retirement accounts are taxed. Still, the deal postponed another $85 billion in cuts to March 1 - a way to buy more time to find alternative sources of revenue.¶ The Pentagon in recent weeks has grown increasingly pessimistic about the chances of avoiding the cuts, and the branches of the military have issued memos outlining what programs and sections would be hit hardest.¶ Washington think tanks and policy centers have warned repeatedly of the havoc that the cuts could wreak on the economy. The Bipartisan Policy Center has estimated that 1 million jobs could be lost this year and next as a direct result of the spending cuts, and defense industry analysts say that number could rise to 2 million this year alone.¶ The president made his plea as Senate Democrats were meeting in Annapolis for their annual retreat. Mr. Obama is scheduled to address the group Wednesday.

#### It’s the top priority—PC key

Wolf Blitzer and Gloria Borger (CNN political analysts) February 1, 2013 “Wall Street Soars; Senate Scandal; Super Bowl Advertising; Al Gore Defends Selling to Al Jazeera; The Most Expensive Election; Hillary Clinton Resigns; Kerry Arrives at Swearing in Ceremony; Geraldo Rivera for Senator?; New Jersey Senate Showdown; Once Powerful Cardinal Disciplined; $8M a Minute; Controversy Over Some Super Bowl Ads; New York Mourns Ed Koch” Lexis

BLITZER: So, there's more jobs created, another 150,000 last month. They revised figures for November and December, another 200,000 beyond those earlier announced.¶ So how is this going to impact his legislative agenda on some of these critically important issues?¶ BORGER: Before he gets to immigration and everything else, he has to go through all of the business speed bumps, the economic speed bumps.¶ BLITZER: And there are plenty of them.¶ BORGER: And there are plenty of them coming up.¶ And I think both sides can make the case, Wolf, and they will, that a dysfunctional Washington really hurts consumer confidence and hurts business hiring. Republicans will say you have got to decrease the deficit and the president will say, you know what, we have to perhaps think about spending a little bit of money to get out of this and to try and reduce that unemployment rate.¶ So they are going to come at it from different sides, Wolf. The big thing to think about here is the president's approval rating. It is now at 52 percent. That gives him an awful lot of leverage on these economic issues.¶ BLITZER: He's going to need that if he's going to get some of these agenda items through.¶ BORGER: He will need every bit of it. Yes.

#### The plan injects a new budget controversy—no turns

**Gholz 2012** – PhD, Associate Professor of Public Affairs, University of Texas at Austin, senior advisor to the deputy assistant secretary of defense for manufacturing and industrial base policy (March, Eugene, Energy Innovation at the Department of Defense: Assessing the Opportunities, White Paper, “The dynamics of military innovation and the prospects for defense-led energy innovation”, http://bipartisanpolicy.org/sites/default/files/Energy%20Innovation%20at%20DoD.pdf, WEA)

The old saw that the Army would rather plan ¶ than fight may be an exaggeration, but it holds more than a grain ¶ of truth. More than most organizations, the U.S. military is well ¶ prepared to deal with the complexity that energy innovation ¶ will inject into its routines, and even if the logistics system seems ¶ Byzantine and inefficient, the organizational culture does not ¶ have antibodies against this aspect of energy innovation.¶ **On the other** hand, investing in base infrastructure has tended ¶ to be a harder task for the military, because with a few exceptions ¶ the quality of facilities at bases is tangential to the organizations’ ¶ critical tasks. People may rib the Air Force for the priority attached ¶ to making sure that bases have a decent golf course, but the ¶ bases do not really suffer (or benefit) from overinvestment in ¶ what is perceived as “nice to have” luxuries. **It is local politics** and ¶ their impact on congressional votes **that** **maintains** a **robust** ¶ number of military **bases, and the politics feed on** the **money** ¶ that **soldiers and their families spend in the community, not** ¶ **on paying the additional up-front cost of installing** efficient or ¶ **experimental energy** technologies.¶ 96

The military installations ¶ that attract the most innovative spending are the installations ¶ where the spending contributes directly to American forces’ ¶ combat edge—bases like the National Training Center that ¶ allow for highly realistic combat exercises. Advocates of energy ¶ innovation are unlikely to meld their pitch smoothly with that ¶ high-end organizational mission. If, instead, they pitch the energy ¶ innovations as “efficiency-enhancing,” they will face the fate ¶ of every other efficiency-enhancing investment that military ¶ installations could make: energy innovation will be treated as a ¶ low priority somewhere in the mix of desiderata in the budget.

#### Econ decline causes global catastrophe and nuclear war

Harris and Burrows, 9 – \*counselor in the National Intelligence Council, the principal drafter of Global Trends 2025, \*\*member of the NIC’s Long Range Analysis Unit “Revisiting the Future: Geopolitical Effects of the Financial Crisis”, Washington Quarterly, http://www.twq.com/09april/docs/09apr\_burrows.pdf)

Increased Potential for Global Conflict

Of course, the report encompasses more than economics and indeed believes the future is likely to be the result of a number of intersecting and interlocking forces. With so many possible permutations of outcomes, each with ample opportunity for unintended consequences, there is a growing sense of insecurity. Even so, history may be more instructive than ever. While we continue to believe that the Great Depression is not likely to be repeated, the lessons to be drawn from that period include the harmful effects on fledgling democracies and multiethnic societies (think Central Europe in 1920s and 1930s) and on the sustainability of multilateral institutions (think League of Nations in the same period). There is no reason to think that this would not be true in the twenty-first as much as in the twentieth century. For that reason, the ways in which the potential for greater conflict could grow would seem to be even more apt in a constantly volatile economic environment as they would be if change would be steadier.

In surveying those risks, the report stressed the likelihood that terrorism and nonproliferation will remain priorities even as resource issues move up on the international agenda. Terrorism’s appeal will decline if economic growth continues in the Middle East and youth unemployment is reduced. For those terrorist groups that remain active in 2025, however, the diffusion of technologies and scientific knowledge will place some of the world’s most dangerous capabilities within their reach. Terrorist groups in 2025 will likely be a combination of descendants of long established groupsinheriting organizational structures, command and control processes, and training procedures necessary to conduct sophisticated attacksand newly emergent collections of the angry and disenfranchised that become self-radicalized, particularly in the absence of economic outlets that would become narrower in an economic downturn.

The most dangerous casualty of any economically-induced drawdown of U.S. military presence would almost certainly be the Middle East. Although Iran’s acquisition of nuclear weapons is not inevitable, worries about a nuclear-armed Iran could lead states in the region to develop new security arrangements with external powers, acquire additional weapons, and consider pursuing their own nuclear ambitions. It is not clear that the type of stable deterrent relationship that existed between the great powers for most of the Cold War would emerge naturally in the Middle East with a nuclear Iran. Episodes of low intensity conflict and terrorism taking place under a nuclear umbrella could lead to an unintended escalation and broader conflict if clear red lines between those states involved are not well established. The close proximity of potential nuclear rivals combined with underdeveloped surveillance capabilities and mobile dual-capable Iranian missile systems also will produce inherent difficulties in achieving reliable indications and warning of an impending nuclear attack. The lack of strategic depth in neighboring states like Israel, short warning and missile flight times, and uncertainty of Iranian intentions may place more focus on preemption rather than defense, potentially leading to escalating crises.

Types of conflict that the world continues to experience, such as over resources, could reemerge, particularly if protectionism grows and there is a resort to neo-mercantilist practices. Perceptions of renewed energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could result in interstate conflicts if government leaders deem assured access to energy resources, for example, to be essential for maintaining domestic stability and the survival of their regime. Even actions short of war, however, will have important geopolitical implications. Maritime security concerns are providing a rationale for naval buildups and modernization efforts, such as China’s and India’s development of blue water naval capabilities. If the fiscal stimulus focus for these countries indeed turns inward, one of the most obvious funding targets may be military. Buildup of regional naval capabilities could lead to increased tensions, rivalries, and counterbalancing moves, but it also will create opportunities for multinational cooperation in protecting critical sea lanes. With water also becoming scarcer in Asia and the Middle East, cooperation to manage changing water resources is likely to be increasingly difficult both within and between states in a more dog-eat-dog world.

### 1nc spacemil

#### Current space policy prevents conflict through cooperation and restraint

**Huntley 11** – senior lecturer in the National Security Affairs department at the Naval Postgraduate School in Monterey, California (Wade, “The 2011 U.S. National Space Security Policy: Engagement as a Work in Progress”, Disarmament Times, Spring, http://disarm.igc.org/index.php?option=com\_content&view=article&id=429:the-2011-us-national-space-security-policy-engagement-as-a-work-in-progress&catid=154:disarmament-times-spring-2011&Itemid=2)

This background is essential for appreciating how the space policies of the Obama administration are beginning to genuinely break new trails. The U.S. National Space Policy issued in June 2010 has been widely recognized for its cooperative and multilateral tone, including as explicit near-term goals the expansion of international cooperation on all activities and pursuing international as well as national measures to enhance space stability. Particularly notable are the document’s emphasis on orienting U.S. “leadership” toward fostering international cooperation, and its references, in its concluding section, to cooperation with other states and non-state actors in the pursuit of national security space objectives.3

Less broadly noticed was this policy’s clarity and coherence in articulating a vision for U.S. space activities on its own terms.  The document is organized around core principles, subsidiary goals and implementing guidelines that exceed its predecessors in delineating a longer-term direction for U.S. space policy that is integrated with, rather than derivative of, broader U.S. global aims.4 The policy also was generated and issued far earlier in the tenure of the administration than either of its predecessors, indicating an increased prioritization of attention to space policy at higher levels of policy-making.

To some degree, a turn toward multilateral cooperation in U.S. space policy was to be expected. China’s 2007 anti-satellite weapon (ASAT) test and the 2009 Iridium-Cosmos collision increased awareness of the challenge of space debris and the need for better global information sharing on space situational awareness (SSA).5  Also, new budget realities and **unpromising tech**nological developments have scaled back ambitions in some quarters for solving U.S. space security concerns with new independent capabilities. Finally, the Obama administration has pursued a more cooperative disposition across a wide range of global policy challenges, from Iranian nuclear ambitions to global climate change. But the improved clarity of vision in the 2010 Space Policy suggests that the emphasis on fostering global cooperation on space-related activities is more grounded in deliberate foresight than sailing the prevailing political winds.

The 2011 National Security Space Strategy, released February 4, is best interpreted against this background of the Obama administration’s turn toward both greater international space cooperation and greater attention to space policy in general. This first-of-its-kind strategic statement culminates a congressionally mandated space posture review.6 The initial section portraying the strategic environment to which U.S. security policy must be responsive highlights the growing problems of space debris, orbital congestion and coordination among a growing number of space actors — not state-based security threats per se.  The Security Space Strategy features the objective of a “stable space environment in which nations exercise shared responsibility.”7 Specific provisions intended to implement this strategy, relevant to the preceding observations, include:8

• The strategy presents a full section on “Partnering with Responsible Nations, International Organizations, and Commercial Firms.” This category is not wholly multilateral in the traditional sense, displaying a symbiosis of alliance-building and collective cooperation not always carefully distinguished; i.e., “The United States will lead in building coalitions of like-minded space-faring nations and, where appropriate, work with international institutions to do so.”

• The strategy intends to “encourage responsible behavior in space and lead by the power of example,” a significant observation given the tendency of U.S. policy-makers (as noted above) not to expect quid pro quo responses to cooperative gestures. Also, the strategy states the U.S. “will support development of data standards, best practices, **transparency** and confidence-building measures, and *norms of behavior for responsible space operations*.” [italics added] In the context of the section on “Preventing and Deterring Aggression,” the strategy similarly intends to “support diplomatic efforts to promote norms of responsible behavior in space” as well as “pursue international partnerships that encourage potential adversary restraint,” along with other measures.  This emphasis on norm-building and the role of example suggests a near-term endorsement of the development of “codes of conduct” for space activities (such as the recently revised European Union Code of Conduct, discussed below), whether or not such concord leads to more formal arms control arrangements in the longer-term.

• The Department of Defense is directed to “foster cooperative SSA relationships,” and to “expand provision of safety of flight services to U.S. Government agencies, other nations, and commercial firms.” Greater SSA information sharing has been a key suggestion for fostering international cooperation; the U.S. possesses globally superior SSA capabilities, but restricts the sharing of this information on the basis of national security concerns.9 Hence, this nominal commitment is significant in its own right.

• The strategy commits to reforming export controls. “In particular, as new opportunities arise for international collaboration, a revised export control system will better enable the domestic firms competing for these contracts.” As noted above, the oppressive impact of current U.S. export controls not only impinges on U.S. commercial space actors but also epitomizes the high degree to which U.S. policy has subsumed commercial and civil interests to national security concerns. The strategy appears to acknowledge this connection and commit to remedy it.

• The most assertive passages of the statement are moderated with community-building intent. For example, the strategy’s section on “Preventing and Deterring Aggression” concludes that the U.S. “will retain the right and capabilities to respond in self-defense, should deterrence fail,” but immediately adds that the U.S. “will use force in a manner that is consistent with longstanding principles of international law, treaties to which the United States is a party, and the inherent right of self defense.”

• The concluding and most conflict-oriented section of the strategy opens by noting that “some actors may still believe counterspace actions could provide military advantage.” Counterspace capabilities, unarticulated in the document, include ASATs, ground-based directed energy weapons and satellite transmission jamming. Deputy Assistant Secretary of Defense for Space Policy Gregory Schulte explained at the strategy’s rollout that China is a principal concern in this regard, but so is the proliferation of these technologies: “If Ethiopia can jam a commercial satellite, you have to worry what others can do.”10  This section of the strategy does not, however, call for maintaining options to develop complementary space conflict capabilities.

Rather, the strategy asserts that the U.S. “must be prepared to ‘fight through’ a degraded environment,” and identifies “resilience” and “space protection” as the key criteria.

The preceding survey of elements of the 2011 National Security Space Strategy is deliberately selective, highlighting those elements expressing consistency with the 2010 National Space Policy’s bend toward fostering greater international collaboration. Perhaps as **striking** as the prevalence of such passages, however, **is the** **absence of** expressed **intention — even** couched **in hedging language — to** sustain or **expand** the kind of **independent** **space-based military capabilities** that were the centerpiece of the prior administration’s aims (if not its accomplishments). Again, to some extent this turn in tone is overdetermined by extenuating global circumstances. But one must still be struck by the degree to which developments such as the Chinese ASAT test have not ignited the kind of response one might have anticipated only a few short years after Donald Rumsfeld’s notorious warning of a “space Pearl Harbor.”11

The most immediate significance of the National Security Space Strategy is likely the signals its sends concerning U.S. policy toward the recently revised European Union Code of Conduct.12  The strategy did not explicitly endorse this EU initiative, but Mr. Schulte, at the February 4 presentation of the strategy, highlighted the initiative “as a potential way” to promote “transparency and confidence-building measures, which tend to be voluntary as opposed to legally binding.” A week earlier, Rose Gottemoeller, Assistant Secretary of State for Arms Control, Verification and Compliance, stated at the Conference on Disarmament that the administration was nearing a decision on whether the U.S. would sign on to the code, and what modifications might be required in order to do so.13 As U.S. interest in the Code of Conduct has increased, debates over its provisions and its relationship to the Outer Space Treaty have intensified.

These policy movements toward multilateral engagement and commitment to behavioral standards (even if non-binding) mark a sharp departure from the stiff resistance to curtailing U.S. “freedom of action” in the previous administration, and have accordingly generated resistance from congressional opponents on just those terms. Prior to the release of the National Security Space Strategy, a group of 37 Republican senators led by Arizona Senator Jon Kyl issued a letter to Secretary of State Hillary Rodham Clinton expressing concern over a potential multilateral commitment that might limit development and/or deployment of space-based missile defense interceptors and ASAT-defeating systems.14  Critics also decried the strategy’s emphasis on “the old fallacious assumption that the power of example will prevent adversaries from doing the United States harm,” and endorsed maintaining the goal of U.S. retention of a “dominant position in military and intelligence space capabilities.”15 In fact, the administration’s warming toward normative commitments in general — and the EU Code of Conduct in particular — are in part intended to forestall pressure for more formal and binding measures that would definitively cut off the “hedge” of unilateral U.S. weapons development options.16 The balance of U.S. debate may have shifted toward greater international cooperation, but the terms of the debate remain the same.

In sum, the National Security Space Strategy appears to mark not only a swing in U.S. policy toward greater global engagement but also, and more importantly, a step toward greater long-term coherence in thinking concerning the core goals of U.S. space activities. Even supporters of the general directions of the strategy noted its more-than-expected breadth of thought.17 But if this reading is sound, the strategy is still but one step on a long road, and ongoing debates over the role of U.S. space policy vis-à-vis broader national security interests will insure that road is bumpy. Suggesting such limitations, Mr. Schulte acknowledged that the classified version of the strategy is only four pages longer than the released version, indicating that more specific guidelines for military implementation of the strategy remain to be developed.18 Many devils may lurk in these details.

#### The plan causes space weaponization

Maybury 12 Chief Scientist-USAF, “Energy Horizons: United States Air Force Energy S&T Vision 2011-2026,” 1/31, http://www.fas.org/irp/doddir/usaf/energy.pdf

Space is the ―ultimate high ground, providing access to every part of the globe, including denied areas. Space also has the unique characteristic that once space assets reach space, they require comparatively small amounts of energy to perform their mission, much of which is renewable. This simple characterization belies the complexity of the broader space enterprise. The bigger space energy picture must encompass the energy required to maintain and operate the launch ranges, the energy consumed during the launch of space assets, the energy generated and used in space, the energy consumed in satellite control stations, and the energy consumed in data ingest and processing centers. A comprehensive space energy strategy that addresses this full spectrum promises to enhance the resiliency, sustainability, and affordability of future space systems and operations through reduced consumption, increased energy supply, and cultural change. In the near-term, there should be an emphasis on lowering ground facilities and systems energy consumption, while continuing S&T investments for long-term assured energy advantage. The focus on ground facilities should include launch ranges, world-wide satellite control facilities, as well as the substantial data centers required to process and disseminate data to warfighters. In the longer term it may be possible to broaden the set of missions to be performed from space in an energy-efficient manner. This would require significant advances in S&T related to space-borne energy generation and storage technologies. In the mid- and long-term, substantial energy savings may be achieved through commonality in ground systems, efficient operations of those ground systems, as well as expanding the use of renewable energy resources. 3.1 Space Domain Strategic Context **On-orbit assets continue to be among the highest demand** and lowest density assets in the Air Force inventory. They consistently and effectively provide unique capability to the community. These assets are constrained, not just by the size of the payloads they carry, but also by their capability. Their austere operational environment coupled with current technology constraints means these systems regularly are required to operate long past their projected life. S&T that increases energy production, storage, and utilization of on-orbit assets can both provide longer life systems or increase capability value for the Air Force. In contrast to the air domain, assets in the space portfolio do not use traditional aviation fuels for mobility (airlift and air refueling). Indeed, once space assets are placed in orbit, with the very small exception of on-board consumables (to include propulsion for satellite maneuverability), only energy for the associated ground facilities and systems is required to maintain and operate them. Although there is an energy cost in getting systems to space, it is relatively small compared to the energy costs of the ground infrastructure. Therefore, in the near-term, investments in S&T that reduce the energy costs of space systems should focus primarily on reducing the energy costs of the associated ground facilities and systems. Nonetheless, there are promising S&T projects, such as the Reusable Booster System (RBS) and revolutionary small launch vehicles, that may substantially reduce the cost to orbit by applying lessons learned from the commercial aircraft industry to the RBS. For example, reuse may dramatically reduce manufacturing costs while simultaneously permitting much faster turnaround times. However, the full implications of reusable launch vehicles on energy consumption are not yet fully understood. The reusable components of RBS must be rocketed or jetted back to the launch base, resulting in greater use of energy for every launch. The energy impact of RBS requires detailed study. Additional potentially large energy cost savings could be achieved by employing other technologies emphasized in Technology Horizons, including fractionated, composable, and networked space systems. Much smaller systems that may perform the same functions as larger systems offer the possibility of substantially lowering launch costs and reducing on-orbit energy use. On the other hand, launching larger constellations of smaller satellites in low earth orbit may require more energy and use less efficient small launch vehicles. The total energy picture associated with the use of small, fractionated satellites requires careful analysis. Technology Horizons also advocated autonomous real-time, cross-domain, assured and trusted Space Situational Awareness (SSA). While autonomy can be used to save energy and cost for virtually any space mission, automating heavily human-directed SSA can potentially save large energy costs by reducing the presence of human interaction and, at the same time, increasing responsiveness. Figure 3.1 visually emphasizes that the overwhelming share of energy use for space domain operations is in terrestrial facilities and systems. Of the energy consumed for Air Force Space Command (AFSPC) missions, 97.2% is used by terrestrial facilities, 1.8% is used for ground vehicle transportation, and an estimated 1% is used for rocket launches. The commercial space sector has taken significantly different approaches on the ground infrastructure. Commercial space systems are operated with smaller facilities, small crews, and even autonomously. AFSPC has considered base closures to save significant costs; another solution, either in concert with base closures or by itself, is to establish an aggressive program to replace local power generation with renewable technologies. This would directly support the Air Force Energy Plan goals in the near-term, while also supporting assured sources of supply and cost reduction goals. Efforts are already underway to create more energy efficient ground assets using information from the cyber and infrastructure elements of Energy Horizons. A key opportunity is energy cost reduction for terrestrial radar and heating, ventilation, and air conditioning (HVAC) systems, but so far little work has been done on this. 3.2 Space Energy Technologies Leading edge technologies for energy performance of on-orbit space systems can transition to terrestrial facilities and systems to lower their energy intensity and consumption. These technologies fall into three categories which are addressed in turn: energy generation, storage, and transmission. 3.2.1 Energy Generation Table 3.1 illustrates the near-, mid- and far-term opportunities in energy generation. Today, there is an emphasis on continuing to evolve Inverted Meta-Morphic (IMM) solar cell arrays that are exceeding 34% efficiency in demonstration programs. In contrast, current terrestrial solar cell arrays for energy generation are far less efficient, below 20%. If packaging and production issues could be overcome, the improved efficiency offered by IMM would dramatically improve the output capabilities of ground facility solar array systems and, in turn, lower the use of non-renewable energy sources. There may also be spinoff to the air and ground domains through programs such as DARPA‘s Vulture program, a long-endurance unmanned vehicle powered by solar cells, which is taking advantage of the same kinds of efficiency improvements in terrestrial systems. The importance of these S&T efforts lies in the fact that every 1% increase in solar cell energy generation efficiency translates to a 3.5% increase in power (or decrease in mass) for the system. The downside is that as the efficiency improves, the relative benefit is not as great, so there is a point of diminishing returns with the evolutionary approach. In addition, amorphous-Silicon (a-Si) for flexible arrays has achieved 10% efficiency. While a-Si has not been fully space qualified, it could be transitioned to terrestrial systems such as Remotely Piloted Aircraft (RPA) and powered tents. There are other breakthrough space energy generation component technologies with the potential of achieving up to 70% efficiency. Examples include quantum dots and dilute nitrides in solar cells. But there are also entirely new technologies such as tethers to attempt to harvest energy from the geomagnetic field, and energy harvesting from system heat waste. These ideas, as well as **new developments in** nuclear energy, including **small modular reactors, can potentially fuel** local **facilities.** Recently, there has been progress in developing large systems for energy generation, including very large deployable panels as developed by the Air Force Research Lab (AFRL), DARPA, and industry. For example, we are currently limited to 27 kW arrays for satellite power, whereas more power is required for some future space missions by the AF, National Security Space (NSS), and NASA. **Employing larger and more efficient arrays will enable missions that require very high power, such as** space-based radar or **space-based laser missions**. An example of a system that is almost ready for a flight demonstration is the AFRL-Boeing 30 kW Integrated Blanket Interconnect System (IBIS). Figure 3.2 shows the technology and implementation concept for such a High Power Solar Array (HPSA). In the long term, increased solar cell efficiencies and revolutionary materials foreshadow the potential of 500 kW on-orbit power generation technologies, which would be transformational for performing missions from space-based systems. In addition to improving photovoltaic efficiencies, other potential energy production is possible in the mid- to far-term. In addition to modern designs for autosafing, **small modular nuclear reactors** for ground operations energy, nuclear energy has been demonstrated on several satellite systems (e.g., Radioisotope Thermoelectric Generators (RTG)). **This source provides consistent power regardless of harvestable resources** (i.e. solar) at a much higher energy and power density than current technologies. While the implementation of such a technology should be weighed heavily against potential catastrophic outcomes, **many investments into small modular reactors can be leveraged for space based systems. As these nuclear power plants decrease in size, their utility on board space based assets increases.**

#### Causes arms racing and war

Bruce Gagnon (Coordinator of the Global Network Against Weapons & Nuclear Power in Space) 2001 “STATEMENT OF CONCERN “ http://www.space4peace.org/mission.htm

Another obstacle exists though. If the U.S. can "control" space, so might another nation. Thus we have the early stages of an arms race in space. How will France, Russia, China or any other nation respond as the U.S. consolidates its "control" of space? In order to ensure that the Pentagon maintains its current space military superiority the U.S. Space Command is now developing new war fighting technologies like the Ballistic Missile Defense (BMD) and Anti-satellite weapons (ASATS) as well as space based laser weapons. Star Wars is alive and well. Recent efforts to move toward early deployment of the BMD system, which could easily be used for offensive purposes, is expected to break the 1972 ABM Treaty as well as the Outer Space Treaty. Nuclear power in space becomes a key ingredient in the plans for space colonization and domination. Nuclear power is seen by NASA as an appropriate power source for interplanetary missions. Nuclear rockets are envisioned for trips to Mars and nuclear powered mining colonies are planned for the moon and Mars. At the same time the U.S. Space Command sees nuclear power as the primary source for the enormous amounts of power generation that will be required for space weapons. The Department of Energy (DoE) laboratories throughout the U.S., casting about for a new role as the need for more nuclear weapons diminishes, views space as a great new opportunity for their on-going nuclear production work. Labs like Hanford (Washington state); Savannah River Plant (South Carolina); Los Alamos (New Mexico); Lawrence Livermore (California); and INEL (Idaho) are already heavily involved in space nuclear power production efforts.

#### Extinction

**Chari, 7** – Research Professor, Institute of Peace and Conflict Studies (“CHINA’S ASAT TEST Seeking the Strategic High Ground,” <http://www.ipcs.org/pdf_file/issue/1512612560IPCS-Special-Report-34.pdf>)

Possession of satellites with both defensive and offensive capabilities could, in theory, enable the nation possessing them to acquire virtual invulnerability to counterattack by the adversary’s missiles. In other words, the ability to intercept a ballistic missile attack, using information acquired by reconnaissance and communication satellites, could ensure an invulnerable first strike capability, untrammeled by the angst that the adversary would be able to launch a second strike and inflict unacceptable damage on the aggressor. Disrupting a putative detection and interception capability by ASAT means could, arguably, restore the balance, and ensure that second-strike capabilities remain robust; thereby, the nuclear deterrent relationship between adversaries would also remain stable.¶Unfortunately, this scenario is unlikely to obtain in the real world. A nation which discovers that its space-based assets have become vulnerable to attack would, most likely, either enlarge their numbers or equip them with self-protecting equipment possessing both defensive and offensive capabilities. It could also place its other nuclear forces on hair-trigger alert to attack the aggressor if it finds its space-based assets being targeted or attacked. This not implausible scenario might very well spell the initiation of a **nuclear Armageddon**.¶ Proceeding further, the national judgment of when, how and in what manner it would determine that its space-based assets have been attacked to launch its counter-attack from space or earth would be made by computers. Given the reality that computers do malfunction and the well-recognized maxims of Murphy’s Law, the transfer of decision-making on such vital national security issues to computers and machines is hardly reassuring. Stated differently, the chances of accident, misunderstanding and misperception will increase should decisionmaking be largely premised on mechanical instruments, which is inevitable when satellites are equipped and empowered to launch attacks and defend themselves in space. This dispensation is, intrinsically, conducive to great instability and tensions in bilateral relations.

### 1nc cp

#### Counterplan: The United States Federal Government should allocate funding to the Department of Defense for the development of smart microgrids for its military functions not supplied by small modular reactors, a diverse portfolio tailored to local installations, including non-nuclear energy sources for on-site generation, backup capacity, energy efficiency, storage, and accelerated implementation of the SPIDERS project.

#### The combination of mechanisms resolves problems with each component

SERDP 12 – the Strategic Environmental Research and Development Program, DoD’s environmental science and technology program, executed in partnership with DOE and EPA, 7/10/12, “DoD Study Finds Microgrids Offer Improved Energy Security for DoD Installations,” http://www.serdp.org/News-and-Events/News-Announcements/Program-News/DoD-study-finds-microgrids-offer-improved-energy-security-for-DoD-installations

Advanced microgrids offer a cost-effective solution to military installations' growing vulnerability to the fragile electric grid, according to a study released today by DoD’s Office of Installations and Environment. The study performed by MIT Lincoln Laboratory looked at different microgrid architectures and characteristics and compared their relative cost-effectiveness. The report provides insight into increasing energy security and reducing energy costs through the incorporation of renewable energy resources into microgrids, as well as new market opportunities for DoD in the area of demand response and ancillary services.

The study highlights the extent of ongoing microgrid work across DoD. It identified 44 installations that either had existing microgrids, planned installation of microgrids, or conducted microgrid studies or demonstrations at their facilities. The authors interviewed more than 75 people from the military Services, the Office of the Secretary of Defense, and the Department of Energy. The analysis categorized the ongoing microgrid efforts based on several key attributes including size, maturity, the inclusion of renewable resources, and the ability to operate in a grid-tied manner.

The analysis confirms the value of microgrids to DoD. The combination of on-site energy generation and storage, together with the microgrid’s ability to manage local energy supply and demand, allow installations to shed non-essential loads and maintain mission-critical loads if the electric grid is disrupted.

The report illustrates the largely untapped potential of moving to smarter, next generation microgrids that would accommodate far greater penetration of renewable energy sources, as well as tighter integration with the electrical grid. If solar resources that are increasingly being installed on DoD installations were available during islanded operation of a microgrid, they could significantly extend the islanding time. Moreover, a microgrid that could operate when tied to the grid would offer new opportunities for the DoD to generate cost savings by using backup generation assets during normal operation and generate financial revenue by using advanced ancillary services.

One important finding is that there will be no “one size fits all” solution. The location of a military installation influences the options available for energy generation sources, the options available for interaction with the local utility, the characteristics of the local electricity market, and the regulatory environment. The most effective microgrids will be those that take into account the needs of the local commercial electric grid and are configured so that they can earn value helping to meet those needs.

#### SPIDERS will ensure effective demand management, network security, monitoring, and integrated power sources

Robert K. Ackerman 12, SIGNAL Magazine, February 2012, “Military Energy Enters SPIDERS Web,” http://www.afcea.org/content/?q=node/2877

No man may be an island, but each U.S. military base may become an energy island if a joint project among the Department of Energy, the Department of Homeland Security and the Defense Department comes to fruition. The effort aims to develop a microgrid that would supply a base with internal power independent of any external source that might fail as a result of enemy action.¶ Network security would be a key element of this energy microgrid. Facing the possibility of a cyberattack on the nation’s power grid, military bases must be able to sustain internal power with a degree of immunity from the online tactics employed by cybermarauders.¶ This program also seeks to blend a host of conventional and alternative energy sources into a single entity that would respond seamlessly to internal base power demands. Complicating the endeavor to link these energy sources is the requirement to provide secure network control that could interoperate with the public power grid but still be immune to cyberthreats that menace the larger network.¶ Known as the Smart Power Infrastructure Demonstration for Energy Reliability and Security, or SPIDERS, the project is a Defense Department joint capability technology demonstration (JCTD). It already is underway at Joint Base Pearl Harbor-Hickam, Oahu, Hawaii, and later phases will evaluate progressively sophisticated systems at Fort Collins, Colorado, and Camp Smith, Hawaii.¶ Melanie Johnson, an electrical engineer with the Army Corps of Engineers Construction Engineering Research Laboratory, explains that SPIDERS is designed to develop a template for bringing microgrid technology to military installations in the United States. Its success would have implications for installations outside the United States, particularly in operational settings, she points out.¶ Part of the SPIDERS technical management team, Johnson explains that a key element in SPIDERS is to provide network security for the communications and control systems within that microgrid environment. That security would be vital if a base loses power because of a cyberattack on the local power grid.¶ What sets SPIDERS apart from other microgrid efforts is its emphasis on cybersecurity and network communications. Security is a primary SPIDERS objective, Johnson says, adding that this includes information assurance certification and implementing emerging standards from the National Institute of Standards and Technology (NIST), the North American Electric Reliability Corporation (NERC) and Department of Energy organizations.¶ Adding cybersecurity to the microgrid complicates the picture and requires “a little critical thinking,” Johnson observes. However, SPIDERS is not employing the traditional approach of first developing a control system and then overlaying security. Instead, security will be integrated into the system as it is developed. **The result will be a** **comprehensive** security **solution** that is **tailored to the system**, she offers.¶ The microgrid control system continually will monitor power quality and conditions in the regional power grid. If it detects instability or significant quality issues, it can alert monitors who would decide to disconnect the base from the external grid. The microgrid would continue to provide power to critical missions.¶ Johnson shares that planners are examining the relationship between the interface with the microgrid control system and the base’s enterprise network. Of particular interest is how that relationship would open the microgrid to vulnerabilities from outside the installation. Issues include the types of communications traffic that would be allowed in and out of the microgrid control system network.¶ According to its guidance, SPIDERS’ primary objectives are to protect task-critical assets from power loss due to cyberattack; integrate renewable and other distributed generational electricity to power task-critical assets in times of emergency; sustain critical operations during prolonged power outages; and manage installation electrical power consumption to reduce petroleum demand and carbon footprint.¶ SPIDERS will exploit existing energy assets such as solar arrays, wind generators and other renewable technologies as well as diesel generators to provide electricity more efficiently than if backup diesel generators alone were used. Renewable energy generators remain online constantly, providing electricity from alternate sources during opportune conditions such as windy or sunny days. Johnson points out, however, that most renewable energy resources trip offline when the main grid crashes. The microgrid allows the renewable power to stay online while maintaining necessary safety measures.

### 1nc prolif

#### No impact to prolif---every actor has an incentive to overstate the impact

Robert Farley 11, assistant professor at the Patterson School of Diplomacy and International Commerce at the University of Kentucky, 11/16/11, “Over the Horizon: Iran and the Nuclear Paradox,” http://www.worldpoliticsreview.com/articles/10679/over-the-horizon-iran-and-the-nuclear-paradox

But states and policymakers habitually overestimate the impact of nuclear weapons. This happens among both proliferators and anti-proliferators. Would-be proliferators seem to expect that possessing a nuclear weapon will confer “a seat at the table” as well as solve a host of minor and major foreign policy problems. Existing nuclear powers fear that new entrants will act unpredictably, destabilize regions and throw existing diplomatic arrangements into flux. These predictions almost invariably turn out wrong; nuclear weapons consistently fail to undo the existing power relationships of the international system. ¶ The North Korean example is instructive. In spite of the dire warnings about the dangers of a North Korean nuclear weapon, the region has weathered Pyongyang’s nuclear proliferation in altogether sound fashion. Though some might argue that nukes have “enabled” North Korea to engage in a variety of bad behaviors, that was already the case prior to its nuclear test. The crucial deterrent to U.S. or South Korean action continues to be North Korea’s conventional capabilities, as well as the incalculable costs of governing North Korea after a war. Moreover, despite the usual dire predictions of nonproliferation professionals, the North Korean nuclear program has yet to inspire Tokyo or Seoul to follow suit. The DPRK’s program represents a tremendous waste of resources and human capital for a poor state, and it may prove a problem if North Korea endures a messy collapse. Thus far, however, the effects of the arsenal have been minimal. ¶ Israel represents another case in which the benefits of nuclear weapons remain unclear. Although Israel adopted a policy of ambiguity about its nuclear program, most in the region understood that Israel possessed nuclear weapons by the late-1960s. These weapons did not deter Syria or Egypt from launching a large-scale conventional assault in 1973, however. Nor did they help the Israeli Defense Force compel acquiescence in Lebanon in 1982 or 2006. Nuclear weapons have not resolved the Palestinian question, and when it came to removing the Saddam Hussein regime in Iraq, Israel relied not on its nuclear arsenal but on the United States to do so -- through conventional means -- in 2003. Israeli nukes have thus far failed to intimidate the Iranians into freezing their nuclear program. Moreover, Israel has pursued a defense policy designed around the goal of maintaining superiority at every level of military escalation, from asymmetrical anti-terror efforts to high-intensity conventional combat. Thus, it is unclear whether the nuclear program has even saved Israel any money. ¶ The problem with nukes is that there are strong material and normative pressures against their use, not least because states that use nukes risk incurring nuclear retaliation. Part of the appeal of nuclear weapons is their bluntness, but for foreign policy objectives requiring a scalpel rather than a sledgehammer, they are useless. As a result, states with nuclear neighbors quickly find that they can engage in all manner of harassment and escalation without risking nuclear retaliation. The weapons themselves are often more expensive than the foreign policy objectives that they would be used to attain. Moreover, normative pressures do matter. Even “outlaw” nations recognize that the world views the use of nuclear -- not to mention chemical or biological -- weapons differently than other expressions of force. And almost without exception, even outlaw nations require the goodwill of at least some segments of the international community. ¶ Given all this, it is not at all surprising that many countries eschew nuclear programs, even when they could easily attain nuclear status. Setting aside the legal problems, nuclear programs tend to be expensive, and they provide relatively little in terms of foreign policy return on investment. Brazil, for example, does not need nuclear weapons to exercise influence in Latin America or deter its rivals. Turkey, like Germany, Japan and South Korea, decided a long time ago that the nuclear “problem” could be solved most efficiently through alignment with an existing nuclear power. ¶ Why do policymakers, analysts and journalists so consistently overrate the importance of nuclear weapons? The answer is that everyone has a strong incentive to lie about their importance. The Iranians will lie to the world about the extent of their program and to their people about the fruits of going nuclear. The various U.S. client states in the region will lie to Washington about how terrified they are of a nuclear Iran, warning of the need for “strategic re-evaluation,” while also using the Iranian menace as an excuse for brutality against their own populations. Nonproliferation advocates will lie about the terrors of unrestrained proliferation because they do not want anyone to shift focus to the manageability of a post-nuclear Iran. The United States will lie to everyone in order to reassure its clients and maintain the cohesion of the anti-Iran block. ¶ None of these lies are particularly dishonorable; they represent the normal course of diplomacy. But they are lies nevertheless, and serious analysts of foreign policy and international relations need to be wary of them. ¶ Nonproliferation is a good idea, if only because states should not waste tremendous resources on weapons of limited utility. Nuclear weapons also represent a genuine risk of accidents, especially for states that have not yet developed appropriately robust security precautions. Instability and collapse in nuclear states has been harrowing in the past and will undoubtedly be harrowing in the future. All of these threats should be taken seriously by policymakers. Unfortunately, as long as deception remains the rule in the practice of nuclear diplomacy, exaggerated alarmism will substitute for a realistic appraisal of the policy landscape.

#### Upcoming 123 negotiations hinge on ENR restrictions, but US policy is in limbo

**Grossman 1/11**/2013 – visiting scholar at the Johns Hopkins School of Advanced International Studies, reporter with Global Security Newswire, won 13 national journalism awards over the past decade, including top honors from the National Press Club and Society of Professional Journalists (Elaine, NTI, “U.S. May Land Key Asian Nuclear Trade Deals in 2013”, http://www.nti.org/gsn/article/us-could-secure-key-asian-nuclear-trade-deals-2013/)

Negotiations stalled over this issue and others last fall, heading into both U.S. and South Korean national elections. **As 2013 unfolds**, it remains unclear whether Seoul’s new president, Park Geun-hye, might be more amenable than her predecessor to simply renewing the old accord’s terms after she takes office on Feb. 25. South Korea’s agreement expires in March 2014.¶ Time is “running out” for the two nations’ envoys to seal the renewal, issue expert Miles Pomper said in a September essay published in the Bulletin of the Atomic Scientists. “Negotiators remain far apart on the terms of a new pact.”¶ The “sticking point” in talks now appears related more to uranium enrichment than the widely discussed rift over plutonium reprocessing, he said.¶ South Korea wants to develop a uranium enrichment capacity to help ensure a steady supply of fuel for its nuclear reactors, he said. The nation additionally seeks enrichment capability to more effectively compete in the world market for providing comprehensive nuclear fuel services, said Pomper, a senior research associate at the James Martin Center for Nonproliferation Studies.¶ Also set for possible achievement in 2013: A new nuclear cooperation agreement with Vietnam. A senior State Department official announced a year ago that bilateral discussions were kicking off with Hanoi, which some say has bristled at the idea of including a nonproliferation gold standard provision in its agreement text.¶ More recently, another high-ranking U.S. diplomat pointed instead to voluntary international trade guidelines as helping prevent the proliferation of enrichment technology to Vietnam or other emerging nuclear energy nations. That infuriated some on Capitol Hill who have pushed to see ironclad promises against nuclear fuel-making incorporated into bilateral cooperation agreements.¶ The official, acting Undersecretary of State for Arms Control and International Security Rose Gottemoeller, two months earlier noted that she did not “like this term, the ‘gold standard,’” because it implied “somehow everything else we’re doing already is not served by our policy.”¶ Yet, a so-called Section 123 agreement -- named for a passage in federal law that provides for international atomic cooperation pacts -- with Vietnam and other first-time nuclear energy partners likely will not be concluded until the Obama administration finalizes a policy review regarding how and when it will pursue no-enrichment-or-reprocessing promises abroad.¶ Interagency discussion of the matter reportedly concluded in 2012 but secret review recommendations have remained at the White House for decision, according to government officials. Earlier in the year, senior administration officials told Congress that U.S. nuclear diplomats would seek gold-standard pledges in nuclear trade negotiations only on a case-by-case basis.¶ The nascent policy, however, outraged key Democratic and Republican lawmakers, who charged the Obama team did not appear to be pursuing strict nonproliferation terms aggressively enough in its nuclear energy negotiations. The matter quickly went back into internal administration review and congressional aides say it appears no new policy has yet been set.¶ “There is an issue as to whether we should require the gold standard in all future 123s,” U.S. nuclear energy envoy Richard Stratford said in March 2011. “Some people think yes, we should. Let’s tighten up. Others say if you do that, there’s going to be a lot of people that you’re writing off in terms of nuclear cooperation, and do you really want to do that? Well, until we can settle that issue, we really can’t move forward with Vietnam.”¶ A State Department representative on Friday declined to describe the status of the ongoing review or say when the policy issue would be resolved and publicly discussed.¶ Until the review is complete, some other nuclear pacts under negotiation with nations elsewhere around the globe remain in limbo, as well.

#### The plan lets us demand ENR restrictions for Korea, Saudi Arabia, and Vietnam

Mark **Hibbs 12**, SENIOR ASSOCIATE, NUCLEAR POLICY PROGRAM, Carnegie Endowment, "Negotiating Nuclear Cooperation Agreements," NUCLEAR ENERGY BRIEF, AUGUST 7, 2012 http://carnegieendowment.org/2012/08/07/negotiating-nuclear-cooperation-agreements/d98z-http://carnegieendowment.org/2012/08/07/negotiating-nuclear-cooperation-agreements/d98z

\*ENR = enrichment and reprocessing

\*123 = agreement to allow US civilian nuclear trade

The United States is currently negotiating bilateral agreements for peaceful nuclear cooperation under Section 123 of the U.S. Atomic Energy Act—so-called 123 agreements—with Jordan, Saudi Arabia, South Korea, and Vietnam. At some point—thus far no decision has been taken when—the United States will begin a fifth such negotiation, with Taiwan.¶ The negotiations with South Korea and Taiwan are to renew agreements set to expire in 2014, while the others are new. All five states want to deploy nuclear power reactors for electricity generation in the coming years and they seek benefits that would accrue from a formal legal framework for conducting its nuclear trade and diplomacy with the United States.¶ Although the Atomic Energy Act establishes criteria that 123 agreements must meet in order to conform to U.S. law without special Congressional consideration, for all of these negotiations to succeed the language and terms written into the five agreements will have to differ quite significantly. Why? Because the **interest calculus and leverage** balance of the two parties in each case **won’t be the same**.¶ Progress in negotiating these agreements has been held up because of a contentious two-year interagency debate in the United States over how to proceed in trying to limit the spread of uranium enrichment and spent fuel reprocessing (so-called ENR) capabilities worldwide. In 2009, the United Arab Emirates (UAE) concluded a 123 agreement that said it would not “engage in activities within its territory” for ENR. The UAE agreement also indicated that the no-ENR provision was to be included in future 123 agreements for countries in the Middle East.¶ Some administration officials, supported by lawmakers, sought to universalize the UAE no-ENR provision as a “gold standard” for all future agreements, but others preferred instead to apply it on a limited case-by-case basis.¶ Since 2004, when the Bush administration proposed that ENR technologies be restricted to the few states currently having them—which includes the United States—many countries have objected that this would violate their “rights” to peaceful nuclear development, expressed in both the International Atomic Energy Agency (IAEA) statute and in Article IV of the Nuclear Non-Proliferation Treaty.¶ The United States sought to codify this ban in nuclear trade guidelines upheld by the 46-member Nuclear Suppliers Group, but had to settle for a criteria-based approach adopted by the group in June 2011. Last fall, the U.S. House of Representatives introduced legislation that would set forth a blanket requirement that countries entering into nuclear cooperation with the United States forego ENR.¶ But **neither Congress nor the administration at a senior level has set a firm policy course on what should be required in future 123 agreements, leaving it up to negotiators themselves** to follow recommendations arising from lower-level internal deliberations. In practice, this means that there has been a strong difference of views between the State Department, which at high levels supports making the “gold standard” a requirement in all 123 agreements, and the Department of Energy, which favors a more differentiated approach also favored by the U.S. nuclear industry.¶ Currently, there is an interagency understanding that the State Department will aim to negotiate no-ENR provisions into nearly all future 123 agreements and that any exceptions to the no-ENR outcome must be jointly authorized by Secretary of State Hillary Clinton and Secretary of Energy Steven Chu.¶ Recent media accounts suggest that Taiwan has “volunteered” to adopt the “gold standard” and that one or more advocates at the State Department behind the scenes then pushed Taiwan to the top of the list of 123 agreements to be negotiated in order to quickly establish the “gold standard” as a precedent for all future agreements. But issues about the timing of the pending Taiwan negotiation were in fact triggered by a State Department staffer’s travel schedule and were unrelated to any policy discussion.¶ Taiwan and the United States have understood from the very outset that because the United States has immense leverage over Taiwan, a four decade-old policy of no enrichment and reprocessing in Taiwan enforced by the United States will be enshrined in the new agreement.¶ A new Taiwan agreement will not serve as a precedent for any of the agreements the United States is currently negotiating with other states because the United States enjoys far less leverage, and may have overriding policy goals, in these cases.¶ Vietnamese officials, for example, have informed their U.S. counterparts that they don’t want to negotiate a nuclear cooperation agreement on the basis that Vietnam must forfeit its ENR “rights.” Vietnam has little incentive to do so. While Taiwan’s nuclear infrastructure was set up decades ago hand-in-hand with U.S. industry, Vietnam will build reactors with the help of Russia and Japan and it doesn’t need an agreement with the United States to do that. Russia has agreed to supply fresh nuclear fuel to Vietnam and thereafter to take back and reprocess in Russia the spent fuel from reactors in Vietnam.¶ Hanoi has spelled out that it has no interest in setting up enrichment or reprocessing plants, and U.S. officials on the ground appear unworried that Vietnam will try to develop sensitive nuclear fuel cycle capabilities—a consideration that may matter should U.S. negotiators eventually ask Chu and Clinton to make an exception to the no-ENR policy for Vietnam.¶ Saudi Arabia might be a different story. While Vietnam has decided to bet its chips on nuclear energy partnerships with Russian and Japanese industry, Riyadh has so far not identified who its future industrial collaborators will be, and it is considering possible linkups with American firms. That would not be possible without a 123 agreement.¶ The Saudi government is also aware that should Riyadh not assure Washington that it won’t build sensitive enrichment and reprocessing installations, U.S. lawmakers, concerned about the security of Israel, would almost certainly forbid the United States to cooperate with Saudi Arabia on those terms. What’s more, like neighboring UAE, Saudi Arabia may want to accommodate the United States in the interest of its bilateral defense arrangements, especially in view of its perceived threat from Iran.¶ The U.S. **State Department is highly aware of the** differences in the calculus of each of its prospective nuclear trading partners and the varying **extent of U.S. leverage** in these cases. Before Washington began broaching nuclear cooperation with Vietnam and Saudi Arabia, it had been negotiating bilateral nuclear agreements with South Korea and Jordan.¶ South Korea may become one of the exceptions made to a no-ENR outcome, as Seoul is hardly inclined to abandon its interest to enrich and reprocess. To the contrary, South Korea argues that Washington should afford it the same freedom to reprocess its growing inventory of spent fuel to minimize nuclear waste as the United States provided Japan when its 123 agreement was renegotiated in the 1980s.¶ The United States has long argued that a 1991 bilateral agreement between South Korea and North Korea, which commits both to renounce ENR, stands in the way. But South Korean officials argue that the bilateral agreement is null and void in the wake of North Korea’s revelation that it is now enriching uranium outside of IAEA safeguards, not to mention that it also produced plutonium outside of safeguards and used it in two nuclear explosions in 2006 and 2009. Officials argue that the size of South Korea’s ever-expanding nuclear program—the country now has 23 power reactors—will soon justify the establishment of a domestic uranium enrichment capacity.¶ With the exception of the ENR issue, negotiation of a 123 agreement with Jordan is virtually complete. But Jordan, like Vietnam, will likely build power reactors in cooperation with non-U.S. vendors (in this case French or Canadian firms) and Jordan has informed the United States it will not negotiate away its generic “right” to enrich uranium or reprocess spent fuel.¶ Amman’s refusal to legally forfeit its ENR options doesn’t have to mean that Jordan can’t accommodate the United States on this point if both sides really want a nuclear cooperation agreement. Instead of forcing Jordan to legally commit itself not to enrich or reprocess, the U.S.-Jordan agreement might include a declaration by Jordan—in a preamble or in a side letter—to the effect that Jordan will not set up sensitive fuel cycle infrastructure because it is not justified by the anticipated requirements of Jordan’s nuclear power program.¶ Such a declaration may or may not be legally binding, but it would be politically robust in the context of a bilateral agreement with the United States. Jordan would retain its “right” to develop or acquire reprocessing and enrichment capabilities, but it could agree not to exercise this option. Jordan and the United States might agree to periodically reassess Jordan’s nuclear fuel supply requirements.¶ A similar approach was successfully taken by Canada in a somewhat different context concerning its interest in enriching uranium. When the United States proposed to the Nuclear Suppliers Group in 2004 that transfers of ENR items to newcomers be banned, Canada objected. Unlike Vietnam, but like Jordan, Canada has domestic uranium reserves (indeed it’s currently the world’s leading uranium exporter) and, like Jordan, Canada does not want to forfeit its option to add value by processing the uranium into commercial power reactor fuel in coming years. In 2008, Ottawa overcame an impasse with the United States on this issue by voluntarily suspending its freedom to import enrichment technology for a limited period of time pending successful negotiation of global ENR trade rules.¶ U.S. resolve to include a no-ENR pledge in the body of new bilateral agreements will be seen by some countries as arrogant and unacceptable. Incorporating ENR terms into side-letters or preambles may be less offensive. That approach would also more easily facilitate including reciprocal commitments by the United States into its 123 bargains with foreign countries. These might include guaranteeing nuclear fuel supply through participation in the U.S. fuel bank, facilitating the country’s access to other back-up sources of nuclear fuel, and, in the future, perhaps even taking back U.S.-origin spent fuel.¶ The outcome of any negotiation for a bilateral nuclear cooperation agreement **will depend on the leverage both sides bring** to the table. When the United States negotiated most of the 22 such agreements in force today, it was the world’s leading provider of nuclear technology, equipment, and fuel. As the examples of Jordan and Vietnam show, unlike half a century ago, nuclear newcomers today don’t need to buy American.¶ The vendor field is populated by firms in Argentina, Australia, Canada, the European Union, Japan, Kazakhstan, Namibia, Niger, Russia, and South Korea, and in the future they will be joined by others in China and India. Governments in these countries do not seek to establish a no-ENR requirement as a condition for foreign nuclear cooperation. Some of them, Australia and Canada for example, have strong nonproliferation track records. Countries now seeking to form foreign industrial partnerships to set up nuclear power programs have numerous options and they will favor arrangements that provide them the most freedom and flexibility.¶ Equity in international nuclear affairs matters. By negotiating with its partners voluntary political agreements, including side benefits to limit the application of sensitive technologies, instead of trying to legally compel them to make concessions that are politically onerous, the United States can serve its nonproliferation and security interests while avoiding the challenge to U.S. credibility that would follow from rigid application of a one-size-fits-all policy.¶ The United States should show nonproliferation leadership by generally discouraging countries without enrichment and reprocessing capabilities from embarking in this direction. But negotiators need policy guidelines that provide for flexibility and encourage them to create incentives to get desired results. To some extent, the **current policy** may be informed by the insight that trying to negotiate no-ENR terms into the operative text of an agreement may fail, and that other approaches may be more productive. It also **reflects the reality that U.S. leverage on nuclear trade is declining**.

#### Strict 123s wreck the ROK alliance

Seongho **Sheen 11**, associate professor at the Graduate School of International Studies, Seoul National University, Nuclear Sovereignty versus Nuclear Security: Renewing the ROK-U.S. Atomic Energy Agreement, The Korean Journal of Defense Analysis, Vol. 23, No. 2, June 2011, 273–288, http://www.brookings.edu/~~/media/research/files/papers/2011/8/nuclear%20korea%20sheen/08\_nuclear\_korea\_sheen

The most important challenge for Washington and Seoul is to prevent the issue from becoming a **test-case for the alliance**. During their summit meeting in June 2009, President Obama and President Lee promised close cooperation regarding the peaceful use of nuclear energy, among others. 35 Yet, any hint of U.S. objections to South Korea’s demand for “peaceful” nuclear sovereignty could **send the current amicable alliance relationship into turmoil**, as shown during the fierce anti-American rallies in Seoul over the U.S. beef import issue in 2008. Many South Koreans often compare the ROK-U.S. revision of the atomic agreement with the U.S.-Japan revision in the 1980s. In its renegotiation in the late 1980s of its nuclear agreement with the United States, Japan acquired an advanced agreement on full-scale spent fuel reprocessing and uranium enrichment. Japan has become the only non-nuclear weapons state with a full reprocessing capability.¶ 36 Washington believed that Japan posed no proliferation risk given its excellent nonproliferation credentials; however, many in South Korea think that they deserve the same right. Washington seems to have difficulty in giving the same benefit of doubt to South Korea when it comes to sensitive nuclear technology. They may say South Korea is different from Japan, which already had reprocessing and enrichment plants under the existing agreement that was agreed to before North Korea’s nuclear program was revealed.¶ Yet, it will be difficult for the United States to simply ignore South Korea’s demand and its growing nuclear capacity because South Korea, along with Japan, is one of the most important U.S. allies in Asia. It will be a challenge for the United States to balance its bilateral alliance management with Seoul and its commitment to global nonproliferation efforts. An editorial in the Chosun Ilbo, a prominent Korean newspaper, warned the ROK-U.S. alliance could, “come under strain if Washington stubbornly insists on blocking South Korea from reprocessing.” 37¶ For many Koreans the negotiation could be another **test case for the U.S. commitment to the alliance after the very controversial KORUS FTA** negotiations. The U.S. attitude could be regarded as another referendum on America’s sincerity and respect for South Korea’s status as a key ally. The comparison with Japan would provide a compelling case for both critics and supporters of the alliance in Korea. In addition, the 2008 Bush administration’s decision to award another long-term consent to India for reprocessing nuclear waste will make it more difficult for U.S. negotiators to persuade Seoul to forgo the same right.¶ 38 How minor they might be, some strong nationalists may even argue for the need for South Korea to have its own nuclear weapons program. Recently, Kim Dae-Joong, a prominent Korean conservative journalist called for a South Korean nuclear weapons program. 39 In addition, some members of the National Assembly argued for having a “conditional” nuclear option until the complete resolution of North Korea’s nuclear issue. 40

#### Key to deter peninsular war

**McDevitt ’11 –** vice president and director of the CNA Strategic Studies

(Michael McDevitt, “Deterring North Korean Provocations”, Brookings Institution, February 2011, http://www.brookings.edu/research/papers/2011/02/north-korea-mcdevitt)

Since the Armistice that ended the fighting in Korea in 1953, the U.S.-ROK alliance has been **successful** in preventing another North Korean invasion. The basic approach has been to present such a formidable defensive posture that the North would **never believe it had an opportunity** to forcefully reunify the country under its leadership. In other words, North Korea has successfully been deterred. Alliance strategy has worked so well that today the prospect of an attempt by North Korea to militarily reunite the peninsula is judged by many to be incredible. Setting aside the question of whether Pyongyang still has the desire to solve the Korean civil war by force of arms, some argue that North Korea no longer has the capability to invade successfully, even if it wanted to. Still, both the U.S. and ROK armed forces take the possibility of another invasion, however remote, seriously. The alliance’s Combined Forces Command (CFC) worries about the possibility of a surprise, or short warning attack, because North Korea has positioned much of its Korean People’s Army (KPA) close to the DMZ where it could undertake offensive operations in short order. Deterrence as Practiced Today in Korea “Broadly defined, deterrence is the threat of force intended to convince a potential aggressor not to undertake a particular action because the costs will be unacceptable or the probability of success extremely low.”[1] In other words, deterrence comes in two forms—deterrence by punishment and deterrence by denial. In the first instance, potential aggressors are deterred by the prospect of having to endure unacceptable punishment in response to an aggressive act. In the second case, deterrence by denial, the potential aggressor is deterred because defenses are so good that the aggressor concludes that it could not achieve its political and military objectives through use of force. In Korea, the U.S.-ROK alliance combines both of these approaches—a strong defense that can deny success, buttressed with the promise of overwhelming retaliation in the event of an invasion from the north. For either of these forms of deterrence to be successful what is threatened in response to aggression or a hostile act must be believable, or as it is commonly cast, must be credible. Credibility in turn, derives from a combination of military capability and a belief in the minds of North Korean leaders that the alliance has the political will to act. There is no doubt that the U.S.-ROK allies have the political will to respond to an invasion; hence the conditions necessary for a credible deterrent, capability and political will, are met.

#### Extinction

**Hayes & Hamel-Green, 10** – \*Executive Director of the Nautilus Institute for Security and Sustainable Development, AND \*\* Executive Dean of the Faculty of Arts, Education and Human Development act Victoria University (1/5/10, Executive Dean at Victoria, “The Path Not Taken, the Way Still Open: Denuclearizing the Korean Peninsula and Northeast Asia,” http://www.nautilus.org/fora/security/10001HayesHamalGreen.pdf)

The international community is increasingly aware that cooperative diplomacy is the most productive way to tackle the multiple, interconnected global challenges facing humanity, not least of which is the increasing proliferation of nuclear and other weapons of mass destruction. Korea and Northeast Asia are instances where risks of nuclear proliferation and actual nuclear use arguably have increased in recent years. This negative trend is a product of continued US nuclear threat projection against the DPRK as part of a general program of coercive diplomacy in this region, North Korea’s nuclear weapons programme, the breakdown in the Chinese-hosted Six Party Talks towards the end of the Bush Administration, regional concerns over China’s increasing military power, and concerns within some quarters in regional states (Japan, South Korea, Taiwan) about whether US extended deterrence (“nuclear umbrella”) afforded under bilateral security treaties can be relied upon for protection.

The consequences of failing to address the proliferation threat posed by the North Korea developments, and related political and economic issues, are serious, not only for the Northeast Asian region but for the whole international community.

At worst, there is the possibility of nuclear attack1, whether by intention, miscalculation, or merely accident, leading to the resumption of Korean War hostilities. On the Korean Peninsula itself, key population centres are well within short or medium range missiles. The whole of Japan is likely to come within North Korean missile range. Pyongyang has a population of over 2 million, Seoul (close to the North Korean border) 11 million, and Tokyo over 20 million. Even a limited nuclear exchange would result in a holocaust of unprecedented proportions.

But the catastrophe within the region would not be the only outcome. New research indicates that even a limited nuclear war in the region would rearrange our global climate far more quickly than global warming. Westberg draws attention to new studies modelling the effects of even a limited nuclear exchange involving approximately 100 Hiroshima-sized 15 kt bombs2 (by comparison it should be noted that the United States currently deploys warheads in the range 100 to 477 kt, that is, individual warheads equivalent in yield to a range of 6 to 32 Hiroshimas).The studies indicate that the soot from the fires produced would lead to a decrease in global temperature by 1.25 degrees Celsius for a period of 6-8 years.3 In Westberg’s view:

That is not global winter, but the nuclear darkness will cause a deeper drop in temperature than at any time during the last 1000 years. The temperature over the continents would decrease substantially more than the global average. A decrease in rainfall over the continents would also follow…The period of nuclear darkness will cause much greater decrease in grain production than 5% and it will continue for many years...hundreds of millions of people will die from hunger…To make matters even worse, such amounts of smoke injected into the stratosphere would cause a huge reduction in the Earth’s protective ozone.4

These, of course, are not the only consequences. Reactors might also be targeted, causing further mayhem and downwind radiation effects, superimposed on a smoking, radiating ruin left by nuclear next-use. Millions of refugees would flee the affected regions. The direct impacts, and the follow-on impacts on the global economy via ecological and food insecurity, could make the present global financial crisis pale by comparison. How the great powers, especially the nuclear weapons states respond to such a crisis, and in particular, whether nuclear weapons are used in response to nuclear first-use, could make or break the global non proliferation and disarmament regimes. There could be many unanticipated impacts on regional and global security relationships5, with subsequent nuclear breakout and geopolitical turbulence, including possible loss-of-control over fissile material or warheads in the chaos of nuclear war, and aftermath chain-reaction affects involving other potential proliferant states. The Korean nuclear proliferation issue is not just a regional threat but a global one that warrants priority consideration from the international community.

#### Independently, relations prevent extinction

Snyder et al 10 – director of the Center for U.S.-Korea Policy and senior associate of Washington programs in the International Relations program of The Asia Foundation (Charles L. Pitchard and John H. Tilleli Jr. “US Policy Toward the Korean Peninsula” ww.cfr.org/content/publications/attachments/Korean\_PeninsulaTFR64.pdf)

Strong alliance coordination with South Korea has ensured peninsu­lar stability for more than five decades, initially in response to North Korea’s conventional threat and now in promoting a coordinated response to North Korea’s efforts to develop nuclear weapons. While successfully deterring North Korea, the alliance also provided the polit­ical stability necessary for South Korea’s economic and political trans­formation into a leading market economy with a vibrant democratic political system. South Korea’s democratic transformation has allowed a more robust and enduring partnership with the United States that also applies to a growing list of regional and global security, economic, and political issues beyond North Korea. Presidents Obama and Lee recognized the potential for such coop­eration through the adoption of a Joint Vision Statement at their White House meeting in June 2oo9.43 Citing shared values between the two countries, the statement outlines an agenda for broadened global coop­eration on peacekeeping, postconflict stabilization, and development assistance, as well as for addressing a wide range of common challenges to human security, including “terrorism, proliferation of weapons of mass destruction, piracy, organized crime and narcotics, climate change, poverty, infringement on human rights, energy security, and epidemic disease.”44 The Joint Vision Statement also underscores U.S. commitments to defend South Korea from North Korea’s nuclear challenge by providing extended deterrence to protect South Korea—that is, a pledge to use its nuclear arsenal in response to any nuclear attack on South Korea—and to transition the role of U.S. forces in South Korea from a leading to a supporting role. It also pledges to strengthen bilateral economic, trade, and investment ties through ratification of the Korea-U.S. Free Trade Agreement (KORUS FTA). The Task Force believes that the Joint Vision Statement consti­tutes a valuable foundation for U.S.-ROK cooperation and should be implemented fully. The Korean decision in late ŒŸŸ9 to provide a Provincial Reconstruction U.S. Policy Toward the Korea Peninsula Team (PRT) to Afghanistan is a welcome contribution to the global security issue at the top of the Obama admin­istration’s agenda, and South Korea’s role as host and chair of the Group of Twenty (Gro) summit in ŒŸŠŸ and the ŒŸŠŒ nuclear security summit is a basis on which the United States and South Korea can build cooperation to manage recovery from the global financial crisis. The role of the alliance as a platform for constructive South Korean regional diplomacy is likely to become more important in the context of rising Chinese influence. When paired with the U.S.-Japan alliance, which is based on a complementary set of values and interests, the U.S.-led alliance system in Northeast Asia is a cornerstone for regional stability and provides a framework for promoting East Asian security cooperation.

#### No widespread prolif

Hymans 12

Jacques Hymans, USC Associate Professor of IR, 4/16/12, North Korea's Lessons for (Not) Building an Atomic Bomb, www.foreignaffairs.com/articles/137408/jacques-e-c-hymans/north-koreas-lessons-for-not-building-an-atomic-bomb?page=show

Washington's miscalculation is not just a product of the difficulties of seeing inside the Hermit Kingdom. It is also a result of the broader tendency to overestimate the pace of global proliferation. For decades, Very Serious People have predicted that strategic weapons are about to spread to every corner of the earth. Such warnings have routinely proved wrong - for instance, the intelligence assessments that led to the 2003 invasion of Iraq - but they continue to be issued. In reality, despite the diffusion of the relevant technology and the knowledge for building nuclear weapons, the world has been experiencing a great proliferation slowdown. Nuclear weapons programs around the world are taking much longer to get off the ground - and their failure rate is much higher - than they did during the first 25 years of the nuclear age.

As I explain in my article "Botching the Bomb" in the upcoming issue of Foreign Affairs, the key reason for the great proliferation slowdown is the absence of strong cultures of scientific professionalism in most of the recent crop of would-be nuclear states, which in turn is a consequence of their poorly built political institutions. In such dysfunctional states, the quality of technical workmanship is low, there is little coordination across different technical teams, and technical mistakes lead not to productive learning but instead to finger-pointing and recrimination. These problems are debilitating, and they cannot be fixed simply by bringing in more imported parts through illicit supply networks. In short, as a struggling proliferator, North Korea has a lot of company.

#### Tech diffusion’s already happened, but prolif is glacially slow

Jacques E.C. Hymans 12, Assistant Professor in the School of International Relations at the University of Southern California, May/June 2012, “Botching the Bomb,” Foreign Affairs, Vol. 91, No. 3

"TODAY, ALMOST any industrialized country can produce a nuclear weapon in four to five years," a former chief of Israeli military intelligence recently wrote in The New York Times, echoing a widely held belief. Indeed, the more nuclear technology and know-how have diffused around the world, the more the timeline for building a bomb should have shrunk. But in fact, rather than speeding up over the past four decades, proliferation has gone into slow motion.

Seven countries launched dedicated nuclear weapons projects before 1970, and all seven succeeded in relatively short order. By contrast, of the ten countries that have launched dedicated nuclear weapons projects since 1970, only three have achieved a bomb. And only one of the six states that failed -- Iraq -- had made much progress toward its ultimate goal by the time it gave up trying. (The jury is still out on Iran's program.) What is more, even the successful projects of recent decades have needed a long time to achieve their ends. The average timeline to the bomb for successful projects launched before 1970 was about seven years; the average timeline to the bomb for successful projects launched after 1970 has been about 17 years.

International security experts have been unable to convincingly explain this remarkable trend. The first and most credible conventional explanation is that the Nuclear Nonproliferation Treaty (NPT) has prevented a cascade of new nuclear weapons states by creating a system of export controls, technology safeguards, and on-site inspections of nuclear facilities. The NPT regime has certainly closed off the most straightforward pathways to the bomb. However, the NPT became a formidable obstacle to would-be nuclear states only in the 1990s, when its export-control lists were expanded and Western states finally became serious about enforcing them and when international inspectors started acting less like tourists and more like detectives. Yet the proliferation slowdown started at least 20 years before the system was solidified. So the NPT, useful though it may be, cannot alone account for this phenomenon.

### 1nc dod

#### Can’t solve forward deployment—also fiat doesn’t solve because it’s not in the US

**Sarewitz and Thernstrom 2012** – \*Co-Director, Consortium for Science, Policy and Outcomes, Arizona State University, \*\*Senior Climate Policy Advisor, Clean Air Task Force (March, Daniel and Samuel, “Energy Innovation at the Department of Defense: Assessing the Opportunities”, http://bipartisanpolicy.org/sites/default/files/Energy%20Innovation%20at%20DoD.pdf)

Liquid fuels are indispensable for the U.S. military. Nuclear ¶ reactors power submarines and aircraft carriers; otherwise ¶ the Navy’s ships run on petroleum. So do all types of aircraft, ¶ trucks, and combat vehicles. Military installations buy electrical ¶ power, when they can, from local utilities, but diesel generators ¶ provide essential backup—and are **the main power source at** ¶ **forward bases that lack grid connections**. Direct consumption ¶ of petroleum accounted for more than three-quarters of DoD’s ¶ energy use in fiscal 2010, costing $13.4 billion.¶ 11

Even so, given adequate forward planning, DoD has little ¶ reason to fear constraints on supply of petroleum-based fuels ¶ for several decades, perhaps many. A tightening international ¶ oil market, resulting in continuing price increases, would pose ¶ greater difficulties for other segments of the U.S. economy and ¶ society, and for other countries. DoD’s expenditures on fuel may ¶ seem large, but should be viewed in the context of other routine ¶ expenditures. Even for the Air Force, the principal consumer with ¶ its fleet of nearly 6,000 planes, fuel accounts for only around ¶ one-fifth of operations and maintenance costs.¶ 12

#### No impact to grid failure

Douglas Birch 10-1, former foreign correspondent for the Associated Press and the Baltimore Sun who has written extensively on technology and public policy, 10/1/12, “Forget Revolution,” Foreign Policy, http://www.foreignpolicy.com/articles/2012/10/01/forget\_revolution?page=full

Government officials sometimes describe a kind of Hieronymus Bosch landscape when warning of the possibility of a cyber attack on the electric grid. Imagine, if you will, that the United States is blindsided by an epic hack that interrupts power for much of the Midwest and mid-Atlantic for more than a week, switching off the lights, traffic signals, computers, water pumps, and air conditioners in millions of homes, businesses, and government offices. Americans swelter in the dark. Chaos reigns!

Here's another nightmare scenario: An electric grid that serves two-thirds of a billion people suddenly fails in a developing, nuclear-armed country with a rich history of ethnic and religious conflict. Rail transportation is shut down, cutting off travel to large swathes of the country, while many miners are trapped underground.

Blackouts on this scale conjure images of civil unrest, overwhelmed police, crippled hospitals, darkened military bases, the gravely injured in the back of ambulances stuck in traffic jams.

The specter of what Defense Secretary Leon Panetta has called a "digital Pearl Harbor" led to the creation of U.S. Cyber Command, which is tasked with developing both offensive and defensive cyber warfare capabilities, and prompted FBI Director Robert Mueller to warn in March that cyber attacks would soon be "the number one threat to our country." Similar concerns inspired both the Democrats and Republicans to sound the alarm about the cyber threat in their party platforms.

But are cyber attacks really a clear and present danger to society's critical life support systems, capable of inflicting thousands of casualties? Or has fear of full-blown cybergeddon at the hands of America's enemies become just another feverish national obsession -- another of the long, dark shadows of the 9/11 attacks?

Worries about a large-scale, devastating cyber attack on the United States date back several decades, but escalatedfollowing attacks on Estonian government and media websites during a diplomatic conflict with Russia in 2007. That digital ambush was followed by a cyber attack on Georgian websites a year later in the run-up to the brief shooting war between Tbilisi and Moscow, as well as allegations of a colossal, ongoing cyber espionage campaign against the United States by hackers linked to the Chinese army.

Much of the concern has focused on potential attacks on the U.S. electrical grid. "If I were an attacker and I wanted to do strategic damage to the United States...I probably would sack electric power on the U.S. East Coast, maybe the West Coast, and attempt to cause a cascading effect," retired Admiral Mike McConnell said in a 2010 interview with CBS's 60 Minutes.

But the scenarios sketched out above are not solely the realm of fantasy. This summer, the United States and India were hit by two massive electrical outages -- caused not by ninja cyber assault teams but by force majeure. And, for most people anyway, the results were less terrifying than imagined.

First, the freak "derecho" storm that barreled across a heavily-populated swath of the eastern United States on the afternoon of June 29 knocked down trees that crushed cars, bashed holes in roofs, blocked roads, and sliced through power lines.

According to an August report by the U.S. Department of Energy, 4.2 million homes and businesses lost power as a result of the storm, with the blackout stretching across 11 states and the District of Columbia. More than 1 million customers were still without power five days later, and in some areas power wasn't restored for 10 days. Reuters put the death tollat 23 people as of July 5, all killed by storms or heat stroke.

The second incident occurred in late July, when 670 million people in northern India, or about 10 percent of the world's population, lost power in the largest blackout in history. The failure of this huge chunk of India's electric grid was attributed to higher-than-normal demand due to late monsoon rains, which led farmers to use more electricity in order to draw water from wells. Indian officials told the media there were no reports of deaths directly linked to the blackouts.

But this cataclysmic event didn't cause widespread chaos in India -- indeed, for some, it didn't even interrupt their daily routine. "[M]any people in major cities barely noticed the disruption because localized blackouts are so common that many businesses, hospitals, offices and middle-class homes have backup diesel generators," the New York Timesreported.

The most important thing about both events is what didn't happen. Planes didn't fall out of the sky. Governments didn't collapse. Thousands of people weren't killed. Despite disruption and delay, harried public officials, emergency workers, and beleaguered publics mostly muddled through.

The summer's blackouts strongly suggest that a cyber weapon that took down an electric grid even for several days could turn out to be little more than a weapon of mass inconvenience.

That doesn't mean the United States can relax. James Lewis, director of the technology program at the Center for Strategic and International Studies, believes that hackers threaten the security of U.S. utilities and industries, and recently penned an op-ed for the New York Times calling the United States "defenseless" to a cyber-assault. But he told Foreign Policy the recent derecho showed that even a large-scale blackout would not necessarily have catastrophic consequences.

#### Energy competitiveness not key to heg—downstream innovation slves

**Morris, 12** – Deputy Director of the Climate and Energy Economics Project at Brookings (Adele, CLEAN ENERGY: REVISITING THE CHALLENGES OF INDUSTRIAL POLICY, 6/4, <http://www.brookings.edu/~/media/research/files/papers/2012/6/04%20clean%20energy%20morris%20nivola%20schultze/04_clean_energy_morris_nivola_schultze.pdf>)

Let us first consider the supposed imperative of matching the Chinese, Germans or others in their quest to be “Number One” in clean energy technologies. In a 1994 essay, Paul Krugman wrote, “The idea that a country's economic fortunes are largely determined by its success on world markets is a hypothesis, not a necessary truth; and as a practical, empirical matter, that hypothesis is flatly wrong.” 21 He makes the empirical case that improvements in U.S. living standards derive from the growth rate of domestic productivity -- not market share relative to competitors.

Krugman notes that, while the term “competitiveness” is meaningful when applied to individual firms, it makes little sense when applied to the economic relationships among countries. CocaCola and Pepsi struggle for market share, and one succeeds only to the disadvantage of the other. By contrast, international trade consists of transactions that are, by definition, mutually advantageous to the trading partners. Over the long haul, American living standards improve, rather than deteriorate, through freer trade. Growth of productivity and real incomes in countries with whom we trade redounds to our benefit, even if some individual domestic firms and workers may suffer in the short or intermediate term.

Advocates for taxpayers’ investments to promote U.S. competitiveness often appear to ¶ misunderstand how trade affects U.S. output and employment. In periods of sustainable noninflationary prosperity and high employment, supported by a competent and flexible monetary ¶ policy, losses of employment in sectors that are losing business to cheaper imports will tend to ¶ be offset by gains in other sectors through an appropriate adjustment in monetary policy. In a ¶ normal year the U.S. experiences about 14 million hires from new entrants to the labor force ¶ and people changing jobs, and a little under 13 million job separations, from retirements, quits, ¶ layoffs, and other causes (the difference is the growth in the labor force). In the churning there ¶ are losses and gains for individual workers. But overall, international trade tends to reallocate ¶ rather than add or subtract overall jobs in the economy. And if another country expands its ¶ exports by keeping its exchange rate with the U.S. dollar artificially low, that will increase the ¶ pace of job reallocation in this country, with the accompanying adjustment costs. But with ¶ appropriate monetary and fiscal policy it will not, except temporarily, worsen unemployment. ¶ Likewise, temporary subsidies to exporting firms won’t improve the long run growth of ¶ exports.

#### DOD would be fine

**Sorebo**, chief cybersecurity technologist and vice president – SAIC, consultant for the government and industry in cybersecurity and smart grid technology, MA – GW University, JD – Catholic U, 2/8/**’10**

(Gib, “The Many Shades of Project Grey Goose,” RSA Conference)

As I noted in my previous post about a recent 60 Minutes segment, we often rely on rumor and innuendo as the basis for journalism in critical infrastructure. If a current or former high-ranking public official says he heard something, then it must be true. Unfortunately, Project Grey Goose, whose stated objective was “to answer the question of whether there has been any successful hacker attacks against the power grid, both domestically and internationally,” falls victim to much of the same **fear, uncertainty, and doubt.** As in all media reports, there are factual bases for findings that exaggerated the true state of the electric grid. For example, their statement that “90% of the U.S. Department of Defense's (DOD) most critical assets are entirely dependent on the bulk power grid” is presumably taken from a Government Accountability Office (GAO) report noting that 85 percent of critical DoD assets rely on commercial electric power. However, the “entirely dependent” statement ignores the wide variety of backup generators that support these assets, and while not adequate, are nonetheless a significant contribution to the reliability of critical DoD assets. So rather than sounding the alarm that military bases, for the most part, do not have their own power plants, a better response would have been to suggest that the military expand the use of backup generators and micro-grid technology to augment commercial power as the GAO report does. Of course, that would not grab as many headlines. ¶ Similarly, the Grey Goose Report note that “[m]ost Grid asset owners and operators have been historically resistant to report cyber attacks against their networks as well as make the necessary investments to upgrade and secure their networks.” While it may be true that incidents are underreported, the implication that the electricity industry is deficient compared to other industrial sectors is misleading or even wrong. Most companies do not report security incidents unless legally required to or to mitigate the harm to their customers, and even then the evidence of an intrusion and theft of data had better be definitive. Lost laptops and backup tapes are one thing. You cannot say they are within your control if they go missing. However, organizations in general have a horrible record of even detecting when a successful attack has occurred let alone what was taken. Like many industries, the electricity industry has struggled to pinpoint the source of many disruptions associated with their network infrastructure. **More often than not, the problems were inadvertent and not malicious.** We can certainly do better, and with technologies like Smart Grid, we have to. However, calling out the electricity industry for failures that we’ve all been subjected to is not very productive.¶ The other statements made about the vulnerabilities in the electricity sector are misleading. While North American Electric Reliability Corporation Critical Infrastructure Protection (NERC CIP) still does not apply to many aspects of the electrical grid for a variety of jurisdictional reasons, where it does apply, it is not voluntary, as the many utilities subjected to rigorous and painful audits can attest. The process may not be perfect, but utilities are being subjected to scrutiny. Moreover, anyone receiving stimulus grants under the Department of Energy’s Smart Grid grant program has to demonstrate a very rigorous approach to cyber security through the entire implementation life cycle. ¶ Finally, the report cites a litany of vulnerabilities discovered in various Smart Grid devices such as meters and perpetuates speculation about the potential impact on the grid without considering compensating security controls. **Nowhere does the report cite names of vulnerable vendors** nor does it provide any information about whether these vulnerable products have actually been implemented. It’s like saying that tests on personal computers showed that they were vulnerable to attack without identifying the operating system or the applications running on the device.

#### Grid disruptions don’t spillover

**Schneier 7**, editor – Crypto-Gram, internationally renowned security technologist and author, contributor – NYT, Forbes, Guardian, Wired, Bulletin of the Atomic Scientists, 10/2/**’7**

(Bruce, “Staged Attack Causes Generator to Self-Destruct,” <http://www.schneier.com/blog/archives/2007/10/staged_attack_c.html>)

A government video shows the potential destruction caused by hackers seizing control of a crucial part of the U.S. electrical grid: an industrial turbine spinning wildly out of control until it becomes a smoking hulk and power shuts down.¶ The video, produced for the Homeland Security Department and obtained by The Associated Press on Wednesday, was marked "Official Use Only." It shows commands quietly triggered by simulated hackers having such a violent reaction that the enormous turbine shudders as pieces fly apart and it belches black-and-white smoke.¶ The video was produced for top U.S. policy makers by the Idaho National Laboratory, which has studied the little-understood risks to the specialized electronic equipment that operates power, water and chemical plants. Vice President Dick Cheney is among those who have watched the video, said one U.S. official, speaking on condition of anonymity because this official was not authorized to publicly discuss such high-level briefings.¶ More here. And the video is on CNN.com.¶ I haven't written much about SCADA security, except to say that I think the risk is overblown today but is getting more serious all the time -- and we need to deal with the security before it's too late. I didn't know quite what to make of the Idaho National Laboratory video; it seemed like hype, but I couldn't find any details. (The CNN headline, "Mouse click could plunge city into darkness, experts say," was definitely hype.)¶ Then, I received this anonymous e-mail:¶ I was one of the industry technical folks the DHS consulted in developing the "immediate and required" mitigation strategies for this problem.¶ They talked to several industry groups (mostly management not tech folks): electric, refining, chemical, and water. They ignored most of what we said but attached our names to the technical parts of the report to make it look credible. We softened or eliminated quite a few sections that may have had relevance 20 years ago, such as war dialing attacks against modems.¶ The end product is a work order document from DHS which requires such things as background checks on people who have access to modems and logging their visits to sites with datacom equipment or control systems.¶ By the way -- they were unable to hurt the generator you see in the video but did destroy the shaft that drives it and the power unit. They triggered the event from 30 miles away! Then they **extrapolated the theory** that a malfunctioning generator can destroy not only generators at the power company but the power glitches on the grid would destroy motors many miles away on the electric grid that pump water or gasoline (through pipelines).¶ They kept everything very secret (all emails and reports encrypted, high security meetings in DC) until they produced a video and press release for CNN. There was huge concern by DHS that this vulnerability would become known to the bad guys -- yet now they release it to the world for their own career reasons. Beyond shameful.¶ Oh, and they did use a contractor for all the heavy lifting that went into writing/revising the required mitigations document. Could not even produce this work product on their own.¶ By the way, the vulnerability they hypothesize is completely bogus but I won't say more about the details. Gitmo is still too hot for me this time of year.

#### Their internal link can’t affect the structural reasons why heg solves war

**Maher 11**—adjunct prof of pol sci, Brown. PhD expected in 2011 in pol sci, Brown (Richard, The Paradox of American Unipolarity: Why the United States May Be Better Off in a Post-Unipolar World, Orbis 55;1, Amiles)

The United States should start planning now for the inevitable decline of its preeminent position in world politics. By taking steps now, the United States will be able to position itself to exercise maximum influence beyond its era of preponderance. This will be America’s fourth attempt at world order. The first, following World War I and the creation of the League of Nations, was a disaster. The second and third, coming in 1945 and 1989-1991, respectively, should be considered significant achievements of U.S. foreign policy and of creating world order. This fourth attempt at world order will go a long way in determining the basic shape and character of world politics and international history for the twenty-first century. The most fundamental necessity for the United States is to create a stable political order that is likely to endure, and that provides for stable relations among the great powers. The United States and other global stakeholders must prevent a return to the 1930s, an era defined by open trade conflict, power competition, and intense nationalism. Fortunately, the United States is in a good position to do this. The global political order that now exists is largely of American creation. Moreover, its forward presence in Europe and East Asia will likely persist for decades to come, ensuring that the United States will remain a major player in these regions. The disparity in military power between the United States and the rest of the world is profound, and **this gap will not close in the next several decades at least**. In creating a new global political order for twenty-first century world politics, the United States will have to rely on both the realist and liberal traditions of American foreign policy, which will include deterrence and power balancing, but also using international institutions to shape other countries’ preferences and interests. Adapt International Institutions for a New Era of World Politics. The United States should seek to ensure that the global rules, institutions, and norms that it took the lead in creating—which reflect basic American preferences and interests, thus constituting an important element of American power—outlive American preeminence. We know that institutions acquire a certain ‘‘stickiness’’ that allow them to exist long after the features or forces at the time of their creation give way to a new landscape of global politics. The transaction costs of creating a whole new international—or even regional— institutional architecture that would compete with the American post-World War II vintage would be enormous. Institutions such as the International Monetary Fund (IMF), World Bank, and World Trade Organization (WTO), all reflect basic American preferences for an open trading system and, with a few exceptions, have near-universal membership and **overwhelming legitimacy**. Even states with which the United States has significant political, economic, or diplomatic disagreement—China, Russia, and Iran—have strongly desired membership in these ‘‘Made in USA’’ institutions. Shifts in the global balance of power will be reflected in these institutions—such as the decision at the September 2009 Pittsburgh G-20 summit to increase China’s voting weight in the IMF by five percentage points, largely at the expense of European countries such as Britain and France. Yet these institutions, if their evolution is managed with deftness and skill, will disproportionately benefit the United States long after the demise of its unparalleled position in world politics. In this sense, the United States will be able to ‘‘lock in’’ a durable international order that will continue to reflect its own basic interests and values. Importantly, the United States should seek to use its vast power in the broad interest of the world, not simply for its own narrow or parochial interests. During the second half of the twentieth century the United States pursued its own interests but also served the interests of the world more broadly. And there was intense global demand for the collective goods and services the United States provided. The United States, along with Great Britain, are history’s only two examples of liberal empires. Rather than an act of altruism, this will improve America’s strategic position. States and societies that are prosperous and stable are less likely to display aggressive or antagonistic behavior in their foreign policies. There are things the United States can do that would hasten the end of American preeminence, and acting in a seemingly arbitrary, capricious, and unilateral manner is one of them. The more the rest of the world views the American-made world as legitimate, and as serving their own interests, the less likely they will be to seek to challenge or even transform it.19 Cultivate Balance of Power Relationships in Other Regions. The United States enjoys better relations with most states than these states do with their regional neighbors. South and East Asia are regions in which distrust, resentment, and outright hostility abound. The United States enjoys relatively strong (if far from perfect) strategic relationships with most of the major states in Asia, including Japan, India, Pakistan, and South Korea. The United States and China have their differences, and a more intense strategic rivalry could develop between the two. However, right now the relationship is generally stable. With the possible exception of China (but perhaps **even** **Beijing views the American military presence** in East Asia **as an assurance against Japanese revanchism**), these countries prefer a U.S. presence in Asia, and in fact view good relations with the United States as **indispensable** for their own security.

#### Heg is inevitable

Maher 11 – Richard Maher, Ph.D. in Political Science from Brown University, Winter 2011, “The Paradox of American Unipolarity: Why the United States May Be Better Off in a Post-Unipolar World,” Orbis, Vol. 55, No. 1, p. 53-68

The United States will continue to be the ‘‘default power’’ (to use Josef Joffe’s term) in the near future.20 No other country will be able to duplicate the overall reach and influence of the United States—in terms of economic, political, and military power—for at least several decades. It is not clear, moreover, how many peoplewouldwant to live in aworlddominated byChina, India,Russia, or even Europe. The United States retains a number of tremendous advantages compared to possible strategic competitors: its demographics; advanced technology; raw materials; research universities and laboratories; continued dominance in global mass culture, and labor market flexibility.

#### No impact to withdrawal

**Friedman 10**—research fellow in defense and homeland security, Cato. PhD candidate in pol sci, MIT (Ben, Military Restraint and Defense Savings, 20 July 2010, http://www.cato.org/testimony/ct-bf-07202010.html, AMiles)

Another argument for high military spending is that U.S. military hegemony underlies global stability. Our forces and alliance commitments dampen conflict between potential rivals like China and Japan, we are told, preventing them from fighting wars that would disrupt trade and cost us more than the military spending that would have prevented war. The theoretical and empirical foundation for this claim is weak. It overestimates both the American military's contribution to international stability and the danger that instability abroad poses to Americans. In Western Europe, U.S. forces now contribute little to peace, at best making the tiny odds of war among states there slightly more so.7 Even in Asia, where there is more tension, the history of international relations suggests that without U.S. military deployments potential rivals, especially those separated by sea like Japan and China, will generally achieve a stable balance of power rather than fight. In other cases, as with our bases in Saudi Arabia between the Iraq wars, U.S. forces probably create more unrestthan they prevent. Our force deployments can also generate instability by prompting states to develop nuclear weapons. Even when wars occur, their economic impact is likely to be limited here.8 By linking markets, globalization provides supply alternatives for the goods we consume, including oil. If political upheaval disrupts supply in one location, suppliers elsewhere will take our orders. Prices may increase, but markets adjust. That makes American consumers less dependent on any particular supply source, undermining the claim that we need to use force to prevent unrest in supplier nations or secure trade routes.9 Part of the confusion about the value of hegemony comes from misunderstanding the Cold War. People tend to assume, falsely, that our activist foreign policy, with troops forward supporting allies, not only caused the Soviet Union's collapse but is obviously a good thing even without such a rival. Forgotten is the sensible notion that alliances are a necessary evil occasionally tolerated to balance a particularly threatening enemy. The main justification for creating our Cold War alliances was the fear that Communist nations could conquer or capture by insurrection the industrial centers in Western Europe and Japan and then harness enough of that wealth to threaten us — either directly or by forcing us to become a garrison state at ruinous cost. We kept troops in South Korea after 1953 for fear that the North would otherwise overrun it. But these alliances outlasted the conditions that caused them. During the Cold War, Japan, Western Europe and South Korea grew wealthy enough to defend themselves. We should let them. These alliances heighten our force requirements and threaten to drag us into wars, while providing no obvious benefit.

## 2nc

### politics

**They have no aff no more**

Sydney Freedberg and Colin Clark (writers for AOL Defense) January 17, 2013 “Sequester's A Nightmare But Year-Long CR Is Just As Bad: SecNav Mabus, Under Sec. Work” http://defense.aol.com/2013/01/17/sequesters-a-nightmare-but-year-long-cr-is-just-as-bad-secn/

The automatic budget cuts known as sequestration aren't the only nightmare scenario looming in March for the Department of Defense, Navy Secretary Ray Mabus said this morning. If Congress keeps on funding the federal government on the current ad hoc basis, by simply extending the current "continuing resolution" -- now set to expire March 27 -- instead of by finally passing proper appropriations bills, the impact would be equally bad.¶ "Most of the attention is put on sequestration because it was such a big deal leading up to the fiscal cliff," Mabus told reporters after his public remarks at the Surface Navy Association's annual conference. "We have an equal, equal concern about CR."¶ Asked about remarks earlier in the conference by uniformed leaders that the Navy was sailing for a readiness crisis -- the infamous "hollow force" -- Mabus said, "I agree with Adm. Gortney that if these things are triggered, in the sort of mindless automatic way they work, you do run a big risk of becoming hollow."¶ [Updated: Speaking later at the same conference, Mabus's Under Secretary, the gloriously outspoken Robert Work, said it was entirely possible that both disasters might strike at once. "We are planning as if sequestration occurs and a year-long CR occurs," he said. "If that happens, ladies and gentlemen, the world as we know it will end. There's just no way you can keep the Navy whole and keep the Marine Corps whole."¶ [If he had to guess, Work went on, "we're going to get some type of deal that take sequestration off the table, but we're going to have a year-long CR."]¶ Either disaster would have an equal financial impact on the Navy, but it would be distributed in different ways.¶ Sequestration "would be $4.6 billion hit for the Department of the Navy," said Mabus in his speech. "If that continuing resolution is extended for the rest of the fiscal year that's another -- exactly the same number -- $4.6 billion hit."¶ The second similarity is "the mindless way both those things operate," Mabus continued. "Under sequestration, you just whack a certain percentage off virtually every program. Continuing resolution says you stay at the levels you were at last year and no new starts."¶ A memo last week from Deputy Defense Secretary Ash Carter instructed the services to prepare for sequestration by economizing on readiness, including -- if sequester takes effect -- cancelling the "availabilities" of Navy warships for major maintenance in port. But a continuing resolution only allows the government to keep spending on existing programs, not to start new ones (unless Congress makes a specific exception), and each "availability" is technically a new program unto itself.¶ So the CR would have exactly the same crippling impact on maintenance as the sequester, Mabus explained to AOL Defense: "If you put a ship in for a shipyard availability, that may be considered a new start, and so we couldn't do that."¶ That said, the two disasters aren't identical. Sequestration has its own unique and nasty wrinkles for the Navy. For example, the sea service has pushed hard for multi-year procurement contracts, in which it guarantees contractors the same amount every year for several years running in return for a lower overall price. Such steady-state expenditures are allowed under a continuing resolution. But sequestration cuts multi-year payments by the same amount it does almost all other programs, about 8.8 percent, which means the Navy couldn't pay the whole sum. That, in turn, would violate the contract and send everyone back to the bargaining table. So, said Mabus to reporters, "if we can't pay under sequestration, we breach a multi-year and the price just goes through the roof."¶ The Navy Secretary wasn't the only senior defense official bemoaning the current budgetary state of the United States early today. The head of Air Force Space Command, Gen. William Shelton, told reporters that the absence of a 2013 appropriations bill adds to the uncertainty engendered by sequestration. "That affects the planning for 2014 and that affects the planning for 2015, which we are deep into," Shelton said at a breakfast put on by the Defense Writers Group. So far, the general said readiness has not been affected. "Day to day we are carrying on," but he made clear that the Air Force would soon have to pare back or forgo flying hours, purchases of information technology, office furniture and the like.¶ Mabus made clear that he understood that budget cuts are probably coming no matter what, even if Congress and the White House cut a deal to avert sequestration. But rather than sequestration's automatic cuts to every program or a continuing resolution's auto-pilot continuation of last year's spending levels, he begged political leaders to give the military discretion of how to apply the cuts: Give us a bill, he said, and let us figure out how to pay it so we can protect our priorities.¶ "Nobody likes budget cuts, but if Defense or the Navy has to be a part of some ... grand bargain," Mabus told the audience at the Surface Navy conference, "then give us the top line, let us manage how any cuts , how any reductions, are made. Let us put dollars against strategy instead of simply cutting the top line."¶ Beset just a few years ago by out-of-control shipbuilding costs on programs like the Littoral Combat Ship, the Navy has vastly improved its management, Mabus argued. "We have shown, I believe pretty decisively so, that we know how to manage the budget, that we know how to set some priorities, that we know how to get money into programs, that we know how to drive a hard bargain, that we know how to get the most money for the taxpayers' dollars," he said. "Instead of mindlessly cutting, give us that chance to manage to whatever the final number is."¶ "We've shown," he said, "that we're willing to make some pretty hard choices, that we're willing to cancel some stuff."¶ Mabus mentioned both shipbuilding and maintenance as priorities he wanted to protect. But what else is left to cut?¶ "I learned a long time ago," said the veteran politician in answer to AOL Defense, "I only get in trouble when I answer what-if questions."¶ [Updated: Under Secretary Work was far more direct, as is his wont: "Shipbuilding is the No. 1 priority in the Department of the Navy. If given a choice between an aviation program and a shipbuilding program, the Secretary will choose shipbuilding."]¶ Any specifics now would just inflame key programs' partisans in Congress. But there's the rub: Sequestration and the continuing resolution may be mindless, but precisely for that reason they save political leaders from making painful choices. The sequester law actually allows the President's Office of Management and Budget to submit an alternative proposal for how to achieve the required cuts, while Congress can exempt any program it wishes from the restrictions of the CR -- but either way requires sacrificing some constituency's favorite program to save another's, and it requires legislators to step up and vote to do so. America's political class may no longer have the courage -- and there's no one left to beat it into them.

### single design bad

#### The aff isn’t key to their global monitoring claims—only a risk that pushing one design

Nader Elhefnawy 8, Professor of English at the University of Miami, writer on IR published in journals including International Security, Astropolitics, and Survival, Autumn 2008, “The Next Wave of Nuclear Proliferation,” Parameters: The US Army War College Quarterly

It would be a mistake to focus excessively on any one track for ameliorating the risk of proliferation. When all is said and done, the current monitoring mechanisms will remain, and so will the maintenance of a stable security environment. Individual cases will require tailored solutions. Nonetheless, the spread of nuclear energy production means a significantly enlarged number of countries will have access to the full nuclear fuel cycle. There are then two primary ways to ameliorate the associated threats. One is to seek methods of nuclear energy production that are inherently proliferation-proof, as may be the case with “Generation IV” nuclear reactors. The other is to reduce the need for nuclear energy production, by making overall energy consumption more efficient, and by increasing production from alternative, nonfossil fuel sources.

New Reactor Designs

Some experts argue that the next-generation (Generation IV) reactor designs will reduce the proliferation risks associated with nuclear energy production. Advocates of next-generation fast-neutron reactors argue that they could provide more efficient energy production. This would enable them to recover up to 99 percent of the energy from their fuel, allowing them to use smaller quantities and a greater variety of fuel types, including natural uranium and possibly even depleted uranium. 31 They would also generate less waste (perhaps only one percent), containing only trace amounts of the transuranics needed for weapons manufacture, than other reactors of similar capacity. 32 This would permit “pyroprocessing,” a different, possibly cheaper, approach to reprocessing fuel that is less suitable for weapons manufacture. 33 Finally, these different procedures will permit onsite fuel fabrication, fuel recycling, and waste processing, something current reactor fuel cycles do not allow, reducing the transportation and security problems.

While appearing to be a panacea for many of nuclear power’s problems, these designs will not be commercially viable until at least 2030. Additionally, despite their obvious advantages, pressuring states to adopt reactors of any given type raises many of the same political issues as the schemes associated with restricting a potential proliferator’s access to nuclear fuel— especially given the fact that established nuclear powers, based on their intention of retaining their current nuclear arsenals, are almost certain to continue operating their existing reactors.

### at: prolif resistant

#### SMRs are worse for prolif than large reactors

Corey **Nealon 11**, "Could small nukes be the energy answer?," 12-4-11, http://articles.dailypress.com/2011-12-04/news/dp-nws-nuclear-reactors-20111203\_1\_nuclear-power-reactors-energy-department

Also, small reactor technology is newer than conventional reactors, many of which date to the 1970s. Because they are smaller and more automated, they could potentially operate with fewer employees and less regulations, Genoa said.

Disadvantages

That worries the Union of Concerned Scientists, a Massachusetts-based environmental watchdog group. Companies developing small reactors are overstating their benefits and minimizing potential downsides, Edwin Lyman, a scientist with the union’s Global Security Program, told a Senate subcommittee in July.

Small reactors “could pose comparable or even greater safety, security and proliferation risks than large reactors,” Lyman said.

### at: arms control

#### Nuclear branding fails—intel and inspections gains can’t translate into solutions

**Sokolski, 11** [What Nuclear Power’s Revival Will Now Require: Tightening the Rules Testimony of Henry Sokolski Executive Director The Nonproliferation Policy Education Center Washington, DC, March 17, 2011 Room 2172 Rayburn House Office Building Washington, DC, http://foreignaffairs.house.gov/112/sok031711.pdf]

Nuclear Inspections and Intelligence: What Are the Limits? This is where the idea of strengthening existing nuclear inspections and enhancing national intelligence are generally held up as nonproliferation solutions. In the case of IAEA inspections, much can be done to improve near-real time surveillance of inspected sites with remote sensors and secure communication links. Securing talented inspectors and retaining more of them would also be both possible and useful. 15. See Committee on Review of DOE's Nuclear Energy Research and Development Program, National Research Council, ―Minority Opinion: Dissenting State of Gilinsky and Macfarlane,‖ in Review of DOE's Nuclear Energy Research and Development Program (Washington, DC: National Academies Press, 2008), available at http://armscontrolcenter.org/assets/pdfs/macfarlane\_gilinsky.pdf and Frank Von Hippel, ―Managing Spent Fuel in the United States: The Illogic of Reprocessing,‖ in Henry Sokolski editor, Falling Behind: International Scrutiny of the Peaceful Atom (Carlisle, PA: Strategic Studies Institute, 2008), pp. 159-221. 16. On the matter of the NPT and the right to peaceful nuclear energy, 11 Yet, simply sending money to the IAEA and increasing its authority ought not to be seen as a panacea. Most U.S. officials, for example, are extremely enthusiastic about increasing the number of state adherents to the IAEA‘s latest inspection understanding, The Additional Protocol, which authorizes the IAEA to conduct more intrusive inspections than under existing safeguards agreements. The increased inspection authority that the Additional Protocol affords, though, is most commonly occasioned by a reduction in the number of routine inspections. Once a country qualifies for Additional Protocol inspections, it is argued, it should be trusted more and inspected less. This lessens IAEA inspection loads but it also reduces IAEA safeguards presence on the ground. There also are real limits on IAEA inspections. After Iran, Iraq, Libya, Syria, and Algeria, we learned that in the most dangerous cases, the IAEA cannot always meet its own timeliness nuclear detection goals. Safeguarding nuclear fuel making (e.g., enrichment, reprocessing, fuel fabrication, uranium hexafluoride production) and nuclear weapons usable fuels (highly enriched uranium, separated plutonium, mixed oxide fuel) anywhere; and large civilian nuclear facilities in hostile states (e.g., Iran and North Korea), are among these cases. In these instances, the inspected nuclear activities and materials are so close to bomb making that **there is scant time even with discovery** of a diversion to do much and a high likelihood that any discovery might come after the diversion if at all.17 Finally, recent research suggests that for large organizations with **conflicting goals** regarding the regulation of complex technologies, their mere expansion may not help and, in certain cases, could actually make matters worse. These research findings could easily apply to the IAEA, which is designed both to promote civilian nuclear applications and to restrain them to assure they stay peaceful. These two opposing IAEA functions make achieving the agency‘s safeguarding mission difficult. It also makes determining how much one is ―strengthening‖ the IAEA inherently tricky.18 This, then, brings us to the utility of improving national intelligence capabilities. Since the late l980s, much has been made of what the U.S. and other states might do to ―counter‖ proliferation with trade interdictions, covert operations, passing off sensitive information to agencies like the IAEA and, if necessary, military strikes. All of these operations may be needed; all demand timely, actionable intelligence. To argue that we can depend on such operations to prevent proliferation if we only could secure more ―actionable‖ intelligence, though, would be a stretch. First, there are severe limits on how much actionable intelligence any country is comfortable sharing with allies, much less international organizations. Second, there are limits on how much information most governments, including our own, are likely to demand about states that are about to or may have already acquired nuclear weapons. In more than a few cases, getting or sharing such information becomes awkward since it can force officials to have to act in ways they may be disinclined to. This arguably was the case with Israel, Pakistan, and North Korea, where at various points, senior U.S. officials actually kept intelligence officers from inspecting or reporting more on what actually was occurring in each of these countries nuclear weapons programs. We subsequently have had to downplay the implications of nonproliferation failures in each of these cases. This suggests that our problem in preventing proliferation may not be the lack of actionable intelligence so much as a lack of demand for it in the hardest and, arguably, most important cases.19

#### Can't stop determined proliferators

Dr. Peter R. **Lavoy**, former Director of the Center for Contemporary Conflict and Senior Lecturer in the Department of National Security Affairs at the Naval Postgraduate School. and Mr. Robin Walker, research associate in the Department of National Security Affairs at the Naval Postgraduate School, “Nuclear Weapons Proliferation: 2016” July 28-29, **2006**, http://www.ccc.nps.navy.mil/people/walker.asp)

Lessons learned from the Pakistani case include that a motivated state will develop nuclear weapons given enough time if it believes in their feasibility and utility. Willing **suppliers will create a network to fill supply needs** if indigenous capacity cannot meet them. However, programmatic success requires secrecy and compartmentalization. In the case of a hypothetical new proliferator with sufficient capacity to produce a weapon, production may well trump oversight in the desire for secrecy, creating a huge opportunity for abuse. Additionally, even lawbreakers (like A.Q. Khan) working on a nuclear program may well enjoy significant domestic support. Finally, as demonstrated by Pakistan, strategic utility of nuclear weapons is not easily found: new nuclear powers will find it difficult to figure out how to put nuclear weapons to effective strategic uses.

### at: economic self interest

#### The aff can’t solve simply through benign tech transfer—IF economics were the only thing that drove nuclear plant decisions, then obviously there would never be prolif because it’s EXPENSIVE

Lewis 12

Jeffrey Lewis, director of the East Asia Nonproliferation Program at the James Martin Center for Nonproliferation, 8/1/12, It's Not as Easy as 1-2-3, www.foreignpolicy.com/articles/2012/08/01/it\_s\_not\_as\_easy\_as\_1\_2\_3?page=full

Creating market incentives to discourage the spread of enrichment and reprocessing seems like a reasonable thing to do - **except that most** states make nuclear decisions on something other than a cost basis. Nuclear power enthusiasts have been no strangers to wishful thinking, starting with claims that nuclear energy would be "too cheap to meter." Government decisions about nuclear power tend to prioritize concerns about sovereignty and keeping technological pace with neighbors. It is not hard to see national nuclear programs as something akin to national airlines - money-losing prestige projects that barely take market forces into account. Often, aspiring nuclear states look to countries like the United States and Japan as models. If such countries invest heavily in fuel-cycle services, developing states might try to copy them rather than simply become their customers.

### 123

#### Sour agreement wrecks prolif leadership

Dr. Chen **Kane 10**, Senior Research Associate at the James Martin Center for Nonproliferation Studies, "Nonproliferation Issues in U.S.-ROK Nuclear Cooperation", U.S.-ROK Workshop on Nuclear Energy and Nonproliferation, The Henry L. Stimson Center and The Asia Foundation Center for U.S.-Korea Policy, http://asiafoundation.org/resources/pdfs/ChenKane100120.pdf

The U.S.-ROK nuclear cooperation agreement will probably be the first cooperation agreement the Obama administration will negotiate and present to Congress for approval. As such, the administration is very conscious that it will set the standards and criteria for future nonproliferation agreements. It will also shed light on the administration’s policies with regards to reprocessing, export controls, waste and energy among other topics. Any decision therefore, within the U.S.-ROK cooperation agreement will take into account its broader bilateral, regional and global implications. ¶ Bilaterally, some in South Korea perceived the unprecedented acquisition of a US$20.4 billion contract to develop nuclear power plants for the UAE as a game changer which marked the beginning of a new relationship with the United States over nuclear power. The agreement makes South Korea the world’s sixth exporter of nuclear plants. It also strengthens South Korea’s claim for closing the back-end of the nuclear fuel cycle. By managing every component of the fuel cycle, the ROK will be in an even better position to offer full range of nuclear services and to attract additional contracts. ¶ The current 123 agreement is based on a so-called “reciprocal relationship” but much has changed in the US-ROK relations since 1974. Specifically, the U.S. and South Korean nuclear industries are now closely intertwined. The U.S. nuclear industry **relies heavily on Korean reactor components**. It is conceivable that during the negotiation **if the U.S. refuses to grant** South Korea programmatic **consent**, Seoul in return will threat to put restrictions on U.S. companies exporting Korean reactor components. However, such a move could meet in return with U.S. threats to limit South Korea from exporting U.S. technologies such the ones embedded in the Korean reactors.

#### Unique turn—agreements revive our industry

**Kerr et al 11**

Paul K. Kerr, CRS Analyst in Nonproliferation, Mark Holt, CRS Specialist in Energy Policy, Mary Beth Nikitin, CRS Specialist in Nonproliferation, 2011, Nuclear Energy Cooperation with Foreign Countries: Issues for Congress, http://www.fas.org/sgp/crs/nuke/R41910.pdf

U.S. nuclear cooperation agreements with foreign countries are also designed is to help promote growth in the U.S. nuclear industry by facilitating U.S. nuclear exports. As noted, U.S. exports of nuclear plant components, equipment, fuel, and technology have held steady at modest levels since the mid-1990s and comprise a decreasing share of the global market; such exports require nuclear cooperation agreements. That downward trend could be altered by new, higher-efficiency uranium enrichment plants currently planned in the United States and by new U.S. contracts to supply reactor technology and components in China and elsewhere.¶ Recent plans for nuclear power expansion around the world, particularly in China and India, could lead to future growth in U.S. nuclear reactor exports. A consortium led by Westinghouse signed a contract with Chinese nuclear firms on July 24, 2007, to supply four AP1000 reactors— Westinghouse’s newest design—at a cost estimated at $8 billion.73 The four reactors are currently under construction at two sites. According to the World Nuclear Association, “[a]t least eight more at four sites are firmly planned after them, and about 30 more are proposed to follow.”74 Much like earlier U.S. agreements with South Korea and other countries, the Westinghouse-China deal includes the transfer of the AP1000 technology to Chinese firms, who are expected eventually to be able to build the reactors on their own. Westinghouse is also working with another Chinese consortium to develop larger versions of the AP1000.75 India has announced plans for up to 12 U.S. nuclear reactors at two sites, although no contracts have been signed.76¶ **U.S.** uranium enrichment **exports could see future growth** resulting from planned new enrichment plants, despite **the scheduled decommissioning of the main existing U.S. plant**. The first new commercial enrichment plant in the United States since the 1950s began commercial production in June 2010 in Lea County, NM. Built by a U.S. subsidiary of the European enrichment firm Urenco, the Lea County plant is to reach full initial capacity by 2013, with further expansion possible. Two other new enrichment plants of similar capacity are planned by the French firm Areva in Idaho and by USEC in Ohio to replace its existing plant in Kentucky. All three planned new plants would use advanced gas centrifuge technology, which is far less energy-intensive than the gaseous diffusion technology used by the existing USEC plant. GE-Hitachi is considering building an enrichment plant using laser enrichment technology that it is developing. If all the planned U.S. enrichment capacity were to come online, and the existing USEC plant shut down, total U.S. enrichment capacity would nearly triple from its current level.77 123 agreements are required for both the construction of these facilities and for the export of enriched uranium.¶ 123 agreements benefit the U.S. nuclear energy program in other ways. For example, licenses under the U.S.-Australia agreement have been primarily for the import of uranium to the United States from Australia. More recently, as noted, foreign firms have been involved in **sustaining the U.S. nuclear energy program** by, for example, participating in nuclear reactor projects in the United States (see discussion above “Increasing Importance of Foreign Suppliers to U.S. Nuclear Power Projects”).

### at: no asia war

#### Strong alliance prevents escalation of prolif and other security threats

Kurt M. **Campbell 11** Assistant Secretary, Bureau of East Asian and Pacific Affairs "U.S. Policy Toward North Korea" March 1 Testimony Before SFRC

The primary strategic objective for U.S. engagement in the Asia-Pacific region is to promote a peaceful and stable security environment that advances the interests of the United States, our allies, and partners in the region. Essential to this approach is the security and stability that our alliances with Japan, the Republic of Korea (ROK), Australia, Thailand, and the Philippines provide. These relationships underwrite peace and security in the region and provide a context for the region’s tremendous economic dynamism and vitality. In addition, our alliances are buttressed by a network of partnerships ranging from Indonesia to New Zealand and an evolving regional political and security architecture that will help create rules of the road for this rapidly evolving and strategically critical region. China is also a key U.S. partner in promoting peace and security in the Asia-Pacific region and globally, and the joint statement issued during President Hu’s January 2011 to Washington underscored that ‘‘in coordination with other parties, the United States and China will endeavor to increase cooperation to address common concerns and promote shared interests.’’ ¶ Despite the tremendous opportunities in Asia that have become part of our popular discourse, one country stands out as an outlier, and in fact an impediment, to the region’s promising future: the Democratic People’s Republic of Korea’s (DPRK). The DPRK’s brazen attack on the ROK corvette Cheonan in March of last year, its recent disclosure of a uranium enrichment program, its shelling of Yeonpyong Island that resulted in the tragic loss of South Korean lives, and its ongoing human rights violations underscore the threat that the DPRK’s policies and provocations, including its nuclear and ballistic missile programs and proliferation activities, pose to regional stability and global security. ¶ The verifiable denuclearization of the Korean Peninsula, which is the core objective of the 2005 joint statement of the six-party talks, is an essential ingredient to the Asia-Pacific region’s long-term success and to our own security. Progress toward this goal requires close coordination between the ROK, Japan, and the United States, as well as with China and Russia. Our Northeast Asian alliances play an essential role in maintaining regional security, deterring North Korean provocations, providing a reliable and robust strategic deterrent posture, and bringing maximum leverage to bear on the DPRK to change its current course and become a member of the community of nations. To this end, we have actively engaged our regional partners to ensure robust implementation of U.N. Security Council Resolutions (UNSCR) 1718 and 1874 on North Korea, and though there is still work to be done, strong regional cooperation, particularly with Japan and South Korea, has made it more difficult for North Korea to successfully engage in proliferation and other illicit activities. We will continue to take steps to enhance and broaden our bilateral political, economic, and security relations, as well as make progress on key alliance modernization initiatives. We will also work to develop a more integrated trilateral framework for cooperation and coordination between Seoul, Tokyo, and Washington. Furthermore, we are taking steps to enhance coordination with China and Russia—both of which have important relationships with North Korea—to create a more favorable context for denuclearization and peace and security. In addition to the aforementioned five key parties, we are working more closely with other stakeholders like the Association of Southeast Nations (ASEAN), India, and Australia to broaden regionwide efforts to compel North Korea to abide by its denuclearization commitments and obligations, as well as with the U.N. Security Council. ¶ The Republic of Korea ¶ The United States-ROK alliance is grounded in the threat that North Korea poses to the ROK. However, over the course of the past few years, the United States has undertaken steps to expand alliance cooperation in both regional and global settings. In 2011, we will aggressively pursue initiatives to increase collaboration in the peninsular, regional, and global contexts.

#### Relations key to regional power projection and global hegemony

**Campbell et al, 09** – Assistant Secretary of State for East Asian and Pacific Affairs (Kurt M., Center for a New American Security, “Going global: the future of the U.S.-South Korea alliance.” Ed. by Campbell et al, “Going global: the future of the U.S.-South Korea alliance.” P. 60 http://www.cnas.org/files/documents/publications/CampbellPatel\_Going%20Global\_February09\_0.pdf)

America’s ability to maintain stability and **project power** in the Asia Pacific has long depended on its hub-and-spoke system of bilateral alliances. South Korea has been a valuable component of this system, serving as a regional hub of U.S. power, and projecting “spokes” of U.S. influence across the region. It has become more and more obvious, however, that the sum of South Korea’s influence and interests can no longer be viewed merely in a regional context. The ROK is actively establishing new economic and diplomatic relationships with countries across the globe. Similarly, the South Korean military is already engaging in complex out-of-area operations. President Lee has embraced and expanded these global aspirations, embark-ing on a process to establish a “green Korea” and transform the country into a world leader on climate change. 2

#### Asia conflicts outweigh on magnitude

**Dibb 2001** – head of the Strategic and Defense Studies Centre in the Research School of Pacific and Asian Studies for The Australian National University, former Deputy Secretary for Strategic Policy and Intelligence in the Australian Department of Defense and director of the Joint Intelligence Organisation (Paul, Naval War College Review, "Strategic trends: Asia at a crossroads", 54:1, ProQuest, WEA)

The areas of maximum danger and instability in the world today are in Asia, followed by the Middle East and parts of the former Soviet Union. The strategic situation in Asia is more uncertain and potentially threatening than anywhere in Europe. Unlike in Europe, it is possible to envisage war in Asia involving the major powers: remnants of Cold War ideological confrontation still exist across the Taiwan Straits and on the Korean Peninsula; India and Pakistan have nuclear weapons and ballistic missiles, and these two countries are more confrontational than at any time since the early 1970s; in Southeast Asia, Indonesia-which is the world's fourth-largest country-faces a highly uncertain future that could lead to its breakup. The Asia-Pacific region spends more on defense (about $150 billion a year) than any other part of the world except the United States and Nato Europe. China and Japan are amongst the top four or five global military spenders. Asia also has more nuclear powers than any other region of the world.¶ Asia's security is at a crossroads: the region could go in the direction of peace and cooperation, or it could slide into confrontation and military conflict. There are positive tendencies, including the resurgence of economic growth and the spread of democracy, which would encourage an optimistic view. But there are a number of negative tendencies that must be of serious concern. There are deep-seated historical, territorial, ideological, and religious differences in Asia. Also, the region has no history of successful multilateral security cooperation or arms control. Such multilateral institutions as the Association of Southeast Asian Nations and the ASEAN Regional Forum have shown themselves to be ineffective when confronted with major crises.

#### Turns everything—wrecks the international system

Hugh **White 8**, Professor of Strategic Studies at Australian National University and Visiting Fellow, the Lowy Institute, June 4, 2008, "’Why War in Asia Remains Thinkable’ ," online: http://www.iiss.org/conferences/global-strategic-challenges-as-played-out-in-asia/asias-strategic-challenges-in-search-of-a-common-agenda/conference-papers/fifth-session-conflict-in-asia/why-war-in-asia-remains-thinkable-prof-hugh-white/

But while I agree that war in Asia is unlikely, it does seem to me to be ‘thinkable’. Moreover I will suggest that there is a real risk that war will become more thinkable in Asia over coming years and decades. And by ‘war’ I mean not just the kinds of small wars that have sadly always remained quite common in global and regional affairs. I mean big wars: wars between major powers that can kill millions, disrupt the lives of billions and wreck the international system. I mean the kind of wars that the founders of the IISS worried about fifty years ago when this great institution was founded, and which they and their successors have done so much to study, understand and prevent.

#### The chance for escalation is high—North Korea will provoke South Korea to test its new leadership

**Cha ‘12**- professor at Georgetown University; senior advisor and Korea chair at the Center for Strategic and International Studies

(Cha, Victor D. “Kim Jong Un Is No Reformer”. August 21, 2012. http://www.foreignpolicy.com/articles/2012/08/21/kim\_jong\_un\_is\_no\_reformer)

Let me be blunt: The North Korean regime will not change because Little Kim studied in Switzerland, likes Mickey Mouse, and has a hot wife. If anything, another crisis could be looming: The death of Kim Jong Il and the politics of an unstable leadership transition, a new "get-tough" attitude in Seoul, and U.S. and South Korean electoral cycles constitute a **unique confluence of escalation** that has not been seen on the peninsula since the 1990s. This could spell another **nuclear crisis** with North Korea, or even worse, military hostilities that could threaten the peace and prosperity of the region. The Obama administration stopped trying to engage Pyongyang after its April 2012 missile launch, which North Korea announced just 16 days after a food-for-nuclear-and-missile-freeze deal with the United States. Stung by the launch, the Obama administration immediately called off the deal and gave up on its last chance to get IAEA inspectors into North Korea's nuclear facilities at Yongbyon. The launch, which North Korea claimed was for a weather satellite but tested ballistic missile technology banned by the U.N. Security Council, exploded an embarrassing 81 seconds after liftoff. The spectacular failure of Kim's first major public act almost ensures that another provocation is in the offing. He lacks the revolutionary credentials his grandfather earned as a guerrilla fighter against the Japanese. Unlike his father, he does not have a decade of training and preparation for the job. Without serving a day of military service, in September 2010 the junior Kim was made a four-star general and foisted to the top of the power structure at the age of 26 or 27. Even for North Koreans, who expect their leaders to start young so that they can rule for decades, this is a stretch. So **Kim must prove himself** -- be it **through** another missile launch, a nuclear test, or **a military provocation** against Seoul. But South Koreans are fed up. Since North Korea torpedoed a South Korean navy ship in March 2010 and shelled an island a few months later in attacks that killed sailors and civilians, the government and public no longer preach patience and stability so as not to rattle the South Korean stock market. South Korean military leaders have re-written their military rules of engagement. They are now prepared to retaliate for the next military act, possibly even going after command structures in North Korea, **which could ignite a full-scale war** on the peninsula. The South Korean conservative political contender for the presidential election in December, moreover, is in no mood to look weak on North Korea. Even if the long-shot liberal candidates who preach engagement with the North were to win, Pyongyang has a history of provoking a newly elected leader in the South to show who is the alpha dog on the peninsula, in which case, public pressure for a strong response would be difficult to ignore. Based on my research of U.S.-North Korea negotiations since 1984, within an average of five months after a provocation Washington is usually back at the bargaining table, often because it wants to de-escalate a crisis. The Obama administration, facing a tough election, is not interested in offering exit ramps to North Korea, for fearing of being denounced as weak by Republicans. Optimists often cite China as the answer to avoiding another crisis. The mid-August meetings between the Chinese and Kim's uncle, Jang Song-taek, may be a prelude to more economic deals and even a visit by the new leader to Beijing. But China cannot restrain Pyongyang from belligerence; and it cannot reform North Korea's family-run regime, no matter how many bureaucrats it offers to train. It can only bribe them to return temporarily to a negotiating table that is now empty of other willing partners. **The only thing missing right now is a spark**. Perhaps North Korea's new leader is busy amusing himself with Disney and his new lovely wife instead of dealing with problems like the flooding that has ravaged the countryside. NGOs report that the food shortage situation is worsening. And the rogue nuclear and missile programs continue to expand. Infighting within the regime is likely intensifying, manifested in the surprise sacking in July of the country's top military general, Ri Yong-ho. Some interpret Ri's departure as evidence of the young reform-minded Kim trying to usurp power from the hard-line military.

### 2nc no domino

#### Prefer our evidence

Potter 8

William C. Potter is Sam Nunn and Richard Lugar Professor of Nonproliferation Studies and Director of the James Martin Center for Nonproliferation Studies at the Monterey Institute of International Studies, Summer 2008, Divining Nuclear Intentions, http://muse.jhu.edu/journals/international\_security/v033/33.1.potter.pdf

For much of the nuclear age, academic experts, intelligence analysts, and public commentators periodically have forecast rapid bursts of proliferation, **which have failed to materialize**. Central to their prognoses, often imbued with the imagery and metaphors of nuclear dominoes and proliferation chains, has been the assumption that one state's nuclearization is likely to trigger decisions by other states to "go nuclear" in quick succession. Today the proliferation metaphors of choice are "nuclear cascade" and "tipping point," but the implication is the same—we are on the cusp of rapid, large-scale nuclear weapons spread. It is with some justification, therefore, that the study of proliferation has been labeled "the sky-is-still-falling profession."1 Although proliferation projections abound, **few of them are founded on,** or even informed **by, empirical research and theory**.2 This deficiency, though regrettable, is understandable given the small body of theoretically or empirically [End Page 139] grounded research on forecasting proliferation developments, and the underdeveloped state of theory on nonproliferation and nuclear decisionmaking more generally. Also contributing to this knowledge deficit is the stunted development of social science research on foreign policy–oriented forecasting and the emphasis on post hoc explanations, rather than predictions on the part of the more sophisticated frameworks and models of nuclear decisionmaking. Two **important exceptions to this** general **paucity of nonproliferation theory with** predictive value **are** recent **books by** Jacques **Hymans**, The Psychology of Nuclear Proliferation: Identity, Emotions, and Foreign Policy, and Etel Solingen, Nuclear Logics: Alternative Paths in East Asia and the Middle East.3 These studies merit careful attention because of their solid grounding in comparative field research and social science theory, their challenges to prevailing conceptions about the sources of nuclear weapons decisions, and their promise for predicting proliferation developments. As such, they go well beyond the influential but historically oriented explanatory frameworks developed by scholars such as Peter Lavoy, Ariel Levite, T.V. Paul, Scott Sagan, and James Walsh.4 Although the approaches advanced by Hymans and Solingen have their own limitations, these two books represent the cutting edge of nonproliferation research and should be of great interest to both policy practitioners and scholars. In particular, a careful review of their studies sheds new insights into why past predictions of rapid proliferation have proved faulty, why the current alarm over impending proliferation doom is largely without merit, and why we should not count on single theories of international relations—at least in their [End Page 140] current state—to offer much guidance in explaining or predicting the dynamics of nuclear weapons spread.

#### They are serial scaremongering

**Kidd 10**

Steve Kidd, June 8 2010. Head of Strategy & Research at the World Nuclear Association, where he has worked since 1995 [when it was the Uranium Institute]. (“Nuclear proliferation risk - is it vastly overrated?” June 8, 2010 Nuclear Engineering International, Lexis, )

A significant amount of media attention has recently attached itself to the nuclear security meeting convened by US president Barack Obama and the five-yearly review conference for the Treaty on the Non-Proliferation of Nuclear Weapons, which followed soon afterwards. The fear of so-called 'rogue nations' acquiring nuclear weapons, or terrorist organisations creating outrages by misuse of nuclear materials, clearly remains strong. Many column inches also continue to be devoted to various North Korean nuclear activities and to Iran's alleged intentions to pursue a weapons programme. There therefore remains a fear that this may cast a shadow over the nuclear renaissance, particularly as many people clearly believe that nuclear energy and bombs are merely two faces of the same coin. But it is surely not unreasonable to question whether these fears are being substantially inflated and possibly manipulated by various interest groups in order to suit their own purposes. There is, however, no doubt that nuclear materials could conceivably be diverted from a civil nuclear power programme into the production of nuclear weapons or alternatively, major fuel cycle processes (notably enrichment and reprocessing of used fuel) could be employed to produce weapons rather than fuel for civil reactors. Similarly, it is understandable that concerns over the security of civil nuclear facilities have multiplied since the 9/11 terrorist attacks in New York. The possibility of aircraft crashing into such plants has naturally now been raised, as have possible terrorist incursions at plants either to acquire materials for weapons or to misuse the facility to create an explosion or a major radioactive release (see also 'Security since September 11th,' NEI March 2010, pp 14-9]. Rather like the risks of operating nuclear power plants themselves, these possibilities largely boil down to assessing very low probability events which may have big consequences. Human beings are notoriously bad at this and frequently reach what seem to be illogical conclusions. This is highlighted by a recent book by a US academic, John Mueller, Atomic Obsession-Nuclear Alarmism from Hiroshima to Al-Qaeda (ISBN No 978-0195381368). Mueller argues very persuasively (but certainly also controversially) that the impact of nuclear weapons has been substantially overstated both in terms of their likely destructive power (in the hands of any party other than one of the five recognised nuclear weapons states) but also in their real impact on human history since 1945. He emphasizes how slow proliferation of weapons has been in reality, partly because the difficulties of acquiring nuclear materials and developing weapons technology are **much greater than commonly stated**, but also because all but a few countries have no real interest in acquiring weapons, as they make little sense beyond supposedly increasing national prestige. Similarly, the task of the atomic terrorist is far from simple. If it were as easy as many people claim, why haven't there been any incidents, even when the controls on nuclear materials were far looser than today? And why do terrorist incidents (with the possible exception of the sarin gas attack on the Tokyo subway in 1995) usually involve low tech methods, such as people attaching bombs to themselves or taking over commercial airlines armed with box cutters and then flying them into prominent buildings? There may not be, in reality, any substantive black market in nuclear materials, despite the stories we regularly hear of nuclear trafficking. The comparison sometimes made with narcotic drugs is not reasonable; although drug seizures are known to be the tip of a very large iceberg, controls on the production, trade and transport of nuclear materials are much stiffer and potential buyers are very limited in number. First, security considerations have been addressed by deploying additional armed personnel at facilities and by other measures to prevent incursions, while new nuclear plants are designed with the possibility of an aircraft impact much in mind. Although such events are clearly not impossible, the entire 50-year history of civil nuclear power contains nothing to suggest that the risks are other than very remote. Little can be done other than what has been accomplished already and the risks should certainly not be allowed to dominate the assessment of potential future actions. Indeed, critics of nuclear power are very bad at keeping things in perspective and fail to apply similar degrees of scrutiny to other plans. For example, should football stadiums not be licensed for 80,000 fans, simply because a direct aircraft strike during a game could conceivably kill many thousands? Should the walls of the stadium have to be several metres thick? Proliferation of nuclear materials and technology and their integration into weapons are notably more substantive risks, particularly as they will likely involve sovereign states with their greater resources above those of a terrorist organisation. Critics of nuclear power emphasise that designing a nuclear bomb itself is not particularly difficult (even if, as Mueller emphasises, actually manufacturing and delivering a weapon certainly is). So much of the world anti-proliferation regime is based on controls on fissile materials; if the necessary plutonium or highly enriched uranium is not available either by diversion from civil uses or production in a local facility, a weapon is impossible. It is therefore necessary for nuclear power critics to focus on alleged weaknesses in the international nuclear safeguards regime or in the security of nuclear materials transport, plus the possible spread of enrichment and reprocessing technologies to countries who may have an interest beyond normal civil uses. While there is no room for complacency, the real risks are actually as remote as those associated with nuclear facility security and mean that attempts to stiffen safeguards even further will encounter reasonable objections. Nevertheless, over the past 35 years, the International Atomic Energy Agency's (IAEA) safeguards system under the Nuclear Non-proliferation Treaty (NPT) has been a conspicuous international success in curbing the diversion of civil uranium into military uses. Most countries have indeed renounced nuclear weapons, recognising that possessing of them would threaten rather than enhance national security. They have therefore embraced the NPT as a public commitment to use nuclear materials and technology only for peaceful purposes. Parties to the NPT agree to accept technical safeguards measures applied by the IAEA, complemented by controls on the export of sensitive technology from countries such as UK and USA through voluntary bodies such as the Nuclear Suppliers' Group (NSG). Safeguards require that operators of nuclear facilities maintain and declare detailed accounting records of all movements and transactions involving nuclear material. The aim is to deter the diversion of nuclear material from peaceful use by maximising the risk of early detection. At a broader level they provide assurance to the international community that countries are honouring their treaty commitments to use nuclear materials and facilities exclusively for peaceful purposes. In this way safeguards are a service both to the international community and to individual states, who recognise that it is in their own interest to demonstrate compliance with these commitments. All NPT non-weapons states must accept these full-scope safeguards, while facility-specific safeguards apply in the five weapons states (USA, Russia, UK, France and China) plus the non-NPT states (India, Pakistan and Israel). Iran and North Korea illustrate both the strengths and weaknesses of international safeguards. While accepting safeguards at declared facilities, Iran has allegedly set up equipment elsewhere in an attempt to enrich uranium to weapons grade (see also 'Figuring out Fordow,' NEI March 2010, pp20-2]. North Korea used research reactors (not commercial electricity-generating reactors) and a reprocessing plant to produce some weapons-grade plutonium. The weakness of the NPT regime lies in the fact that no obvious diversion of material has been involved. In both countries, the uranium used as fuel probably came from indigenous sources, and the countries themselves built the nuclear facilities concerned, without being declared or placed under safeguards arrangements. The greatest risk of nuclear weapons proliferation has traditionally rested with countries which have not joined the NPT and which have significant unsafeguarded nuclear activities. India, Pakistan and Israel are in this category. While safeguards apply to some of their activities, others remain beyond scrutiny. A further concern is that countries may develop various sensitive nuclear fuel cycle facilities and research reactors under full NPT safeguards and then subsequently opt out of the NPT. This is the argument for moving to some kind of intrinsic proliferation resistance in the fuel cycle, where there are a number of ideas, previously floated many years ago, which keep on being revamped. One key principle is that the assurance of non-proliferation must be linked to assurance of supply and services in the nuclear fuel cycle to any country embracing nuclear power. Various proposals for fuel banks and multinational fuel cycle centres may aim to guarantee the supply of nuclear fuel and services for bona fide uses, thereby removing the incentive for countries to develop indigenous fuel cycle capabilities. Yet there is clearly a risk here of dividing the world into 'good guys' and 'bad guys,' in a politically discriminatory way. Already, some international fuel cycle proposals have raised the ire of major developing countries like Brazil and South Africa. The real problem is that nuclear non-proliferation and security have powerful lobby groups behind them, largely claiming to have nothing against nuclear power as such, apart from the dangers of misuse of nuclear technology. In fact in Washington DC, home of the US federal government, there is a cottage industry of lobby groups dedicated to this. Those who oppose their scaremongering (and it essentially amounts to no more than this) are castigated as being in the industry's pocket or acting unresponsively to allegedly genuinely expressed public fears. Pointing out that very few new countries will acquire nuclear power by even 2030, and that very few of these will likely express any interest in acquiring enrichment or reprocessing facilities, seems to go completely over their heads. In any case, nuclear fuel cycle technologies are very expensive to acquire and it makes perfect sense to buy nuclear fuel from the existing commercial international supply chain. This already guarantees security of supply, so moves towards international fuel banks are essentially irrelevant, while measures supposedly to increase the proliferation resistance of the fuel cycle are unwarranted, particularly if they impose additional costs on the industry. It is likely that more countries will foolishly choose to acquire nuclear weapons.

#### Breakout timeframe is a decade at best because of nuclear development—or they don’t solve in time

The Economist 12 – “The Dream that Failed,” 3-10-12, http://www.economist.com/node/21549098/print

Nuclear power is not going to disappear. Germany, which in 2011 produced 5% of the world's nuclear electricity, is abandoning it, as are some smaller countries. In Japan, and perhaps also in France, it looks likely to lose ground. But there will always be countries that find the technology attractive enough to make them willing to rearrange energy markets in its favour. If they have few indigenous energy resources, they may value, as Japan has done, the security offered by plants running on fuel that is cheap and easily stockpiled. Countries with existing nuclear capacity that do not share Germany's deep nuclear unease or its enthusiasm for renewables may choose to buy new reactors to replace old ones, as Britain is seeking to do, to help with carbon emissions. Countries committed to proliferation, or at least interested in keeping that option open, will invest in nuclear, as may countries that find themselves with cash to spare and a wish to join what still looks like a technological premier league.¶ Besides, nuclear plants are long-lived things. Today's reactors were mostly designed for a 40-year life, but many of them are being allowed to increase it to 60. New reactor designs aim for a span of 60 years that might be extended to 80. Given that it takes a decade or so to go from deciding to build a reactor to feeding the resulting electricity into a grid, reactors being planned now may still be working in the early 22nd century.

### no impact

#### Deterrence is ironclad—all leaders come to the same conclusion

**Tepperman, 2009** [Jonathan, Newsweek International's first Assistant Managing Editor (now Deputy Editor), “Why Obama Should Learn to Love the Bomb” 8-29, http://www.newsweek.com/2009/08/28/why-obama-should-learn-to-love-the-bomb.html]

Why indeed? **The iron logic of deterrence** and mutually assured destruction is so compelling, it's led to what's known as the nuclear peace: the virtually unprecedented stretch since the end of World War II in which all the world's major powers have avoided coming to blows. They did fight proxy wars, ranging from Korea to Vietnam to Angola to Latin America. But these never matched the furious destruction of full-on, great-power war (World War II alone was responsible for some 50 million to 70 million deaths). And since the end of the Cold War, such bloodshed has declined precipitously. Meanwhile, the nuclear powers have scrupulously avoided direct combat, and there's very good reason to think they always will. There have been some near misses, but a close look at these cases is fundamentally reassuring—because in each instance, very different leaders all came to the same safe conclusion. Take the mother of all nuclear standoffs: the Cuban missile crisis. For 13 days in October 1962, the United States and the Soviet Union each threatened the other with destruction. But both countries soon stepped back from the brink when they recognized that a war would have meant curtains for everyone. As important as the fact that they did is the reason why: Soviet leader Nikita Khrushchev's aide Fyodor Burlatsky said later on, "It is impossible to win a nuclear war, and both sides realized that, maybe for the first time." The record since then shows the same pattern repeating: nuclear-armed enemies slide toward war, then pull back, always for the same reasons. The best recent example is India and Pakistan, which fought three bloody wars after independence before acquiring their own nukes in 1998. Getting their hands on weapons of mass destruction didn't do anything to lessen their animosity. But it did dramatically mellow their behavior. Since acquiring atomic weapons, the two sides have never fought another war, despite severe provocations (like Pakistani-based terrorist attacks on India in 2001 and 2008). They have skirmished once. But during that flare-up, in Kashmir in 1999, both countries were careful to keep the fighting limited and to avoid threatening the other's vital interests. Sumit Ganguly, an Indiana University professor and coauthor of the forthcoming India, Pakistan, and the Bomb, has found that on both sides, officials' thinking was strikingly similar to that of the Russians and Americans in 1962. The prospect of war brought Delhi and Islamabad face to face with a nuclear holocaust, and leaders in each country did what they had to do to avoid it.

### dod adv

#### SMRs won’t be deployed to forward bases unless they’re thorium—and that won’t happen

**Ackerman**, editor – Danger Room @ Wired, 2/18/**’11**

(Spencer, “Latest Pentagon Brainstorm: Nuke-Powered War Bases,” Danger Room)

Buried within Darpa’s 2012 budget request under the innocuous name of “Small Rugged Reactor Technologies” is a $10 million proposal to fuel wartime Forward Operating Bases with nuclear power. It springs from an admirable impulse: to reduce the need for troops or contractors to truck down roads littered with bombs to get power onto the base. It’s time, Darpa figures, for a “self-sufficient” FOB.

Only one problem. “The only known technology that has potential to address the power needs of the envisioned self-sufficient FOB,” the pitch reads, “is a nuclear-fuel reactor.” Now, bases could mitigate their energy consumption, like the solar-powered Marine company in Helmand Province, but that’s not enough of a game-changer for Darpa. Being self-sufficient is the goal; and that requires going nuclear; and that requires … other things.

To fit on a FOB, which can be anywhere from Bagram Air Field’s eight square miles to dusty collections of wooden shacks and concertina wire, the reactor would have to be “well below the scale of the smallest reactors that are being developed for domestic energy production,” Darpa acknowledges.

That’s not impossible, says Christine Parthemore, an energy expert at the Center for a New American Security. The Japanese and the South Africans have been working on miniature nuclear power plants for the better part of a decade; Bill Gates has partnered with Toshiba to build mini-nuke sites. (Although it’s not the most auspicious sign that one prominent startup for modular reactors suspended its operations after growing cash-light last month.) Those small sites typically use uranium enriched to about 2 percent. “It would be really, really difficult to divert the fuel” for a bomb “unless you really knew what you were doing,” Parthemore says.

But Darpa doesn’t want to take that chance. Only “non-proliferable fuels (i.e., fuels other than enriched uranium or plutonium) and reactor designs that are fundamentally safe will be required of reactors that may be deployed to regions where hostile acts may compromise operations.”

Sensible, sure. But it limits your options: outside of uranium or plutonium, thorium is the only remaining source for generating nuclear fuel. The Indians and now the Chinese have experimented with thorium for their nuclear programs, but, alas, “no one has ever successfully found a way” to build a functioning thorium reactor, Parthemore says, “in a safe and economical manner.”

For now, Darpa proposes to spend $10 million of your money studying the feasibility of the project. But it’s just one part of the researchers’ new push to green the military. Another $10 million goes to a project called Energy Distribution, which explores bringing down energy consumption on the FOBs. An additional $5 million will look at ways to keep fuel storage from degrading in extreme temperatures. For $50 million, Darpa proposes to build a turbine engine that uses 20 percent less energy.

But all of that is mere isotopes compared to the Nuclear FOB. Darpa appears to have thought about it a lot. It says it plans to work with the Department of Energy “to ensure that existing advanced reactor development activities are being exploited and/or accelerated as appropriate, based on the military’s needs.”

Still, if it can’t find the right non-proliferable fuel, it suggests that it might look to the “development of novel fuels.” Says a stunned Parthemore, “I have no idea why you’d want to bring that upon the world.”

#### Err neg—their authors do not support forward deployed SMRs

**Andres**, Professor of National Security Strategy at the National War College **and, Breetz**, doctoral candidate in the Department of Political Science at The Massachusetts Institute of Technology, **11**

(Richard, Senior Fellow and Energy and Environmental Security and Policy Chair in the Center for Strategic Research, Institute for National Strategic Studies, at the National Defense University, Hanna L., Feb, “Small Nuclear Reactors for Military Installations: Capabilities, Costs, and Technological Implications,” http://www.ndu.edu/inss/docuploaded/SF%20262%20Andres.pdf, accessed 9-15-12, CMM)

Small reactors used on domestic military bases are ¶ likely to face a number of additional siting hurdles. As a ¶ distributed energy source, they are likely to face substantial “not-in-my-backyard” battles. Moreover, dispersing a ¶ large number of reactors leads to questions about longterm nuclear waste disposal.¶ 27¶ Arguably, reactors should be ¶ relatively safe on domestic military installations, certainly ¶ more secure than, for instance, the reactors situated in developing countries or intended for processing tar sands. ¶ Nevertheless, no issue involving nuclear energy is simple. ¶ Institutional and technical uncertainties—such as the security of sealed modules, the potential and unintended ¶ social and environmental consequences, or the design of ¶ reliable safeguards—make dispersing reactors across the ¶ country challenging. Some key issues that require consideration include securing sealed modules, determining how ¶ terrorists might use captured nuclear materials, carefully ¶ considering the social and environmental consequences of ¶ dispersing reactors, and determining whether Permissive ¶ Action Links technology could be used to safeguard them

Using the emerging technology at expeditionary locations carries far greater risks. Besides the concerns outlined ¶ above, forward located reactors could be subject to attack. ¶ Today, forward operating bases in Iraq and Afghanistan ¶ are regularly subjected to mortar attacks, suggesting that ¶ reactors at such locations could make these bases prime ¶ targets for attack. Since forward bases are also subject to ¶ capture, any design proposal that envisions deployment ¶ at forward operating bases must incorporate contingency ¶ plans in the event that reactors fall into enemy hands.

#### Fuel cells fail

**Alic**, former tech and science consultant – Office of Technology Assessment, adjunt professor – Johns Hopkins SAIS, ‘**12**

(John, “Defense Department Energy Innovation: Three Cases,” in Energy Innovation at the Department of Defense: Assessing the Opportunities, March)

In practice, as so often, costs and engineering realities pose obstacles. Hydrogen fuel cells offer simplicity and¶ efficiency, but for reasonable volumetric energy density the hydrogen must be stored as either a very lowtemperature¶ liquid or a very high-pressure gas, as mentioned in the preceding section. This requires either a heavily¶ insulated or a heavily strengthened storage vessel. Liquid fuels consumed directly in the cell or converted first to¶ hydrogen via standard chemical processes known as reformation tend to foul or poison the catalysts on which fuel cells and reformers depend; good catalysts are expensive, and JP-8, which otherwise would be ideal for military¶ applications, is one of the worst starting points because of relatively high sulfur content (sulfur is lethal to catalysts,¶ and the sulfur content of jet fuel, unlike that of diesel fuel for road vehicles, remains essentially unregulated).¶ Comparisons¶ Fuel cells and batteries offer relatively high efficiency (the fraction of energy theoretically available that can be¶ converted into useful work) compared to most other energy converters. The best diesel engines, for example,¶ approach 40 percent efficiency under optimal conditions (i.e., the load-speed combination that gives the highest¶ efficiency). While this is better than gasoline engines or gas turbines can achieve, some batteries approach 90 percent efficiency. For any fuel-burning engine, moreover, efficiency falls off at loads and speeds well away from the¶ maximum point, so that average efficiencies do not approach the maximum under load-varying conditions, as for¶ passenger vehicles. Cars and light trucks in typical urban driving, for example, may average 15 percent efficiency¶ or less. For batteries and fuel cells, by contrast, efficiency does not change much with load (i.e., rate of discharge).¶ On the other hand, fuel-burning engines exhibit greater energy density and power density than batteries and have¶ sometimes, for that reason, been considered for soldier-portable power. The technology for combustion engines is¶ highly developed, manufacturing costs are modest, and small engines can be designed to operate much more quietly¶ than leaf blowers or model airplanes. Miniature diesel engines could burn jet fuel. On the other hand, combustion¶ engines would have to be integrated with a generator to produce electrical power, and all such engines scale down¶ poorly, since heat and mechanical losses rise as a proportion of output. In most evaluations, the disadvantages¶ have seemed to outweigh the advantages.

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#### Microgrids are more effective on FOBs than domestic bases---they’re already being deployed so no offense is unique

Peter Asmus 11, Senior Analyst at Pike Research, September 2011, “Military Microgrids: Aggregation Platforms to Secure Mission-Critical Loads and Achieve Net Zero Energy, Renewable Energy, and Demand Response Goals,” http://www.pikeresearch.com/wordpress/wp-content/uploads/2011/09/MMG-11-Executive-Summary.pdf

The business case for microgrids at stationary military bases is one thing, but an even better business case can be made for forward operating base (FOB) microgrids since there is no legacy grid, utilities do not represent barriers to these deployments. Also known as tactical or mobile microgrids, these typically temporary camps and operations centers can greatly reduce casualties during combat. In most ways, the mobile microgrids mirror their stationary base counterparts. However, mobile microgrids must be portable; therefore, designs must be extremely modular at the most micro levels. (Indeed, Skybuilt Power offers a micro-solar microgrid in a suitcase for military applications.) A few of these mobile microgrids are already being deployed in Afghanistan, where there has been a particularly urgent need for immediate deployment.

Much smaller in scale than U.S. stationary microgrids, mobile microgrids can be deployed in a day. The transient nature of these systems makes them extremely difficult to forecast. Definitional issues also play a role; many mobile power systems may or may not qualify as true “microgrids,” as there is large grey area distinguishing solar PV or small wind/diesel hybrids from a bona fide microgrid. Total capacity in the average scenario is estimated at a mere 20 MW by 2017. However, these systems will multiply quickly and significantly, especially if the DOD engages in additional missions in the highly volatile Middle East. FOBs on islands not engaged in direct combat also represent promising near-term markets. The forecasting of this segment is remarkably problematic, nevertheless, given the unpredictability of both political forces and terrorist attacks.

In the end, there will be some crossover between the two different military markets (stationary base and mobile microgrids). This is especially true in the still emerging area of control systems, where vendors large and small are still exploring synergies, collaborations, and product validations.

#### Microgrids achieve full energy independence for bases---particularly FOBs---and DOD leadership improves renewables tech

Amory B. Lovins 10, Chairman/Chief Scientist of the Rocky Mountain Institute, second quarter 2010, “DOD’s Energy Challenge as Strategic Opportunity,” Joint Force Quarterly, http://www.ndu.edu/press/lib/images/jfq-57/lovins.pdf

The U.S. electric grid was named by the National Academy of Engineering as the top The U.S. electric grid was named by the National Academy of Engineering as the top engineering achievement of the 20th century. It is very capital-intensive, complex, technologically unforgiving, usually reliable, but inherently brittle. It is responsible for ~98–99 percent of U.S. power failures, and occasionally blacking out large areas within seconds—because the grid requires exact synchrony across subcontinental areas and relies on components taking years to build in just a few factories or one (often abroad), and can be interrupted by a lightning bolt, rifle bullet, malicious computer program, untrimmed branch, or errant squirrel. Grid vulnerabilities are serious, inherent, and not amenable to quick fixes; current Federal investments in the “smart grid” do not even require simple mitigations. Indeed, the policy reflex to add more and bigger power plants and power lines after each regional blackout may make the next blackout more likely and severe, much as suppressing forest fires can accumulate fuel loadings that turn the next unsuppressed fire into an uncontrollable conflagration.

Power-system vulnerabilities are even worse in-theater, where infrastructure and the capacity to repair it are often marginal: “attacks on the grid are one of the most common and effective tactics of insurgents in Iraq, and are increasingly seen in Afghanistan.” 39 Thus electric, not oil, vulnerabilities now hazard national and theater energy security. Simple exploitation of domestic electric vulnerabilities could take down DOD’s basic operating ability and the whole economy, while oil supply is only a gathering storm.

The DSB Task Force took electrical threats so seriously that it advised DOD— following prior but unimplemented DOD policy 40 —to replace grid reliance, for critical missions at U.S. bases, with onsite (preferably renewable) power supplies in netted, islandable 41 microgrids. The Department of Energy’s Pacific Northwest National Laboratory found ~90 percent of those bases could actually meet those critical power needs from onsite or nearby and mainly renewable sources, and often more cheaply. This could achieve zero daily net energy need for facilities, operations, and ground vehicles; full independence in hunker-down mode (no grid); and increased ability to help serve surrounding communities and nucleate blackstart of the failed commercial grid.

Implementing these sensible policies merits high priority: probably only DOD can move as decisively as the threat to national security warrants. And as with the Endurance capability, exploiting Resilience—building on DOD’s position as the world’s leading director-indirect buyer of renewable energy—would provide leadership, market expansion, delivery refinement, and training that would accelerate civilian adoption. Already, the 2008 NDAA requires DOD to establish a goal to make or buy at least 25 percent of its electricity from renewables by 2020, and study solar and windpower feasibility for expeditionary forces. Under 2007 Executive Order 13423’s Government-wide mandate, DOD must also reduce energy intensity by FY15 to 30 percent below FY03. The Resilience capability would focus all these efforts on robust architectures and implementation paths, ensuring that bases’ onsite renewables deliver reliable power to critical loads whether or not the commercial grid is working—a goal not achieved by today’s focus on compliance with renewables quotas.

Resilience is even more vital and valuable abroad, in fixed installations and especially in FOBs (whose expeditionary character emphasizes the Endurance logic of Fully Burdened Cost of Electricity). Foreign grids are often less reliable and secure than U.S. grids; protection and social stability may be worse; logistics are riskier and costlier in more remote and austere sites; and civilian populations may be more helped and influenced. Field commanders strongly correlate reliable electricity supplies with political stability. In Sadr City, Army Reserve Major General Jeffrey Talley’s Task Force Gold proved in 2008–2009 that making electricity reliable, and thus underpinning systematic infrastructure-building, is an effective cornerstone of counterinsurgency.

Reconstruction in Iraq and Afghanistan is starting to define and capture this opportunity to build civic cohesion and dampen insurgency, while reducing attacks’ disruption and attractiveness. A resilient, distributed electrical architecture can bring important economic and social side-benefits, as with Afghan microhydropower programs for rural development. Cuba lately showed, too, that aggressively integrating end-use efficiency with micropower can cut national blackouts—caused by decrepit infrastructure, not attacks—by one to two orders of magnitude in a year.

At home, DOD efficiency and micropower echo new domestic energy policy and startling developments in the marketplace. In 2006, micropower 42 delivered one-sixth of the world’s electricity, one-third of its new electricity, and 16 to 52 percent of all electricity in a dozen industrialized countries (the United States lagged with 7 percent). In 2008, for the first time in about a century, the world invested more in renewable than in fossilfueled power supplies; renewables (excluding big hydroelectric dams) added 40 billion watts of global capacity and got $100 billion of private investment. Their competitive and falling costs, short lead times, and low financial risks attract private capital. Shifting to these more resilient energy solutions goes with the market’s flow.

#### Successful implementation is modeled

**Ackerman 2012** – editor in chief of SIGNAL, technology journalist and former war correspondent covering the Iraq War embedded with the U.S. Army’s 101st Airborne Division (February, Robert, SIGNAL Magazine, “Military Energy Enters SPIDERS Web”, http://www.afcea.org/content/?q=node/2877)

Johnson offers that successful SPIDERS development could be exploited by any physical campus or community that seeks to enhance its energy security. A site that experiences power quality issues from a larger grid in particular could find a SPIDERS approach useful, especially if it employs a range of different power generation assets. Ka’iliwai notes that the Pacific Northwest National Laboratory in Idaho is helping transition SPIDERS technologies into the commercial sector.

### grid

#### No impact to hegemony – Doesn’t solve war—Friedman says that leadership has no effect on conflict—withdrawal will result in stable regional power balances—their evidence ignores free-riding

**Wilkinson 10**—frmr Cato fellow. MA in philosophy, Northern Illinois U. (Hands off the warfare state!, 4 October 2010, http://www.economist.com/blogs/democracyinamerica/2010/10/military\_spending, AMiles)

But not so fast! According to AEI's Arthur Brooks, Heritage's Ed Feulner, and the Weekly Standard's Bill Kristol, any attempt to shrink the big government of garrisons and guns will "make the world a more dangerous place, and ... impoverish our future." Whose side are you on, tea partiers? Messrs Brooks, Feulner, and Kristol assert that military spending "is neither the true source of our fiscal woes, nor an appropriate target for indiscriminate budget-slashing in a still-dangerous world". They aver that "anyone seeking to restore our fiscal health should look at entitlements first, not across-the-board cuts aimed at our men and women in uniform". This is bogus. Sure, Medicare and Social Security cost more, but spending on war and its infrastructure remains a titanic expense. The path from debt, whether for governments or families, is to cut back across the board. If you're in the red and you spend a ridiculous amount of your income on your porcelain egret collection, the fact that you spend even more on rent and student loan payments is obviously no excuse not to cut back on egret miniatures. And, in fact, America's martial profligacy is a "true source of our fiscal woes". According to Joseph Stiglitz and Linda Bilmes: There is no question that the Iraq war added substantially to the federal debt. This was the first time in American history that the government cut taxes as it went to war. The result: a war completely funded by borrowing. U.S. debt soared from $6.4 trillion in March 2003 to $10 trillion in 2008 (before the financial crisis); at least a quarter of that increase is directly attributable to the war. And that doesn't include future health care and disability payments for veterans, which will add another half-trillion dollars to the debt.As a result of two costly wars funded by debt, our fiscal house was in dismal shape even before the financial crisis—and those fiscal woes compounded the downturn. Perhaps because they see the wrong-headedness of their line of defence, Messrs Brooks, Feulner, and Kristol retreat to the claim that in order to make money, America has to spend money: Furthermore, military spending is not a net drain on our economy. It is unrealistic to imagine a return to long-term prosperity if we face instability around the globe because of a hollowed-out U.S. military lacking the size and strength to defend American interests around the world. Global prosperity requires commerce and trade, and this requires peace. But the peace does not keep itself. Again: completely shabby. The real question at issue here is how much military spending is necessary to keep the trade routes open, and how much of that the United States must kick in. By asserting, rather audaciously, that America's level of military spending is not a "net drain" on the economy, they imply the return on the marginal trillion is positive. I doubt it. The return on the three trillion blown on the war on Iraq, for example, is certainly much, much, much less than zero once the cost of removing financial and human capital from productive uses is taken into account. Also, if prosperity requires peace, it's utterly mysterious how starting expensive wars is supposed to help. When thinking about peace as a global public good, it can help to recall that the United States is not the only country that benefits from it. Suppose the United States were to cut its military budget in half to something like the size of the combined budgets of the next five or six countries. This might not suffice if you're itching to invade Yeman, Iran, and who knows what else Mr Kristol's got his eye on. But if the argument is that the purpose of military spending is to secure a calm climate conducive to global trade, it's hard to believe $350 billion per annum will not suffice. But let's say it doesn't, for the sake of argument. Will nations with an equally strong interest in keeping the peace simply faint on their divans whenever a commerce-threatening war breaks out? Of course not. Even the French are perfectly capable of keeping the sea lanes open. The reality is that much of the world is free-riding off the security provided by American military dominance. Were American taxpayers to refuse to bear so much of the burden of keeping the world safe for Danish container ships, **other countries** **would** surely **step up**. Furthermore, considerations of basic distributive fairness suggest they should.

#### Their ev is myopic

**Preble 10**—Frmr prof, history, Temple U. PhD, history, Temple (Christopher, U.S. Military Power: Preeminence for What Purpose?, 3 August 2010, http://www.cato-at-liberty.org/u-s-military-power-preeminence-for-what-purpose/, AMiles)

Goure and the Hadley-Perry commissioners who produced the alternate QDR argue that the purpose of American military power is to provide global public goods, to defend other countries so that they don’t have to defend themselves, and otherwise shape the international order to suit our ends. In other words, the same justifications offered for American military dominance since the end of the Cold War. Most in Washington still embraces the notion that America is, and forever will be, the world’s indispensable nation. Some scholars, however, questioned the logic of hegemonic stability theory from the very beginning. A number continue to do so today. They advance arguments diametrically at odds with the primacist consensus. Trade routes need not be policed by a single dominant power; the international economy is complex and resilient. Supply disruptions are likely to be temporary, and the costs of mitigating their effects should be borne by those who stand to lose — or gain — the most. Islamic extremists are scary, but hardly comparable to the threat posed by a globe-straddling Soviet Union armed with thousands of nuclear weapons. It is frankly absurd that we spend more today to fight Osama bin Laden and his tiny band of murderous thugs than we spent to face down Joseph Stalin and Chairman Mao. Many factors have contributed to the dramatic decline in the number of wars between nation-states; it is unrealistic to expect that a new spasm of global conflict would erupt if the United States were to modestly refocus its efforts, draw down its military power, and call on other countries to play a larger role in their own defense, and in the security of their respective regions. But while there are credible alternatives to the United States serving in its current dual role as world policeman / armed social worker, the foreign policy establishment in Washington has no interest in exploring them. The people here have grown accustomed to living at the center of the earth, and indeed, of the universe. The tangible benefits of all this military spending flow disproportionately to this tiny corner of the United States while the schlubs in fly-over country pick up the tab.

#### Their internal link can’t affect the structural reasons why heg solves war

**Maher 11**—adjunct prof of pol sci, Brown. PhD expected in 2011 in pol sci, Brown (Richard, The Paradox of American Unipolarity: Why the United States May Be Better Off in a Post-Unipolar World, Orbis 55;1, Amiles)

The United States should start planning now for the inevitable decline of its preeminent position in world politics. By taking steps now, the United States will be able to position itself to exercise maximum influence beyond its era of preponderance. This will be America’s fourth attempt at world order. The first, following World War I and the creation of the League of Nations, was a disaster. The second and third, coming in 1945 and 1989-1991, respectively, should be considered significant achievements of U.S. foreign policy and of creating world order. This fourth attempt at world order will go a long way in determining the basic shape and character of world politics and international history for the twenty-first century. The most fundamental necessity for the United States is to create a stable political order that is likely to endure, and that provides for stable relations among the great powers. The United States and other global stakeholders must prevent a return to the 1930s, an era defined by open trade conflict, power competition, and intense nationalism. Fortunately, the United States is in a good position to do this. The global political order that now exists is largely of American creation. Moreover, its forward presence in Europe and East Asia will likely persist for decades to come, ensuring that the United States will remain a major player in these regions. The disparity in military power between the United States and the rest of the world is profound, and **this gap will not close in the next several decades at least**. In creating a new global political order for twenty-first century world politics, the United States will have to rely on both the realist and liberal traditions of American foreign policy, which will include deterrence and power balancing, but also using international institutions to shape other countries’ preferences and interests. Adapt International Institutions for a New Era of World Politics. The United States should seek to ensure that the global rules, institutions, and norms that it took the lead in creating—which reflect basic American preferences and interests, thus constituting an important element of American power—outlive American preeminence. We know that institutions acquire a certain ‘‘stickiness’’ that allow them to exist long after the features or forces at the time of their creation give way to a new landscape of global politics. The transaction costs of creating a whole new international—or even regional— institutional architecture that would compete with the American post-World War II vintage would be enormous. Institutions such as the International Monetary Fund (IMF), World Bank, and World Trade Organization (WTO), all reflect basic American preferences for an open trading system and, with a few exceptions, have near-universal membership and **overwhelming legitimacy**. Even states with which the United States has significant political, economic, or diplomatic disagreement—China, Russia, and Iran—have strongly desired membership in these ‘‘Made in USA’’ institutions. Shifts in the global balance of power will be reflected in these institutions—such as the decision at the September 2009 Pittsburgh G-20 summit to increase China’s voting weight in the IMF by five percentage points, largely at the expense of European countries such as Britain and France. Yet these institutions, if their evolution is managed with deftness and skill, will disproportionately benefit the United States long after the demise of its unparalleled position in world politics. In this sense, the United States will be able to ‘‘lock in’’ a durable international order that will continue to reflect its own basic interests and values. Importantly, the United States should seek to use its vast power in the broad interest of the world, not simply for its own narrow or parochial interests. During the second half of the twentieth century the United States pursued its own interests but also served the interests of the world more broadly. And there was intense global demand for the collective goods and services the United States provided. The United States, along with Great Britain, are history’s only two examples of liberal empires. Rather than an act of altruism, this will improve America’s strategic position. States and societies that are prosperous and stable are less likely to display aggressive or antagonistic behavior in their foreign policies. There are things the United States can do that would hasten the end of American preeminence, and acting in a seemingly arbitrary, capricious, and unilateral manner is one of them. The more the rest of the world views the American-made world as legitimate, and as serving their own interests, the less likely they will be to seek to challenge or even transform it.19 Cultivate Balance of Power Relationships in Other Regions. The United States enjoys better relations with most states than these states do with their regional neighbors. South and East Asia are regions in which distrust, resentment, and outright hostility abound. The United States enjoys relatively strong (if far from perfect) strategic relationships with most of the major states in Asia, including Japan, India, Pakistan, and South Korea. The United States and China have their differences, and a more intense strategic rivalry could develop between the two. However, right now the relationship is generally stable. With the possible exception of China (but perhaps **even** **Beijing views the American military presence** in East Asia **as an assurance against Japanese revanchism**), these countries prefer a U.S. presence in Asia, and in fact view good relations with the United States as **indispensable** for their own security.

#### Even if heg declines US still projects power

Yi 9 [Xiaoxiong, professor of political science and director of the China Program at Marietta College, “American leadership in a non-polar world,” 12/30/09 http://www.zanesvilletimesrecorder.com/article/20091230/OPINION02/912300303]

In the coming "non-polar" world, no single power will run the show, nor will there be a group of powers such as China, India and Brazil as more or less "equal" powers with the United States, Japan and EU, managing the world system. Instead, the principal characteristic of non-polarity is that the world will be "influenced by dozens of state and non-state actors exercising various kinds of power," according to Richard Haass, president of the Council on Foreign Relations.

The emergence of a non-polar world can prove to be messy, complex and mostly negative. For one thing, as Haass points out, "more decision-makers make it more difficult to make decisions." The recent failure of world leaders to achieve a tough and binding greenhouse-gas reduction agreement in Copenhagen has brought into sharp focus a crisis of non-polarity.

For another, without a uni-polar power center or a clearly defined multi-polar power structure, many of the most dangerous challenges we are facing today -- the Iranian and North Korean nuclear programs, the Arab-Israeli conflict, the genocide in Sudan and the surge in piracy off Somalia-will be hard to defuse or even contain.

The consequences of the non-polarity may be dangerously destabilizing, but it is a mistake to conclude that a "growing vacuum of power" will inevitably lead to more conflict. Even in this emerging non-polar world, the United States remains to be the last guarantor of international security and global financial stability. There is simply no other alternative.

In the coming decade, we can expect that power will continue to be diffused rather than concentrated in the world. But, as Richard Haass noticed, "This is not all bad news for the United States: the United States still retains more capacity than any other actor to improve the quality of the international system and Washington can still manage the transition and make the world a safer place."

The challenge for the United States, however, is to understand the limits of America's reach and to embed America's hard power in a new form of "soft power" leadership. President Obama seems to have come to grasp with the essence of this emerging new world order -- that was perhaps why he was able to pull off what was possibly the only sensible deal in Copenhagen by working in tandem with the Chinese, Brazilian, Indian and South African leaders.

# round 6 neg v. michigan state gt

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#### Sequester deal now—top priority—key to short-term growth

Susa Crabtree (writer for the Washington Times) 2/6, 2013 “Obama ramps up pressure to resolve sequester;¶ Sets up another partisan battle” Lexis

Warning of serious repercussions for the economy and the military if Congress fails to halt the next round of $85 billion in budget cuts next month, President Obama on Tuesday called for replacing the automatic spending "sequesters" with a vague mix of smaller cuts and more tax increases.¶ At a time when many top Republicans have said the cuts should take effect, Mr. Obama's call renews the battle over spending that has dominated Washington for the past two years, but which seemed to cool after the January deal that raised taxes across the board.¶ The president said he would like another big tax reform that targets the wealthy, cutting deductions and loopholes, but said at the very least Congress should avert the sequester, which he called an avoidable self-inflicted economic wound.¶ "If they can't get a bigger package done by the time the sequester is scheduled to go into effect, then I believe they should at least pass a smaller package," he said. "There is no reason that the jobs of thousands of Americans who work in national security or education or clean energy - not to mention the growth of the entire economy - should be put in jeopardy."¶ His offer is a rehash of proposals he has made to end tax breaks and lower projected increases in health care spending, though the White House has yet to lay out a full list of deductions it wants Congress to target.¶ Even before Mr. Obama spoke, Republicans were rejecting his offer.¶ House Speaker John A. Boehner, Ohio Republican, issued a statement saying it was the president who came up with the sequester idea. He also said House Republicans have passed two bills to avert the sequesters, so Mr. Obama must lay out his own specific plan.¶ Still smarting from his "fiscal cliff" deal with Democrats in which Republicans agreed to increase taxes without spending cuts, the speaker made it clear that he was ruling out any need to increase taxes further.¶ "President Obama first proposed the sequester and insisted it become law. Republicans have twice voted to replace these arbitrary cuts with common-sense cuts and reforms that protect our national defense," he said. "We believe there is a better way to reduce the deficit, but Americans do not support sacrificing real spending cuts for more tax hikes.¶ "The president's sequester should be replaced with spending cuts and reforms that will start us on the path to balancing the budget in 10 years," he said.¶ Senate Minority Leader Mitch McConnell, Kentucky Republican, rebuked Mr. Obama for lecturing Congress about the need to avoid the cuts he proposed.¶ "If Democrats have ideas for smarter cuts, they should bring them up for debate," he said. "But the American people will not support more tax hikes in place of the meaningful spending reductions both parties already agreed to and the president signed into law."¶ Mr. McConnell also criticized Mr. Obama for failing to submit a budget by the statutory deadline this year.¶ "The clock is ticking. It's time to get serious," he added.¶ The White House first came up with the idea of the arbitrary, across-the-board spending cuts during budget talks in summer 2011 as a way to pressure Democrats and Republicans in Congress into coming up with their own spending cut plan to reduce the deficit over the next decade.¶ But partisan Washington gridlock quickly took hold and a supercommittee of lawmakers tasked with coming up with a plan to find alternative spending cuts to replace the sequester failed to reach a deal after negotiating for months.¶ As the country braced for the cuts to kick in and Washington to tumble off the fiscal cliff Jan. 1, lawmakers struck a last-minute deal that shifted the first two months of cuts into future spending bills and replaced the rest with an increase in the way retirement accounts are taxed. Still, the deal postponed another $85 billion in cuts to March 1 - a way to buy more time to find alternative sources of revenue.¶ The Pentagon in recent weeks has grown increasingly pessimistic about the chances of avoiding the cuts, and the branches of the military have issued memos outlining what programs and sections would be hit hardest.¶ Washington think tanks and policy centers have warned repeatedly of the havoc that the cuts could wreak on the economy. The Bipartisan Policy Center has estimated that 1 million jobs could be lost this year and next as a direct result of the spending cuts, and defense industry analysts say that number could rise to 2 million this year alone.¶ The president made his plea as Senate Democrats were meeting in Annapolis for their annual retreat. Mr. Obama is scheduled to address the group Wednesday.

#### Maintaining post-election PC is key to get a deal

Wolf Blitzer and Gloria Borger (CNN political analysts) 2/1, 2013 “Wall Street Soars; Senate Scandal; Super Bowl Advertising; Al Gore Defends Selling to Al Jazeera; The Most Expensive Election; Hillary Clinton Resigns; Kerry Arrives at Swearing in Ceremony; Geraldo Rivera for Senator?; New Jersey Senate Showdown; Once Powerful Cardinal Disciplined; $8M a Minute; Controversy Over Some Super Bowl Ads; New York Mourns Ed Koch” Lexis

BLITZER: So, there's more jobs created, another 150,000 last month. They revised figures for November and December, another 200,000 beyond those earlier announced.¶ So how is this going to impact his legislative agenda on some of these critically important issues?¶ BORGER: Before he gets to immigration and everything else, he has to go through all of the business speed bumps, the economic speed bumps.¶ BLITZER: And there are plenty of them.¶ BORGER: And there are plenty of them coming up.¶ And I think both sides can make the case, Wolf, and they will, that a dysfunctional Washington really hurts consumer confidence and hurts business hiring. Republicans will say you have got to decrease the deficit and the president will say, you know what, we have to perhaps think about spending a little bit of money to get out of this and to try and reduce that unemployment rate.¶ So they are going to come at it from different sides, Wolf. The big thing to think about here is the president's approval rating. It is now at 52 percent. That gives him an awful lot of leverage on these economic issues.¶ BLITZER: He's going to need that if he's going to get some of these agenda items through.¶ BORGER: He will need every bit of it. Yes.

#### The plan changes that

Vastag, ‘12

[Brian, Washington Post, 6-25, “Budget cuts threaten pursuit of nuclear fusion as a clean energy source,” http://articles.washingtonpost.com/2012-06-25/national/35461417\_1\_nuclear-fusion-iter-fusion-power]

“There’s enormous debate on how to get there,” says Prager. And little political support in the United States for the needed investment. Obama has said that he favors an “all of the above” energy strategy: more drilling for gas and oil, more investment in solar and wind, more traditional nuclear. Fusion, however, is absent from the list. Energy Secretary Steven Chu rarely mentions it. But at a March Senate hearing on his agency’s budget request, Sen. Diane Feinstein (D-Calif.) forced the Nobel Prize-winning physicist to address the president’s proposed cuts.

#### Global war

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Increased Potential for Global Conflict

Of course, the report encompasses more than economics and indeed believes the future is likely to be the result of a number of intersecting and interlocking forces. With so many possible permutations of outcomes, each with ample opportunity for unintended consequences, there is a growing sense of insecurity. Even so, history may be more instructive than ever. While we continue to believe that the Great Depression is not likely to be repeated, the lessons to be drawn from that period include the harmful effects on fledgling democracies and multiethnic societies (think Central Europe in 1920s and 1930s) and on the sustainability of multilateral institutions (think League of Nations in the same period). There is no reason to think that this would not be true in the twenty-first as much as in the twentieth century. For that reason, the ways in which the potential for greater conflict could grow would seem to be even more apt in a constantly volatile economic environment as they would be if change would be steadier.

In surveying those risks, the report stressed the likelihood that terrorism and nonproliferation will remain priorities even as resource issues move up on the international agenda. Terrorism’s appeal will decline if economic growth continues in the Middle East and youth unemployment is reduced. For those terrorist groups that remain active in 2025, however, the diffusion of technologies and scientific knowledge will place some of the world’s most dangerous capabilities within their reach. Terrorist groups in 2025 will likely be a combination of descendants of long established groups inheriting organizational structures, command and control processes, and training procedures necessary to conduct sophisticated attacks and newly emergent collections of the angry and disenfranchised that become self-radicalized, particularly in the absence of economic outlets that would become narrower in an economic downturn.

The most dangerous casualty of any economically-induced drawdown of U.S. military presence would almost certainly be the Middle East. Although Iran’s acquisition of nuclear weapons is not inevitable, worries about a nuclear-armed Iran could lead states in the region to develop new security arrangements with external powers, acquire additional weapons, and consider pursuing their own nuclear ambitions. It is not clear that the type of stable deterrent relationship that existed between the great powers for most of the Cold War would emerge naturally in the Middle East with a nuclear Iran. Episodes of low intensity conflict and terrorism taking place under a nuclear umbrella could lead to an unintended escalation and broader conflict if clear red lines between those states involved are not well established. The close proximity of potential nuclear rivals combined with underdeveloped surveillance capabilities and mobile dual-capable Iranian missile systems also will produce inherent difficulties in achieving reliable indications and warning of an impending nuclear attack. The lack of strategic depth in neighboring states like Israel, short warning and missile flight times, and uncertainty of Iranian intentions may place more focus on preemption rather than defense, potentially leading to escalating crises.

Types of conflict that the world continues to experience, such as over resources, could reemerge, particularly if protectionism grows and there is a resort to neo-mercantilist practices. Perceptions of renewed energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could result in interstate conflicts if government leaders deem assured access to energy resources, for example, to be essential for maintaining domestic stability and the survival of their regime. Even actions short of war, however, will have important geopolitical implications. Maritime security concerns are providing a rationale for naval buildups and modernization efforts, such as China’s and India’s development of blue water naval capabilities. If the fiscal stimulus focus for these countries indeed turns inward, one of the most obvious funding targets may be military. Buildup of regional naval capabilities could lead to increased tensions, rivalries, and counterbalancing moves, but it also will create opportunities for multinational cooperation in protecting critical sea lanes. With water also becoming scarcer in Asia and the Middle East, cooperation to manage changing water resources is likely to be increasingly difficult both within and between states in a more dog-eat-dog world.

### K

#### Financialization of energy production is a neoliberal tool to subvert communal agency—fuels inequality and unsustainable practices

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The neoliberal market-driven approach to energy policy in Europe and¶ North America that is actively promoted throughout the world by the¶ International Monetary Fund and the World Bank and through bilateral¶ investment treaties and the Energy Charter Treaty is barely 30 years¶ old. Prior to the 1980s, energy – oil, gas, coal and electricity – was¶ largely provided either by state monopolies at prices determined by the¶ state with investment centrally planned by government bureaucracies,¶ or by private monopolies subject to government oversight and regulation to protect users from excessive charges. Markets, in which for-profit companies competed with each to generate, distribute and supply¶ “energy”, were considered “hopelessly inadequate in providing appropriate energy supplies,”¶ 3¶ considered to be “the lifeblood of the world¶ economy.”4¶ “Moving to the market,” however, was proposed as a way of ensuring¶ investment in energy infrastructure – power plants, transmission systems and storage capacity – that would not only guarantee supplies to¶ consumers at cheaper prices but would also direct investment to the¶ most cost-effective means of reducing carbon emissions.¶ 5¶ But markets have singularly failed to deliver on these promises. Directly opposed to forms of social and economic organisation that seek¶ to guarantee the shared right of all to survival, market-based energy¶ policies have led to the exclusion of those who cannot afford to pay for¶ the energy they require to meet their basic needs. The **financialisation**¶ **of “energy**”– where the production and distribution of oil, gas and electricity is mediated and shaped not just by markets in general but by¶ financial markets in particular,¶ 6¶ and where capital is accumulated primarily through financial speculation rather than production – is also¶ **jeopardising investment in the infrastructure that might enable a just**¶ **transition** to a sustainable and equitable climatic future. Investment is¶ diverted into trading on money or the products of money, often creating¶ energy shortages in the process through the speculative “gaming” of¶ energy markets. Just as energy is now “saturated with the language of¶ security”,¶ 7¶ so, too, it is “infused by the logic of finance”,¶ 8¶ even though¶ financialisation is conspicuously absent from energy security narratives.¶ Market-led policies **marginalise the role of communities** and ordinary¶ people in decision-making: instead “choices” about future energy technologies and use are left to those who have economic and political¶ power within the range of markets that affect energy. The input of¶ consumers is reduced to the (limited) decisions they can make within¶ energy retail markets based on price signals alone: the cost of electricity or gas. Debates over **how society might be differently organised** to¶ generate and use (less) “energy” in different ways are entirely sidelined,¶ except where they might provide opportunities to make money.¶ Meanwhile, efforts to address climate change through carbon trading¶ and other market mechanisms are fatally delaying the action that is¶ necessary to prevent runaway global climatic instability, whilst at the¶ same time creating new sources of conflict and insecurity.

#### Focus on production and technology in the neoliberal frame generates crises and precludes other orientations—fusion doesn’t solve the assumptions driving the system

**Ehrenfeld**, Rutgers biology professor, **2005** (David, “The Environmental Limits to Globalization”, Conservation Biology Vol. 19 No. 2, ebsco, ldg)

The overall environmental changes brought about or accelerated by globalization are, however, much easier to describe for the near future, even if the long-term outcomes are still obscure. Climate will continue to change rapidly (Watson 2002); cheap energy and other resources (Youngquist 1997; Hall et al. 2003; Smil 2003), including fresh water (Aldhous 2003; Gleick 2004), will diminish and disappear at an accelerating rate; agricultural and farm communities will deteriorate further while we lose more genetic diversity among crops and farm animals (Fowler & Mooney 1990; Bailey & Lappé 2002; Wirzba 2003); biodiversity will decline faster as terrestrial and aquatic ecosystems are damaged (Heywood 1995); harmful exotic species will become ever more numerous (Mooney & Hobbs 2000); old and new diseases of plants, animals, and humans will continue to proliferate (Centers for Disease Control and Prevention 1995-present;Lashley & Durham 2002); and more of the great ocean fisheries will become economically—and occasionally biologically—extinct (Myers & Worm 2003). Although critics have taken issue with many of these forecasts (Lomborg 2001; Hollander 2003), the critics' arguments seem more political than scientific; the data they muster in support of their claims are riddled with errors, significant omissions, and misunderstandings of environmental processes (Orr 2002). Indeed, these environmental changes are demonstrably and frighteningly real. And because of these and related changes, one social prediction can be made with assurance: globalization is creating an environment that will prove hostile to its own survival.¶ This is not a political statement or a moral judgment. It is not the same as saying that globalization ought to be stopped. The enlightened advocates of globalization claim that globalization could give the poorest residents of the poorest countries a chance to enjoy a decent income. And the enlightened opponents of globalization assert that the damage done by globalization to local communities everywhere, and the increasing gap it causes between the rich and the poor, far outweigh the small amount of good globalization may do. The debate is vitally important, but the fate of globalization is unlikely to be determined by who wins it. Al Gore remarked about the political impasse over global warming and the current rapid melting of the world's glaciers: “Glaciers don't give a damn about politics. They just reflect reality” (Herbert 2004). The same inexorable environmental reality is even now drawing the curtains on globalization.¶ Often minimized in the United States, this reality is already painfully obvious in China, which is experiencing the most rapid expansion related to globalization. Nearly every issue of China Daily, the national English-language newspaper, features articles on the environmental effects of globalization. Will efforts in China to rein in industrial expansion, energy consumption, and environmental pollution succeed (Fu 2004; Qin 2004; Xu 2004)? Will the desperate attempts of Chinese authorities to mitigate the impact of rapid industrialization on the disastrously scarce supplies of fresh water be effective (Li 2004; Liang 2004)? The environmental anxiety is palpable and pervasive.¶ The environmental effects of globalization cannot be measured by simple numbers like the gross domestic product or unemployment rate. But even without such summary statistics, there are so many examples of globalization's impact, some obvious, some less so, that a convincing argument about its effects and trends can be made.¶ The Disappearance of Cheap Energy¶ Among the environmental impacts of globalization, perhaps the most significant is its fostering of the excessive use of energy, with the attendant consequences. This surge in energy use was inevitable, once the undeveloped four-fifths of the world adopted the energy-wasting industrialization model of the developed fifth, and as goods that once were made locally began to be transported around the world at a tremendous cost of energy. China's booming production, largely the result of its surging global exports, has caused a huge increase in the mining and burning of coal and the building of giant dams for more electric power, an increase of power that in only the first 8 months of 2003 amounted to 16% (Bradsher 2003; Guo 2004).¶ The many environmental effects of the coal burning include, most importantly, global warming. Fossil-fuel-driven climate change seems likely to result in a rise in sea level, massive extinction of species, agricultural losses from regional shifts in temperature and rainfall, and, possibly, alteration of major ocean currents, with secondary climatic change. Other side effects of coal burning are forest decline, especially from increased nitrogen deposition; acidification of freshwater and terrestrial ecosystems from nitrogen and sulfur compounds; and a major impact on human health from polluted air.¶ Dams, China's alternative method of producing electricity without burning fossil fuels, themselves cause massive environmental changes. These changes include fragmentation of river channels; loss of floodplains, riparian zones, and adjacent wetlands; deterioration of irrigated terrestrial environments and their surface waters; deterioration and loss of river deltas and estuaries; aging and reduction of continental freshwater runoff to oceans; changes in nutrient cycling; impacts on biodiversity; methylmercury contamination of food webs; and greenhouse gas emissions from reservoirs. The impoundment of water in reservoirs at high latitudes in the northern hemisphere has even caused a small but measurable increase in the speed of the earth's rotation and a change in the planet's axis (Rosenberg et al. 2000; Vörösmarty & Sahagian 2000). Moreover, the millions of people displaced by reservoirs such as the one behind China's Three Gorges Dam have their own environmental impacts as they struggle to survive in unfamiliar and often unsuitable places.¶ Despite the importance of coal and hydropower in China's booming economy, the major factor that enables globalization to flourish around the world—even in China—is still cheap oil. Cheap oil runs the ships, planes, trucks, cars, tractors, harvesters, earth-moving equipment, and chain saws that globalization needs; cheap oil lifts the giant containers with their global cargos off the container ships onto the waiting flatbeds; cheap oil even mines and processes the coal, grows and distills the biofuels, drills the gas wells, and builds the nuclear power plants while digging and refining the uranium ore that keeps them operating.¶ Paradoxically, the global warming caused by this excessive burning of oil is exerting negative feedback on the search for more oil to replace dwindling supplies. The search for Arctic oil has been slowed by recent changes in the Arctic climate. Arctic tundra has to be frozen and snow-covered to allow the heavy seismic vehicles to prospect for underground oil reserves, or long-lasting damage to the landscape results. The recent Arctic warming trend has reduced the number of days that vehicles can safely explore: from 187 in 1969 to 103 in 2002 (Revkin 2004). Globalization affects so many environmental systems in so many ways that negative interactions of this sort are frequent and usually unpredictable.¶ Looming over the global economy is the imminent disappearance of cheap oil. There is some debate about when global oil production will peak—many of the leading petroleum geologists predict the peak will occur in this decade, possibly in the next two or three years (Campbell 1997; Kerr 1998; Duncan & Youngquist 1999; Holmes & Jones 2003; Appenzeller 2004; ASPO 2004; Bakhtiari 2004; Gerth 2004)—but it is abundantly clear that the remaining untapped reserves and alternatives such as oil shale, tar sands, heavy oil, and biofuels are economically and energetically no substitute for the cheap oil that comes pouring out of the ground in the Arabian Peninsula and a comparatively few other places on Earth (Youngquist 1997). Moreover, the hydrogen economy and other high-tech solutions to the loss of cheap oil are clouded by serious, emerging technological doubts about feasibility and safety, and a realistic fear that, if they can work, they will not arrive in time to rescue our globalized industrial civilization (Grant 2003; Tromp et al. 2003; Romm 2004). Even energy conservation, which we already know how to implement both technologically and as part of an abstemious lifestyle, is likely to be no friend to globalization, because it reduces consumption of all kinds, and consumption is what globalization is all about.¶ In a keynote address to the American Geological Society, a noted expert on electric power networks, Richard Duncan (2001), predicted widespread, permanent electric blackouts by 2012, and the end of industrial, globalized civilization by 2030. The energy crunch is occurring now. According to Duncan, per capita energy production in the world has already peaked—that happened in 1979—and has declined since that date.¶ In a more restrained evaluation of the energy crisis, Charles Hall and colleagues (2003) state that:¶ The world is not about to run out of hydrocarbons, and perhaps it is not going to run out of oil from unconventional sources any time soon. What will be difficult to obtain is cheap petroleum, because what is left is an enormous amount of low-grade hydrocarbons, which are likely to be much more expensive financially, energetically, politically and especially environmentally.¶ Nuclear power still has “important…technological, economic, environmental and public safety problems,” they continue, and at the moment “renewable energies present a mixed bag of opportunities.” Their solution? Forget about the more expensive and dirtier hydrocarbons such as tar sands. We need a major public policy intervention to foster a crash program of public and private investment in research on renewable energy technologies. Perhaps this will happen—necessity does occasionally bring about change. But I do not see renewable energy coming in time or in sufficient magnitude to save globalization. Sunlight, wind, geothermal energy, and biofuels, necessary as they are to develop, cannot replace cheap oil at the current rate of use without disastrous environmental side effects. These renewable alternatives can only power a nonglobalized civilization that consumes less energy (Ehrenfeld 2003b).¶ Already, as the output of the giant Saudi oil reserves has started to fall (Gerth 2004) and extraction of the remaining oil is becoming increasingly costly, oil prices are climbing and the strain is being felt by other energy sources. For example, the production of natural gas, which fuels more than half of U.S. homes, is declining in the United States, Canada, and Mexico as wells are exhausted. In both the United States and Canada, intensive new drilling is being offset by high depletion rates, and gas consumption increases yearly. In 2002 the United States imported 15% of its gas from Canada, more than half of Canada's total gas production. However, with Canada's gas production decreasing and with the “stranded” gas reserves in the United States and Canadian Arctic regions unavailable until pipelines are built 5–10 years from now, the United States is likely to become more dependent on imported liquid natural gas (LNG).¶ Here are some facts to consider. Imports of LNG in the United States increased from 39 billion cubic feet in 1990 to 169 billion cubic feet in 2002, which was still <1% of U.S. natural gas consumption. The largest natural gas field in the world is in the tiny Persian Gulf state of Qatar. Gas is liquefied near the site of production by cooling it to −260°F (−162°C), shipped in special refrigerated trains to waiting LNG ships, and then transported to an LNG terminal, where it is off-loaded, regasified, and piped to consumers. Each LNG transport ship costs a half billion dollars. An LNG terminal costs one billion dollars. There are four LNG terminals in the United States, none in Canada or Mexico. Approximately 30 additional LNG terminal sites to supply the United States are being investigated or planned, including several in the Bahamas, with pipelines to Florida. On 19 January 2004, the LNG terminal at Skikda, Algeria, blew up with tremendous force, flattening much of the port and killing 30 people. The Skikda terminal, renovated by Halliburton in the late 1990s, will cost $800 million to $1 billion to replace. All major ports in the United States are heavily populated, and there is strong environmental opposition to putting terminals at some sites in the United States. Draw your own conclusions about LNG as a source of cheap energy (Youngquist & Duncan 2003;Romero 2004).¶ From LNG to coal gasification to oil shale to nuclear fission to breeder reactors to fusion to renewable energy, even to improvements in efficiency of energy use (Browne 2004), our society looks from panacea to panacea to feed the ever-increasing demands of globalization. But no one solution or combination of solutions will suffice to meet this kind of consumption. In the words of Vaclav Smil (2003):¶ Perhaps the evolutionary imperative of our species is to ascend a ladder of ever-increasing energy throughputs, never to consider seriously any voluntary consumption limits and stay on this irrational course until it will be too late to salvage the irreplaceable underpinnings of biospheric services that will be degraded and destroyed by our progressing use of energy and materials.¶ Loss of Agricultural Biodiversity¶ Among the many other environmental effects of globalization, one that is both obvious and critically important is reduced genetic and cultural diversity in agriculture. As the representatives of the petrochemical and pharmaceutical industries' many subsidiary seed corporations sell their patented seeds in more areas previously isolated from global trade, farmers are dropping their traditional crop varieties, the reservoir of our accumulated genetic agricultural wealth, in favor of a few, supposedly high-yielding, often chemical-dependent seeds. The Indian agricultural scientist H. Sudarshan (2002) has provided a typical example. He noted that¶ Over the last half century, India has probably grown over 30,000 different, indigenous varieties or landraces of rice. This situation has, in the last 20 years, changed drastically and it is predicted that in another 20 years, rice diversity will be reduced to 50 varieties, with the top 10 accounting for over three-quarters of the sub-continent's rice acreage.¶ With so few varieties left, where will conventional plant breeders and genetic engineers find the genes for disease and pest resistance, environmental adaptations, and plant quality and vigor that we will surely need?¶ A similar loss has been seen in varieties of domestic animals. Of the 3831 breeds of ass, water buffalo, cattle, goat, horse, pig, and sheep recorded in the twentieth century, at least 618 had become extinct by the century's end, and 475 of the remainder were rare. Significantly, the countries with the highest ratios of surviving breeds per million people are those that are most peripheral and remote from global commerce (Hall & Ruane 1993).¶ Unfortunately, with globalization, remoteness is no longer tenable. Here is a poignant illustration. Rural Haitians have traditionally raised a morphotype of long-snouted, small black pig known as the Creole pig. Adapted to the Haitian climate, Creole pigs had very low maintenance requirements, and were mainstays of soil fertility and the rural economy. In 1982 and 1983, most of these pigs were deliberately killed as part of swine disease control efforts required to integrate Haiti into the hemispheric economy. They were replaced by pigs from Iowa that needed clean drinking water, roofed pigpens, and expensive, imported feed. The substitution was a disaster. Haitian peasants, the hemisphere's poorest, lost an estimated $600 million. Haiti's ousted President Jean-Bertrand Aristide (2000), who, whatever his faults, understood the environmental and social effects of globalization, wrote¶ There was a 30% drop in enrollment in rural schools… a dramatic decline in the protein consumption in rural Haiti, a devastating decapitalization of the peasant economy and an incalculable negative impact on Haiti's soil and agricultural productivity. The Haitian peasantry has not recovered to this day…. For many peasants the extermination of the Creole pigs was their first experience of globalization.¶ The sale of Mexican string beans and South African apples in Michigan and Minnesota in January is not without consequences. The globalization of food has led to the introduction of “high-input” agricultural methods in many less-developed countries, with sharply increasing use of fertilizers, insecticides, herbicides, fungicides, irrigation pumps, mechanical equipment, and energy. There has been a correspondingly sharp decline in farmland biodiversity—including birds, invertebrates, and wild crop relatives—much of which is critically important to agriculture through ecosystem services or as reservoirs of useful genes (Benton et al. 2003). The combination of heavy fertilizer use along with excessive irrigation has resulted in toxic accumulations of salt, nitrates, and pesticides ruining soils all over the world, along with the dangerous drawdown and contamination of underground reserves of fresh water (Hillel 1991; Kaiser 2004; Sugden et al. 2004). Although population growth has been responsible for some of this agricultural intensification, much has been catalyzed by globalization (Wright 1990).¶ Aquaculture is another agriculture-related activity. Fish and shellfish farming—much of it for export—has more than doubled in the past 15 years. This industry's tremendous requirements for fish meal and fish oil to use as food and its degradation of coastal areas are placing a great strain on marine ecosystems (Naylor et al. 2000). Other unanticipated problems are occurring. For instance, the Scottish fisheries biologist Alexander Murray and his colleagues (2002) report that infectious salmon anemia¶ … is caused by novel virulent strains of a virus that has adapted to intensive aquacultural practices and has exploited the associated [ship] traffic to spread both locally and internationally…. Extensive ship traffic and lack of regulation increase the risk of spreading disease to animals raised for aquaculture and to other animals in marine environments…. [and underscore] the potential role of shipping in the global transport of zoonotic pathogens.¶ Loss of Wild Species¶ The reduction of diversity in agriculture is paralleled by a loss and reshuffling of wild species. The global die-off of species now occurring, unprecedented in its rapidity, is of course only partly the result of globalization, but globalization is a major factor in many extinctions. It accelerates species loss in several ways. First, it increases the numbers of exotic species carried by the soaring plane, ship, rail, and truck traffic of global trade. Second, it is responsible for the adverse effects of ecotourism on wild flora and fauna (Ananthaswamy 2004). And third, it promotes the development and exploitation of populations and natural areas to satisfy the demands of global trade, including, in addition to the agricultural and energy-related disruptions already mentioned, logging, over-fishing of marine fisheries, road building, and mining. To give just one example, from 1985 to 2001, 56% of Indonesian Borneo's (Kalimantan) “protected” lowland forest areas—many of them remote and sparsely populated—were intensively logged, primarily to supply international timber markets (Curran et al. 2004).¶ Surely one of the most significant impacts of globalization on wild species and the ecosystems in which they live has been the increase in introductions of invasive species (Vitousek et al. 1996; Mooney & Hobbs 2000). Two examples are zebra mussels (Dreissena polymorpha), which came to the Great Lakes in the mid-1980s in the ballast water of cargo ships from Europe, and Asian longhorn beetles (Anoplophera glabripennis), which arrived in the United States in the early 1990s in wood pallets and crates used to transfer cargo shipped from China and Korea. Zebra mussels, which are eliminating native mussels and altering lake ecosystems, clog the intake pipes of waterworks and power plants. The Asian longhorn beetle now seems poised to cause heavy tree loss (especially maples [Acersp.]) in the hardwood forests of eastern North America. Along the U.S. Pacific coast, oaks (Quercus sp.) and tanoaks (Lithocarpus densiflorus) are being killed by sudden oak death, caused by a new, highly invasive fungal disease organism (Phytophthora ramorum), which is probably also an introduced species that was spread by the international trade in horticultural plants (Rizzo & Garbelotto 2003). Estimates of the annual cost of the damage caused by invasive species in the United States range from $5.5 billion to $115 billion. The zebra mussel alone, just one of a great many terrestrial, freshwater, and marine exotic animals, plants, and pathogens, has been credited with more than $5 billion of damage since its introduction (Mooney & Drake 1986; Cox 1999). Invasive species surely rank among the principal economic and ecological limiting factors for globalization.¶ Some introduced species directly affect human health, either as vectors of disease or as the disease organisms themselves. For example, the Asian tiger mosquito (Aedes albopictus), a vector for dengue and yellow fevers, St. Louis and LaCrosse encephalitis viruses, and West Nile virus, was most likely introduced in used truck tires imported from Asia to Texas in the 1980s and has spread widely since then. Discussion of this and other examples is beyond the scope of this article.¶ Even the partial control of accidental and deliberate species introductions requires stringent, well-funded governmental regulation in cooperation with the public and with business. Many introductions of alien species cannot be prevented, but some can, and successful interventions to prevent the spread of introduced species can have significant environmental and economic benefits. To give just one example, western Australia has shown that government and industry can cooperate to keep travelers and importers from bringing harmful invasive species across their borders. The western Australian HortGuard and GrainGuard programs integrate public education; rapid and effective access to information; targeted surveillance, which includes preborder, border, and postborder activities; and farm and regional biosecurity systems (Sharma 2004). Similar programs exist in New Zealand. But there is only so much that governments can do in the face of massive global trade.¶ Some of the significant effects of globalization on wildlife are quite subtle. Mazzoni et al. (2003) reported that the newly appearing fungal disease chytridiomycosis (caused by Batrachochytrium dendrobatidis), which appears to be the causative agent for a number of mass die-offs and extinctions of amphibians on several continents, is probably being spread by the international restaurant trade in farmed North American bullfrogs (Rana catesbeiana). These authors state: “Our findings suggest that international trade may play a key role in the global dissemination of this and other emerging infectious diseases of wildlife.”¶ Even more unexpected findings were described in 2002 by Alexander et al., who noted that expansion of ecotourism and other consequences of globalization are increasing contact between free-ranging wildlife and humans, resulting in the first recorded introduction of a primary human pathogen, Mycobacterium tuberculosis, into wild populations of banded mongooses (Mungos mungo) in Botswana and suricates (Suricata suricatta) in South Africa.¶ The Future of Globalization¶ The known effects of globalization on the environment are numerous and highly significant. Many others are undoubtedly unknown. Given these circumstances, the first question that suggests itself is: Will globalization, as we see it now, remain a permanent state of affairs (Rees 2002; Ehrenfeld 2003a)?¶ The principal environmental side effects of globalization—climate change, resource exhaustion (particularly cheap energy), damage to agroecosystems, and the spread of exotic species, including pathogens (plant, animal, and human)—are sufficient to make this economic system unstable and short-lived. The socioeconomic consequences of globalization are likely to do the same. In my book The Arrogance of Humanism (1981), I claimed that our ability to manage global systems, which depends on our being able to predict the results of the things we do, or even to understand the systems we have created, has been greatly exaggerated. Much of our alleged control is science fiction; it doesn't work because of theoretical limits that we ignore at our peril. We live in a dream world in which reality testing is something we must never, never do, lest we awake.¶ In 1984 Charles Perrow explored the reasons why we have trouble predicting what so many of our own created systems will do, and why they surprise us so unpleasantly while we think we are managing them. In his book Normal Accidents, which does not concern globalization, he listed the critical characteristics of some of today's complex systems. They are highly interlinked, so a change in one part can affect many others, even those that seem quite distant. Results of some processes feed back on themselves in unexpected ways. The controls of the system often interact with each other unpredictably. We have only indirect ways of finding out what is happening inside the system. And we have an incomplete understanding of some of the system's processes. His example of such a system is a nuclear power plant, and this, he explained, is why system-wide accidents in nuclear plants cannot be predicted or eliminated by system design. I would argue that globalization is a similar system, also subject to catastrophic accidents, many of them environmental—events that we cannot define until after they have occurred, and perhaps not even then.¶ The comparatively few commentators who have predicted the collapse of globalization have generally given social reasons to support their arguments. These deserve some consideration here, if only because the environmental and social consequences of globalization interact so strongly with each other. In 1998, the British political economist John Gray, giving scant attention to environmental factors, nevertheless came to the conclusion that globalization is unstable and will be short-lived. He said, “There is nothing in today's global market that buffers it against the social strains arising from highly uneven economic development within and between the world's diverse societies.” The result, Gray states, is that “The combination of [an] unceasing stream of new technologies, unfettered market competition and weak or fractured social institutions” has weakened both sovereign states and multinational corporations in their ability to control important events. Note that Gray claims that not only nations but also multinational corporations, which are widely touted as controlling the world, are being weakened by globalization. This idea may come as a surprise, considering the growth of multinationals in the past few decades, but I believe it is true. Neither governments nor giant corporations are even remotely capable of controlling the environmental or social forces released by globalization, without first controlling globalization itself.

#### Vote neg to eschew neoliberal frameworks—they’re unsustainable and insulate decisionmaking from deliberation and alternative assumptions needed to solve

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The reduction of ecological valuation through a market mechanism (or various techniques) to a ¶ mere aggregation of individual subjective valuations—which is the main premise of neoliberal ¶ ideology—may be inappropriate for complex and uncertain phenomena ridden with ¶ incommensurabilities and inter- and intra-generational distributional conflicts, such as global ¶ warming, where individual valuations will have clear implications for all living beings. Indeed, ¶ in making decisions with substantial consequences pertaining to our current life as well as our ¶ future (such as the overall growth rate, distributional trajectories, technological path, ¶ consumption habits, risk attitude [say, vis-à-vis nuclear energy]), the market response or the ¶ aggregation of individuals’ valuation through a set of available techniques (e.g., the contingent ¶ valuation) may substantially differ from what could be derived through **collective deliberation** ¶ and negotiation of various stakeholders including the scientific community (see, e.g., ¶ Özkaynak, Adaman and Devine, 2012). This criticism applies not only to neoliberal positions ¶ that favor the current unequal distribution of power but also to the Post-Walrasian one which ¶ although concerned with distributional issues keeps relying on individualist ontologies of ¶ calculative and calculable agency. Indeed, there is a growing theoretical and applied literature ¶ arguing that in incommensurable cases, where all relevant aspects cannot be captured in a single ¶ dimension (such as those derived from monetary cost-benefit analyses), a multi-criteria ¶ methodology would seem better placed, as it will be possible to involve not only economic but ¶ also political, moral, scientific and cultural inputs from a variety of stakeholders (see, e.g., ¶ Martinez-Alier, Munda and O’Neil, 1999; Munda, 2008). The key promise of the multicriteria decision-making tool and other similar participatory and deliberatory dispositifs is that ¶ **rather than finding a “solution”** to a conflictual decision, they shed light on the multifaceted¶ dimensions of the problem at hand and thus facilitate the consensus-building process from ¶ below (see, e.g., Adaman, 2012). In this regard, they constitute a formidable path to be ¶ explored as an alternative to the surreptitiously normative neoliberal governmental dispositifs, ¶ designed by experts from above, under the assumption that all actors are calculative and ¶ calculable.

The current indiscriminate application of neoliberal policies over the entire scope of the social ¶ field has brought about such political, economic, cultural and ecological devastation that any ¶ type of reform suggestion along the line to halt this process is met with much welcoming by ¶ many of us—even if some of them are still **acting as if economic incentives are the only viable** ¶ **policy tool** in town. Consider the case of carbon markets, for example, where the cap is ¶ decided either through a scientific body or through aggregating individuals’ preferences. The ¶ fact of the matter is that, far from addressing the inefficiencies that emanate from opportunistic ¶ and manipulative activities, these mechanisms are vulnerable precisely because they end up¶ soliciting manipulative, predatory, and rent-seeking behavior (**because they are** **designed** to ¶ function **under such behavioral assumptions** in the first place). In other words, these solutions ¶ subject a commons such as global climate into the economic logic of markets and ¶ “performatively” turn it into an object of strategic-calculative logic (MacKenzie, Muniesa and ¶ Siu, 2007; Çalışkan and Callon, 2009; MacKenzie, 2009; Çalışkan and Callon, 2010; see also ¶ Spash, 2011). Consider, furthermore, the case of price-per-bag policies. Laboratory ¶ experiments and anthropological evidence both suggest that charging a price for some activity ¶ that should in fact be treated as a duty or a commitment may well create perverse results (see, ¶ e.g., Campbell, 1998; Bowles and Hwang, 2008). Monetizing the pollution-generating activity ¶ instead of limiting the use of plastic bags (along with an awareness program) may well result in ¶ an increase of the unwanted activity. Similarly, while nationalization is the trend in areas of ¶ natural resource extraction and energy production, many continue to argue for privatization ¶ and private-public partnerships instead. Nevertheless, the problem with the private versus ¶ public dichotomy, given our reading of the contemporary state as an agent of economization, is ¶ precisely that both forms, to the extent that they are informed by the different variants of ¶ neoliberal reason, serve to isolate these critical areas from the deliberations and political ¶ demands of various stakeholders and the general public, **limiting the only channels for** ¶ **communication** available to them to the price (or price-like) mechanisms. However, perhaps ¶ most importantly, neither can be immune towards all sorts of rent-seeking activities that occur ¶ behind the close doors of the technocracy that operates in the area where state shades into ¶ market in the various forms of dispositifs.

Needless to say, economic activities that generate pollution and consume energy are not recent ¶ phenomena that are exclusive to what is now increasingly being called the neoliberal era. If ¶ anything, postwar Keynesian developmentalism was possible precisely because of the ¶ availability of cheap oil, and is responsible for an enormous amount of environmental pollution ¶ and ecological degradation (Mitchell, 2011). In this sense, it would be wrong to present ¶ neoliberal as being the only responsible mode of governmentality for the dual crises of climate ¶ change and natural resource depletion. Yet, this does not change the fact that the neoliberal ¶ reason (in its free-market and mechanism-design variations) is pushing its agenda in an era ¶ where both of these crises are reaching catastrophic levels, and it is highly questionable whether ¶ neoliberal methods of handling the environmental pollution and the extraction crisis will be¶ capable of addressing long-term concerns.

### T

#### Fusion is not “nuclear power”:

Nuclear Regulatory Commission ’12 (March 29, “Uses of Radiation: Nuclear Power Plants” website, [http://www.nrc.gov/about-nrc/radiation/around-us/uses-radiation.html#npp)](http://www.nrc.gov/about-nrc/radiation/around-us/uses-radiation.html#npp%29)  
**Nuclear Power** Plants **Electricity produced by** nuclear [**fission**](http://www.nrc.gov/reading-rm/basic-ref/glossary/fission-fissioning.html) — splitting the [atom](http://www.nrc.gov/reading-rm/basic-ref/glossary/atom.html) — is one of the greatest uses of radiation. As our country becomes a nation of electricity users, we need a reliable, abundant, clean, and affordable source of electricity. We depend on it to give us light, to help us groom and feed ourselves, to keep our homes and businesses running, and to power the many machines we use. As a result, we use about one-third of our energy resources to produce electricity. ¶ Electricity can be produced in many ways — using [generators](http://www.nrc.gov/reading-rm/basic-ref/glossary/turbine-generator-tg.html) powered by the sun, wind, water, coal, oil, gas, or nuclear fission. In America, nuclear power plants are the second largest source of electricity (after coal-fired plants) — producing approximately 21 percent of our Nation's electricity.¶ The purpose of a nuclear power plant is **to boil water to produce steam** to power a generator to produce electricity. While nuclear power plants have many similarities to other types of plants that generate electricity, there are some significant differences. With the exception of solar, wind, and hydroelectric plants, power plants (including those that use nuclear fission) boil water to produce steam that spins the propeller-like blades of a [turbine](http://www.nrc.gov/reading-rm/basic-ref/glossary/turbine.html) that turns the shaft of a generator. Inside the generator, coils of wire and magnetic fields interact to create electricity. In these plants, the energy needed to boil water into steam is produced either by burning coal, oil, or gas (fossil fuels) in a furnace, or by splitting atoms of [uranium](http://www.nrc.gov/reading-rm/basic-ref/glossary/uranium.html) in a nuclear power plant. Nothing is burned or exploded in a nuclear power plant. Rather, the uranium fuel generates heat through a process called [fission](http://www.nrc.gov/reading-rm/basic-ref/glossary/fission-fissioning.html).

Two impacts

The first is precision   
McDonald, senior officer IAEA Department of Nuclear Energy, '06 (Alan, International Atomic Energy Agency “Nuclear Energy 'Pros and Cons'”, IAEA InfoLog, January 2006, [http://www.iaea.org/blog/Infolog/?page\_id=47)](http://www.iaea.org/blog/Infolog/?page_id=47%29)

Nuclear power may have a longer or shorter run than, say, coal as an important energy source for the world, but eventually it will also be overtaken by something newer and better. That may be the renewables were familiar with today like wind and solar, or it might be fusion, or something arising from nanotechnology or genetic engineering, **or something that were not even doing research on today**. As the former Saudi oil minister used to say, The Stone Age didnt end because people ran out of stones. His point was that the oil age will end before the world runs out of oil, and I believe that the nuclear age, to the extent there is one that deserves a label, will end before we run out of uranium or space for waste dumps. Governments should be encouraged to continue research for both nuclear power and renewables, as well as for carbon capture and storage, nanotechnology, genetic engineering and all the rest.

#### The second is limits and ground – fusion is a separate literature base justifies spin off advantages and adds a whole new energy source

### T

#### Production is extraction, conversion, and distribution of energy – excludes R&D

Koplow 4 Doug Koplow is the founder of Earth Track in Cambridge, MA. He has worked on natural resource subsidy issues for 20 years, primarily in the energy sector "Subsidies to Energy Industries" Encyclopedia of Energy Vol 5 2004www.earthtrack.net/files/Energy%20Encyclopedia,%20wv.pdf

3. SUBSIDIES THROUGH THE FUEL CYCLE

Because no two fuel cycles are exactly the same, examining subsidies through the context of a generic fuel cycle is instructive in providing an overall framework from which to understand how common subsidization policies work. Subsidies are grouped into preproduction (e.g., R&D, resource location), production (e.g., extraction, conversion/generation, distribution, accident risks), consumption, postproduction (e.g., decommissioning, reclamation), and externalities (e.g., energy security, environmental, health and safety).

3.1 Preproduction

Preproduction activities include research into new technologies, improving existing technologies, and market assessments to identify the location and quality of energy resources.

3.1.1 Research and Development

R&D subsidies to energy are common worldwide, generally through government-funded research or tax breaks. Proponents of R&D subsidies argue that because a portion of the financial returns from successful innovations cannot be captured by the innovator, the private sector will spend less than is appropriate given the aggregate returns to society. Empirical data assembled by Margolis and Kammen supported this claim, suggesting average social returns on R&D of 50% versus private returns of only 20 to 30%.

However, the general concept masks several potential concerns regarding energy R&D. First, ideas near commercialization have much lower spillover than does basic research, making subsidies harder to justify. Second, politics is often an important factor in R&D choices, especially regarding how the research plans are structured and the support for follow-on funding for existing projects.

Allocation bias is also a concern. Historical data on energy R&D (Table III) demonstrate that R&D spending has heavily favored nuclear and fossil energy across many countries. Although efficiency, renewables, and conservation have captured a higher share of public funds during recent years, the overall support remains skewed to a degree that may well have influenced the relative competitiveness of energy technologies. Extensive public support for energy R&D may also reduce the incentive for firms to invest themselves. U.S. company spending on R&D for the petroleum refining and extraction sector was roughly one-third the multi-industry average during the 1956-1998 period based on survey data from the U.S. National Science Foundation. For the electric, gas, and sanitary services sector, the value was one-twentieth, albeit during the more limited 1995-1998 period.

3.1.2 Resource Location

Governments frequently conduct surveys to identify the location and composition of energy resources. Although these have addressed wind or geothermal resources on occasion, they most often involve oil and gas. Plant siting is another area where public funds are used, primarily to assess risks from natural disasters such as earthquakes for large hydroelectric or nuclear installations. Survey information can be important to evaluate energy security risks and to support mineral leasing auctions, especially when bidders do not operate competitively. However, costs should be offset from lease sale revenues when evaluating the public return on these sales. Similarly, the costs of siting studies should be recovered from the beneficiary industries.

3.2 Production

Energy production includes all stages from the point of resource location through distribution to the final consumers. Specific items examined here include resource extraction, resource conversion (including electricity), the various distribution links to bring the energy resource to the point of final use, and accident risks.

#### R&D also violates incentives

**CCES 9** Center for Climate and Energy Solutions (also called c2es) “Buildings and Emissions: Making the Connection” No specific date dated, most recent citation from 2009 www.c2es.org/technology/overview/buildings

Policy Options to Promote Climate-Friendly Buildings

The mosaic of current policies affecting the building sector is complex and dynamic involving voluntary and mandatory programs implemented at all levels of government, from local to federal. Government efforts to reduce the overall environmental impact of buildings have resulted in numerous innovative policies at the state and local levels. Non-governmental organizations, utilities, and other private actors also play a role in shaping GHG emissions from buildings through third-party “green building” certification, energy efficiency programs, and other efforts.

Various taxonomies have been used to describe the policy instruments that govern buildings, typically distinguishing between regulations, financial incentives, information and education, management of government energy use, and subsidies for research and development (R&D). Each of these is broadly described below.

-Standards and codes

Regulatory policies include building and zoning codes, appliance energy efficiency standards, clean energy portfolio standards, and electricity interconnection standards for distributed generation equipment. Building codes can require a minimum level of energy efficiency for new buildings, thus mandating reductions at the construction stage, where there is the most opportunity to integrate efficiency measures. Zoning codes can provide incentives to developers to achieve higher performance. Because of regional differences in such factors as climatic conditions and building practices, and because building and zoning codes are implemented by states and localities, the codes vary considerably across the country. While substantial progress has been made over the past decade, opportunities to strengthen code requirements and compliance remain.

Appliance and equipment standards require minimum efficiencies to be met by all regulated products sold; they thereby eliminate the least efficient products from the market. Federal standards exist for many residential and commercial appliances, and several states have implemented standards for appliances not covered by federal standards (see Appliance Efficiency Standards).

-Financial incentives

Financial incentives can best induce energy-efficient behavior where relatively few barriers limit information and decision-making opportunities (e.g., in owner-occupied buildings). Financial incentives include tax credits, rebates, low-interest loans, energy-efficient mortgages, and innovative financing, all of which address the barrier of first costs. Many utilities also offer individual incentive programs, because reducing demand, especially peak demand, can enhance the utility’s system-wide performance.

-Information and education

While many businesses and homeowners express interest in making energy-efficiency improvements for their own buildings and homes, they often do not know which products or services to ask for, who supplies them in their areas, or whether the energy savings realized will live up to claims. Requiring providers to furnish good information to consumers on the performance of appliances, equipment and even entire buildings is a powerful tool for promoting energy efficiency by enabling intelligent consumer choices.

-Lead-by-example programs

A variety of mechanisms are available to ensure that government agencies lead by example in the effort to build and manage more energy-efficient buildings and reduce GHG emissions. For example, several cities and states, and federal agencies (including the General Services Administration), have mandated LEED or LEED-equivalent certification for public buildings, and the Energy Independence and Security Act of 2007 includes provisions for reduced energy use and energy efficiency improvements in federal buildings.

-Research and development (R&D)

#### Vote neg:

#### 1. Limits—R&D enables obscure energy types that financial incentive research wouldn’t cover—overstretched neg burdens and prevents any limiting function based on object content.

#### 2. Ground—pre-production insulates them from core market strategies and alternative incentive CPs.

### DA

Chinas aggressively pushing ahead with research -- lack of US funding allows Chinese fusion leadership

#### ASP ‘12

[American Security Project, February, “Fusion Energy: An Opportunity forAmerican Leadership and Security,” http://americansecurityproject.org/wp-content/uploads/2012/02/Ref-0036-Fusion-2020-White-Paper.pdf]

Fusion power is safe and clean, and when commercialized, will solve many of the world’s energy problems. The primary obstacle to realizing fusion’s potential is the integration of technologies into a power plantscale facility. The leaders of the main U.S. national labs state that they are now ready to start building U.S. pilot plants to and ways to overcome those obstacles. China, Japan, South Korea, and the European Union are pushing forward with aggressive efforts to resolve these challenges and secure leadership in the energy technology of the future. In contrast, U.S. efforts, although very significant, have been crippled for decades by severe funding constraints. Clear plans and recommendations for U.S. leadership have not been implemented. The implications of delay are clear. We are in danger of falling behind.

#### Lack of US fusion funding is necessary to sustain the Chinese scientific workforce -- the aff reverses the trend

Cunningham, ‘12

[Nick, American Security Project, “Through Innovation and Investment, the U.S. Can Lead in Next-Generation Energy, Nuclear Fusion,” 8-3, http://energy.aol.com/2012/08/03/through-innovation-and-investment-the-u-s-can-lead-in-next-gen/]

Scientists are confident that the limitations to full commercialization of fusion reactors are not scientific, but budgetary. Exponential increases in power generation were achieved for twenty years leading up to the mid 1990s, but since then, budget cuts have caused delays. A program that had suffered years of atrophy was further harmed when President Obama's fiscal year 2013 budget request called for a $45 million cut from the domestic fusion program, a drastic reduction of 16%. The budget cuts will force MIT's Plasma Science and Fusion Center to shut down. This facility's "Alcator C-Mod" is a critical component of our national research program. Cuts like this would prevent American fusion labs and companies from capitalizing on the lessons learned from the ITER experiment. MIT is doubly important because it houses the largest collection of plasma science graduate students in the country; our next generation of scientists would be trained here. Unfortunately, the prospect of the budget cut has already caused the University to delay acceptances of the incoming 2012 graduate students. Cutting the program will start to dismantle a world class scientific workforce and send the message to our brightest science students that their best chance for career advancement will come from working abroad in France, Japan, or China.

#### Chinese retention of S&T human capital is necessary to spur economic growth

Jiabao, ‘8

[Wen, Premier of the State Council -- People’s Republic of China, October, “Science and China’s Modernization,” Science V 322 N 5902]

The history of modernization is in essence a history of scientific and technological progress. Scientific discovery and technological inventions have brought about new civilizations, modern industries, and the rise and fall of nations. China is now engaged in a modernization drive unprecedented in the history of humankind. Over the past half century, China has made great achievements in basic science and technological innovation. It now ranks among the top nations in the annual number of papers published internationally and patent applications filed. China has also made achievements in such areas as manned space flight, high-performance computers, super-large-scale integrated circuits, and third-generation telecommunications technology. High-tech industry has experienced rapid growth, accounting for over 15% of the manufacturing industry. Francis Bacon, the 16th-century English philosopher, referred to science as a means to improve humankind's lot. Today, the hybrid rice variety developed by Chinese scientists has been adopted for planting in over three million hectares and has become a "golden key" to meeting China's own food needs and boosting world cereal production. Scientific and technological development in the realm of health has also increased average life expectancy in China to that in developed countries. To encourage further innovation, the Chinese government has formulated a Mid- to Long-Term Plan for Development of Science and Technology (2006-2020), which highlights research in the basic sciences and frontier technologies, with priority given to energy, water resources, and environmental protection. We strive to develop independent intellectual property rights in areas of information technology and new materials, while strengthening the application of biotechnology to agriculture, industry, population, and health. The future of China's science and technology depends fundamentally on how we attract, train, and use young scientific talents today. Thus, at the core of our science and technology policy is attracting a diverse range of talents, especially young people, into science and providing them with an environment that brings out the best of their creative ideas. In the field of science and technology, we will intensify institutional reform, restructure scientific research, rationally allocate public resources, and enhance innovation capability. We advocate free academic debate under a lively academic atmosphere, where curiosity-driven exploration is encouraged and failure tolerated. Science has no boundaries. China's endeavors in science and technology need to be more integrated with those of the world, and the world needs a China that is vibrant and able to deliver more in science and technology. Just as collisions generate sparks, exchange and communication enrich imagination and creativity. Many Chinese scientists have stepped into the international academic arena, where they and their foreign colleagues learn from each other and jointly contribute to the worldwide development of science and technology. To encourage the learning and application of science among the general public, we need to embrace a scientific culture by promoting scientific rationality while cherishing Chinese cultural heritage. Enlightened by science, the rich and profound Chinese culture is bound to shine more gloriously. I firmly believe that science is the ultimate revolution. At a time when the current global financial turmoil is dealing a heavy blow to the world economy, it has become all the more important to rely on scientific and technological progress to promote growth in the real economy. Economic and social development must rely on science and technology, and science and technology must serve economic and social development. We will rely on science and technology to promote economic restructuring, transform development patterns, safeguard food and energy security, and address global climate change. We are confident that China will reap a rich harvest in science and technology and that this will have positive and far-reaching effects on human civilization and the well-being of humankind.

Decline collapses the CCP -- great power war

**Kane, ‘1**

[Thomas, PhD in Security Studies from the University of Hull & Lawrence Serewicz, Autumn, http://www.carlisle.army.mil/usawc/Parameters/01autumn/Kane.htm]

Despite China's problems with its food supply, the Chinese do not appear to be in danger of widespread starvation. Nevertheless, one cannot rule out the prospect entirely, especially if the earth's climate actually is getting warmer. The consequences of general famine in a country with over a billion people clearly would be catastrophic. The effects of oil shortages and industrial stagnation would be less lurid, but economic collapse would endanger China's political stability whether that collapse came with a bang or a whimper. PRC society has become dangerously fractured. As the coastal cities grow richer and more cosmopolitan while the rural inland provinces grow poorer, the political interests of the two regions become ever less compatible. Increasing the prospects for division yet further, Deng Xiaoping's administrative reforms have strengthened regional potentates at the expense of central authority. As Kent Calder observes, In part, this change [erosion of power at the center] is a conscious devolution, initiated by Deng Xiaoping in 1991 to outflank conservative opponents of economic reforms in Beijing nomenclature. But devolution has fed on itself, spurred by the natural desire of local authorities in the affluent and increasingly powerful coastal provinces to appropriate more and more of the fruits of growth to themselves alone.[ 49] Other social and economic developments deepen the rifts in Chinese society. The one-child policy, for instance, is disrupting traditional family life, with unknowable consequences for Chinese mores and social cohesion.[ 50] As families resort to abortion or infanticide to ensure that their one child is a son, the population may come to include an unprecedented preponderance of young, single men. If common gender prejudices have any basis in fact, these males are unlikely to be a source of social stability. Under these circumstances, China is vulnerable to unrest of many kinds. Unemployment or severe hardship, not to mention actual starvation, could easily trigger popular uprisings. Provincial leaders might be tempted to secede, perhaps openly or perhaps by quietly ceasing to obey Beijing's directives. China's leaders, in turn, might adopt drastic measures to forestall such developments. If faced with internal strife, supporters of China's existing regime may return to a more overt form of communist dictatorship. The PRC has, after all, oscillated between experimentation and orthodoxy continually throughout its existence. Spectacular examples include Mao's Hundred Flowers campaign and the return to conventional Marxism-Leninism after the leftist experiments of the Cultural Revolution, but the process continued throughout the 1980s, when the Chinese referred to it as the "fang-shou cycle." (Fang means to loosen one's grip; shou means to tighten it.)[ 51] If order broke down, the Chinese would not be the only people to suffer. Civil unrest in the PRC would disrupt trade relationships, send refugees flowing across borders, and force outside powers to consider intervention. If different countries chose to intervene on different sides, China's struggle could lead to major war. In a less apocalyptic but still grim scenario, China's government might try to ward off its demise by attacking adjacent countries.

### Spinoffs

#### The aff isn’t key to plasma spinoffs

#### Prager, ‘12

[Stewart C., Princeton Plasma Physics Laboratory, “The Way Forward with Magnetic Fusion Energy,” http://dotearth.blogs.nytimes.com/2012/11/19/in-defense-of-sustained-research-on-fusion/]

The ensuing decades have seen an intense scientific focus on what is truly a grand scientific challenge. Scientists now are teasing out the secrets of complex multi-scaled layers of turbulence in plasmas, the movement of particles through those plasmas, their interaction with magnetic fields, and numerous other phenomena that impact the plasma’s ability to be harnessed as an energy source. This focus in magnetic fusion has driven the development of a new scientific field, plasma physics, with huge benefits for science in general – from understanding cosmic plasmas to employing these hot, ionized gases for computer chip manufacturing.

#### No internal link – 1ac cross ex established that there isn’t a uniqueness claim for the ability to develop bioweapons.

#### Spinoffs take decades

**Rothwell, ’97** (Jed Rothwell, Infinite Energy, March-June 1997, “Cold Fusion and the Future,” <http://www.infinite-energy.com/iemagazine/issue1314/future.html>, Iss. 13-14)//CC

Cold fusion spin-off like indoor farming, desalination, and aerospace engines will take decades to develop. They will require massive investment, new factories, and years of research. Cold fusion itself will take time to perfect, but the spin-offs will take longer because they are more complex, and because large scale research on them will not begin until cold fusion is commercialized. Indoor farming with robots might take 30 to 60 years to develop. It is cost effective for some crops already: flowers in the Netherlands, tomatoes in Tokyo, aquaculture in Boston. But it will be a long time, if ever, before we grow wheat more cheaply indoors than on the Great Plains. The change to automated indoor farming will occur gradually, giving displaced farm workers time to find new jobs. The energy production industries ­ oil, gas, coal, and the electric power companies ­ are another matter. The potential for chaotic disruption here is very great, because the transition will be swift and it will be in one direction only. All jobs will be lost, none will be created.

#### Your predictions are bad – other areas disprove

**HGFRC, ‘1** (Institutes of the HGF Research Collaboration on Nuclear Fusion, Hearing on Nuclear Fusion before the Bundestag Committee for Education, Research, and Technology Assessment, 28 March 2001, http://fire.pppl.gov/eu\_bundestag\_english.pdf)//CC

Moreover, it is to be doubted that the presentation of long spin-off lists can be regarded as a justification for high future expenditures. Such lists have been drawn up in many areas of research, among others, in elementary particle physics (CERN), in space research (ESA, NASA) and also in the field of fusion research (JET, DOE Office for Fusion Research). A justification on the basis of expected spin-offs, however, is not possible since it is difficult to quantify the coming economic benefit. It would also have to be analysed what benefit would have been achieved if this money had been spent otherwise. On the other hand, it may be assumed, however, that the expenditure of similar sums in different high-technology areas produces similar levels of spin-offs. The fact that fusion research requires very complex, specifically developed instruments in various technological areas makes it so to speak destined for the generation of spin-off products.

#### US FTP solves

**Baker, 2k** (Charles C. Baker, Center for Energy Research, January 2000, “Advances in Fusion Technology,” http://aries.ucsd.edu/LIB/REPORT/UCSD-ENG/UCSD-ENG-077.pdf)//CC

The U.S. Fusion Technology Program is an essential element in the development of the knowledge base for an attractive fusion power source. The Technology Program incorporates both near and long term R&D, contributes to material and engineering sciences as well as technology development, ranges from hardware production to theory and modeling, contributes significantly to spin-off applications, and performs global systems assessments and focused design studies.

#### Status quo solves

**Morrison, ’10** (Chris Morrison, CBS Money Watch, 1 February 2010, “Ten Serious Nuclear Fusion Projects Making Progress Around the World,” <http://www.cbsnews.com/8301-505123_162-34242897/ten-serious-nuclear-fusion-projects-making-progress-around-the-world/)//CC>

Besides the NIF, there are fusion projects going on around the world. All have two things in common: they're still at an experimental stage, and they've all been derided by critics at one point or another. But by looking at the pedigree, breakthroughs and financial support of projects, I've come up with a set of TKTK projects that, like the NIF, could someday give the world a cheap new energy source. I've tried to roughly rank them by their apparent prospects. By necessity the descriptions are pretty short, but you can Google any for more; also, look up the Lawson criterion, which sets the requirements for the sort of self-powered fusion reactions that would be required for any of the below projects to be successful. Here they are: The National Ignition Facility (USA) -- With its initial proof of the viability of using lasers to create fusion, the NIF has become the world's most watched fusion project. The ful name of the technology is laser-based inertial confinement fusion; the basic concept is firing 192 separate lasers to rapidly compress a tiny fuel pellet, which will (hopefully)undergo fusion at its core. Experiments around the idea began in the late 1970s, and following a series of cost overruns, the $3.5 billion NIF opened last year. ITER and DEMO (France) -- The International Thermonuclear Experimental Reactor is planned for France, but ultimately funded by seven countries, if you count the European Union as a single member. Building on the work of numerous other projects, like the Joint European Torus, China's EAST and South Korea's KSTAR, it would be proper to call ITER the grandfather of fusion research -- though the facility won't actually be complete until 2018. ITER is based on a tokamak, a circular (toroidal) magnetic chamber that compresses atoms to achieve fusion. If ITER works out perfectly, construction could begin on DEMO, a Demonstration Power Plant intended to produce usable amounts of electricity. LDX (USA) -- The Levitating Dipole Experiment, also mentioned above, is MIT's attempt to create a new design for fusion reactors. While shaped like a tokamak, which uses external magnets, the LDX brings the magnetic field inside its chamber, allowing different interactions with the plasma inside, including an unexpected density from turbulence. And, as the name suggests, the chamber levitates. HiPER (Europe) -- The High Power Laser Energy Research facility is supposed to be something of an improvement on the NIF's design, using a "fast ignition" approach that shrinks the size and output of the lasers to save on energy costs. Needless to say, HiPER got a boost from the NIF's early success, but the initial design and construction work isn't planned to begin for another year or two. Z-IFE (USA) -- A device at Sandia National Laboratory called the Z machine has proven capable of reaching extremely high temperatures (in the billions of Kelvins) and causing fusion with X-rays. Sandia has already upgraded the Z machine once, and through a series of further upgrades plans to reach the Z-inertial fusion energy (ZIFE) power plant and work up to creating a fairly continuous stream of fusion energy. The trick, as with all of these projects, will be achieving a positive energy output. General Fusion (Canada) -- This is a Canadian startup working on something they call "acoustically driven magnetized target fusion". Much like the NIF's laser fusion, General Fusion plans to use many pressure points to cause fusion in a central pellet; but unlike NIF, the company's design uses phsyical rams that transmit shock waves to compress the material. It's funded with a few million dollars, versus the billions governments have put into projects like NIF and ITER, but General Fusion can at least claim a unique design, which it says is superior because of modern computer controls. Lawrenceville Plasma Physics (USA) -- Another private company, LPP is working with even less funding than General Fusion, for the moment. LPP, run by a researcher who started off with NASA grants, plans to use a "dense plasma focus" device that creates magnetic fields with electricity and uses them to focus matter into a plasmoid. While similar to ITER, one of its advantages would be a lack of external magnets (like the LDX); another, its much lower cost to prototype and smaller scale overall. FRX-L (USA) -- Under study at the Los Alamos National Laboratory and the Air Force Research Laboratory, the FRX-L uses magnetized target fusion, which is much like General Fusion's approach, above. Unlike General Fusion, the researchers using FRX-L aren't driven by the imperative of finding success within a few short years or being shut down. Wendelstein 7-X (Germany) -- Another pilot project intended only to evaluate the potential of fusion energy, the Wendelstein 7-X is, like ITER, based on a toroidal design. The 7-X will be a replacement for the previous 7-AS unit at Germany's Max Planck Institute when it's completed in 2015; the aim is for the unit to be able to operate for 30 minutes continuously, proving that fusion could be used in power plants. Sonofusion (USA) -- Also called bubble fusion, this technique can supposedly use sound waves to compress matter for fusion. It's also in the scientific doghouse, following a scandal in which the students of a researcher who initially claimed to have achieved sonofusion wrote a paper supporting his results. You can find a long technical paper on it here, and there's also a startup called Impulse Devices working on sonofusion.

#### No knowledge transfer—impossible to organize an effective program

**Gormley 2012** – Assistant Professor in the Biodefense Program at George Mason University (Spring, Sonia Ben Ouagrham-Gormley, International Security, 36.4, p. 80-114, “Barriers to Bioweapons: Intangible Obstacles to Proliferation”, MIT Press)

Another challenge in using others’ scientific data is that tacit knowledge¶ does not transfer easily. It requires proximity to the original source(s) and an¶ extended master-apprentice relationship.19 Scientific and technical knowledge¶ is also highly local: it is developed within a specific infrastructure, using a speci¶ fic knowledge base, and at a specific location. Some studies have shown that¶ the use of data and technology in a new environment frequently requires¶ adaption to the new site.20 Successful adaptation often requires the involvement¶ of the original scientific author(s) to guide the adjustment. For instance,¶ some of the problems encountered during the production of the Soviet anthrax¶ weapon were solved only after the authors of the weapon in Russia traveled to¶ Kazakhstan to assist their colleagues. These individuals trained their colleagues,¶ transferring their tacit knowledge in the process, and helped adjust¶ the technical protocols to the Kazakh infrastructure, which was substantially¶ different from that of the Russian facility. Even with the presence of these original¶ authors, five years were needed to complete the process of successful¶ transfer and use of bioweapons technology.21 A further complication is that¶ tacit knowledge can decay over time and may disappear if not used or transferred.¶ Studies have shown that trying to re-create lost knowledge can be difficult, if not impossible.22

Finally, knowledge and technology development, particularly in complex¶ technological projects, is rarely the work of one expert. Instead it requires the¶ cumulative and cooperative work of teams of individuals with specific skills.¶ This is particularly true in weapons programs, which pose a variety of problems¶ spanning many disciplines. For example, biological weapons develop-¶ ment can involve mechanical and electrical engineering, chemistry, statistics,¶ aerobiology, and microbiology, demanding large interdisciplinary teams of scientists,¶ engineers, and technicians. A successful weapon, therefore, is not the¶ product of an individual scientist working alone, but that of the collective¶ work of those involved in the research, design, and testing of the weapon.23 In¶ this context, the efficient use of written technical data would require access to¶ or re-creation of the collective explicit and tacit knowledge of those involved in¶ its development, making the reproducibility of an experiment or object particularly¶ challenging.

External Factors

External factors can also interfere with the use and transfer of knowledge. In¶ the biological sciences, the properties of reagents and other materials used¶ in scientific experiments may differ from one location to another and may vary¶ seasonally. An experiment conducted successfully in one location may not be¶ reproducible in another because of the varying properties of the material used,¶ even when the same individual conducts the experiment.24 Other external factors¶ that cannot be easily identified or quantified can also interfere with an experiment,¶ even when the task is performed by an experienced scientist or¶ technician who has had previous successes in performing the task.25 For example,¶ within the U.S. bioweapons program, the production and scaling up of biological¶ material were routinely subject to unexplained failures whenever¶ production was interrupted to service or decontaminate the equipment. On¶ these occasions, plant technicians at Fort Detrick—the main facility of the U.S.¶ bioweapons program—experienced, on average, three weeks of unsuitable¶ production. The scientific staff could not identify the causes of such routine¶ failures and could only assume that either a contaminant had been introduced¶ during the service or cleanup, or that the technicians changed the way they¶ were doing things and unconsciously corrected the problem only after several¶ weeks.26

**No extinction**

**O’Neill 4** O’Neill 8/19/2004 [Brendan, “Weapons of Minimum Destruction” http://www.spiked-online.com/Articles/0000000CA694.htm]

David C Rapoport*,* professor of political science at University of California, Los Angeles and editor of the Journal of Terrorism and Political Violence, has examined what he calls 'easily available evidence' relating to the historic use of chemical and biological weapons. He found something surprising - such weapons do not cause mass destruction. Indeed, whether used by states, terror groups or dispersed in industrial accidents, they tend to be far less destructive than conventional weapons. 'If we stopped speculating about things that might happen in the future and looked instead at what has happened in the past, we'd see that our fears about WMD are misplaced', he says. Yet such fears remain widespread. Post-9/11, American and British leaders have issued dire warnings about terrorists getting hold of WMD and causing mass murder and mayhem. President George W Bush has spoken of terrorists who, 'if they ever gained weapons of mass destruction', would 'kill hundreds of thousands, without hesitation and without mercy' (1). The British government has spent £28million on stockpiling millions of smallpox vaccines, even though there's no evidence that terrorists have got access to smallpox, which was eradicated as a natural disease in the 1970s and now exists only in two high-security labs in America and Russia (2). In 2002, British nurses became the first in the world to get training in how to deal with the victims of bioterrorism (3). The UK Home Office's 22-page pamphlet on how to survive a terror attack, published last month, included tips on what to do in the event of a 'chemical, biological or radiological attack' ('Move away from the immediate source of danger', it usefully advised). Spine-chilling books such as Plague Wars: A True Story of Biological Warfare, The New Face of Terrorism: Threats From Weapons of Mass Destruction and The Survival Guide: What to Do in a Biological, Chemical or Nuclear Emergency speculate over what kind of horrors WMD might wreak. TV docudramas, meanwhile, explore how Britain might cope with a smallpox assault and what would happen if London were 'dirty nuked' (4). The term 'weapons of mass destruction' refers to three types of weapons: nuclear, chemical and biological. A chemical weapon is any weapon that uses a manufactured chemical, such as sarin, mustard gas or hydrogen cyanide, to kill or injure. A biological weapon uses bacteria or viruses, such as smallpox or anthrax, to cause destruction - inducing sickness and disease as a means of undermining enemy forces or inflicting civilian casualties. We find such weapons repulsive, because of the horrible way in which the victims convulse and die - but they appear to be less 'destructive' than conventional weapons. 'We know that nukes are massively destructive, there is a lot of evidence for that', says Rapoport. But when it comes to chemical and biological weapons, 'the evidence suggests that we should call them "weapons of minimum destruction", not mass destruction', he says. Chemical weapons have most commonly been used by states, in military warfare. Rapoport explored various state uses of chemicals over the past hundred years: both sides used them in the First World War; Italy deployed chemicals against the Ethiopians in the 1930s; the Japanese used chemicals against the Chinese in the 1930s and again in the Second World War; Egypt and Libya used them in the Yemen and Chad in the postwar period; most recently, Saddam Hussein's Iraq used chemical weapons, first in the war against Iran (1980-1988) and then against its own Kurdish population at the tail-end of the Iran-Iraq war. In each instance, says Rapoport, chemical weapons were used more in desperation than from a position of strength or a desire to cause mass destruction. 'The evidence is that states rarely use them even when they have them', he has written. 'Only when a military stalemate has developed, which belligerents who have become desperate want to break, are they used.' (5) As to whether such use of chemicals was effective, Rapoport says that at best it blunted an offensive - but this very rarely, if ever, translated into a decisive strategic shift in the war, because the original stalemate continued after the chemical weapons had been deployed. He points to the example of Iraq. The Baathists used chemicals against Iran when that nasty trench-fought war had reached yet another stalemate. As Efraim Karsh argues in his paper 'The Iran-Iraq War: A Military Analysis': 'Iraq employed [chemical weapons] only in vital segments of the front and only when it saw no other way to check Iranian offensives. Chemical weapons had a negligible impact on the war, limited to tactical rather than strategic [effects].' (6) According to Rapoport, this 'negligible' impact of chemical weapons on the direction of a war is reflected in the disparity between the numbers of casualties caused by chemicals and the numbers caused by conventional weapons. It is estimated that the use of gas in the Iran-Iraq war killed 5,000 - but the Iranian side suffered around 600,000 dead in total, meaning that gas killed less than one per cent. The deadliest use of gas occurred in the First World War but, as Rapoport points out, it still only accounted for five per cent of casualties. Studying the amount of gas used by both sides from1914-1918 relative to the number of fatalities gas caused, Rapoport has written: 'It took a ton of gas in that war to achieve a single enemy fatality. Wind and sun regularly dissipated the lethality of the gases. Furthermore, those gassed were 10 to 12 times as likely to recover than those casualties produced by traditional weapons.' (7) Indeed, Rapoport discovered that some earlier documenters of the First World War had a vastly different assessment of chemical weapons than we have today - they considered the use of such weapons to be preferable to bombs and guns, because chemicals caused fewer fatalities. One wrote: 'Instead of being the most horrible form of warfare, it is the most humane, because it disables far more than it kills, ie, it has a low fatality ratio.' (8) 'Imagine that', says Rapoport, 'WMD being referred to as more humane'. He says that the contrast between such assessments and today's fears shows that actually looking at the evidence has benefits, allowing 'you to see things more rationally'. According to Rapoport, even Saddam's use of gas against the Kurds of Halabja in 1988 - the most recent use by a state of chemical weapons and the most commonly cited as evidence of the dangers of 'rogue states' getting their hands on WMD - does not show that unconventional weapons are more destructive than conventional ones. Of course the attack on Halabja was horrific, but he points out that the circumstances surrounding the assault remain unclear. 'The estimates of how many were killed vary greatly', he tells me. 'Some say 400, others say 5,000, others say more than 5,000. The fighter planes that attacked the civilians used conventional as well as unconventional weapons; I have seen no study which explores how many were killed by chemicals and how many were killed by firepower. We all find these attacks repulsive, but the death toll may actually have been greater if conventional bombs only were used. We know that conventional weapons can be more destructive.' Rapoport says that terrorist use of chemical and biological weapons is similar to state use - in that it is rare and, in terms of causing mass destruction, not very effective. He cites the work of journalist and author John Parachini, who says that over the past 25 years only four significant attempts by terrorists to use WMD have been recorded. The most effective WMD-attack by a non-state group, from a military perspective, was carried out by the Tamil Tigers of Sri Lanka in 1990. They used chlorine gas against Sri Lankan soldiers guarding a fort, injuring over 60 soldiers but killing none. The Tamil Tigers' use of chemicals angered their support base, when some of the chlorine drifted back into Tamil territory - confirming Rapoport's view that one problem with using unpredictable and unwieldy chemical and biological weapons over conventional weapons is that the cost can be as great 'to the attacker as to the attacked'. The Tigers have not used WMD since.

**No smallpox extinction**

**Burcum 3** [2/3, Jill, Star Tribune “Doctors who treated smallpox not alarmist about disease threat” http://www.ph.ucla.edu/epi/bioter/notalarmistthreat.html]

Mack said he is not especially concerned that vaccine-resistant smallpox strains might have been engineered as weapons. He said such strains, if they exist, would spread in the ways he witnessed in Pakistan and **could be contained**. But he said public health authorities haven't asked him to assist in smallpox defense planning. All three Minnesota doctors also said they have not yet been asked to help. Kersey, Haase and Williams have spent much of their careers in areas of medicine unrelated to smallpox, and they said they will leave decisions on vaccine strategy to public health experts. Memories revived None of the three Minnesota doctors knew one another in 1960s Pakistan. Now they're surprised to find themselves digging up distant memories. "If you'd have told me back then that I'd be sitting here in 2003 talking about smallpox, I wouldn't have believed you," said Haase, an internationally known AIDS researcher and head of the Microbiology Department at the University of Minnesota. Haase, 63, was a senior medical school student in 1965 when an international study program sent him to Lahore, Pakistan, to test a new drug to treat smallpox. He had never seen smallpox before he arrived. In Pakistan he sought out victims, driving around the countryside in a jeep with a Pakistani military translator. When the two men arrived in one of the dusty villages dotting the Himalayan foothills of northern Pakistan, they would ask for the village chief. Then they would share tea, as custom dictated, and ask if any villagers had smallpox. If the answer was yes, Haase would ask to see the smallpox victims. Most often, they were cared for by family members in dark, cramped, homes. Haase didn't need much light to make a diagnosis. The pustules are distinctive, usually appearing on the face, legs and arms. After observing one or two cases, "I could see from 200 feet away whether someone had been a victim or not," Haase said. Sometimes, he would encounter smallpox victims along the road. One woman was journeying to a distant part of Pakistan to visit relatives. She had the disease's pustules but felt strong enough to make the trip. The woman, and others like her, probably helped keep smallpox circulating in Pakistan, Haase said. The virus can be shed in pustule scabs. Still, cases were rare, indicating that the disease did not spread easily without prolonged, close contact, he said. That was good, because the drug Haase tested didn't work. It often made people vomit. Some patients' families got angry and forced him to leave villages in a hurry. Williams, 70, a retired lung specialist at the Mayo Clinic, was a Methodist medical missionary stationed in Pakistan from 1965 until late 1973. He still remembers his first smallpox case at the United Christian Hospital in Lahore. The man, who lived in the countryside, arrived covered with pustules. The diagnosis was obvious. Williams and the other doctors sent the man elsewhere for treatment after a day or so. No one else at the hospital contracted the disease, including the men in the open ward where the man stayed, he said. Although most staff members were vaccinated, many patients were not. Williams believes the man survived. The two other smallpox patients he saw probably weren't as fortunate. Williams once traveled to Afghanistan to help deliver supplies to a small hospital. In the hospital's courtyard were two women with smallpox. The hospital staff kept them outside to prevent the disease from spreading, he said. With the advanced medical care available in the United States, Williams said he believes any cases here would be recognized as quickly as they were in Pakistan. The smallpox survival rate might be higher now because of better medical care, he said. It is fatal about 30 percent of the time. "In that country and at that state of health care, we were able to contain and eradicate smallpox; we ought to be able to reproduce at least that much in the United States," Williams said. Kersey, 64, had much the same experience at a hospital in Karachi, in southern Pakistan. That's where he saw the three smallpox patients whose pustule-marked faces still are imprinted on his memory. Yet no one else in the hospital became infected; most staff members were vaccinated. In the slums of Karachi, where he volunteered to care for patients, it was different. The crowded conditions, malnutrition and other health problems helped the disease spread. "These were extraordinarily poor health conditions," he said. And smallpox wasn't the only threat. Far more common, Kersey said, were leprosy, malaria, rabies and deaths from a disease that still kills millions of people -- diarrhea. That's a point to consider, he said, as the nation prepares for bioterrorism. "This is important, but you need to put it in perspective in terms of all the health problems," he said. "We need to be concerned about anthrax and smallpox, yes, but we can't forget about cancer, heart disease, suicides or alcohol-related traffic deaths either."

#### Politicians ignore calls for retaliation—politically viable

**Mueller 5** (John, Professor of Political Science – Ohio State University, Reactions and Overreactions to Terrorism, http://polisci.osu.edu/faculty/jmueller/NB.PDF)

However, history clearly demonstrates that overreaction is not necessarily inevitable. Sometimes, in fact, leaders have been able to restrain their instinct to overreact. Even more important, **restrained reaction**--or even capitulation to terrorist acts--**has** often **proved** to be entirely **acceptable politically**. That is, there are many instances where leaders did nothing after a terrorist attack (or at least refrained from overreacting) and did not suffer politically or otherwise. Similarly, after an unacceptable loss of American lives in Somalia in 1993, Bill Clinton responded by withdrawing the troops without noticeable negative impact on his 1996 re-election bid. Although Clinton responded with (apparently counterproductive) military retaliations after the two U.S. embassies were bombed in Africa in 1998 as discussed earlier, his administration did not have a notable response to terrorist attacks on American targets in Saudi Arabia (Khobar Towers) in 1996 or to the bombing of the U.S.S. Cole in 2000, and these non-responses never caused it political pain. George W. Bush's response to the anthrax attacks of 2001 did include, as noted above, a costly and wasteful stocking-up of anthrax vaccine and enormous extra spending by the U.S. Post Office. However, beyond that, it was the same as Clinton's had been to the terrorist attacks against the World Trade Center in 1993 and in Oklahoma City in 1995 and the same as the one applied in Spain when terrorist bombed trains there in 2004 or in Britain after attacks in 2005: the dedicated application of police work to try to apprehend the perpetrators. This approach was politically acceptable even though the culprit in the anthrax case (unlike the other ones) has yet to be found. The demands for retaliation may be somewhat more problematic in the case of suicide terrorists since the direct perpetrators of the terrorist act are already dead, thus sometimes impelling a vengeful need to seek out other targets. Nonetheless, the attacks in Lebanon, Saudi Arabia, Great Britain, and against the Cole were all suicidal, yet no direct retaliatory action was taken. Thus, **despite short-term demands** that some sort of action must be taken, experience suggests politicians can often successfully ride out this demand after the obligatory (and inexpensive) expressions of outrage are prominently issued.

**No impact – genetic diversity resilient.**

**Harris 1** [Jonathan, Tufts University Global Development and Environment Institute, A Survey of Sustainable Development, p 132-3]

Given the possible instability of predator-prey interaction as well as external physical variability, the key to system persistence lies in spatial heterogeneity and biotic diversity. These characteristics make an ecological system resilient– able to withstand internal imbalances or external disturbances. Ecological models show a very wide range of complex behaviors, with multiple stable states, boom-and-bust cycles, and even chaotic behavior. Plant- and animal-specie fluctuations on a local scale interact with geophysical variables on a much larger scale to generate robust and resilient ecosystems. Human population growth and economic activity affects the local-scale relationships in ways that can profoundly change overall ecosystems. The resources management concepts of the maximum sustained yields (e.g., of fish populations) and fixed carrying capacities (e.g., of terrestrial herbivores) have been discredited by these more sophisticated views of broad ecosystem function. The very success of achieving management yield goals tends to reduce variability and damage ecosystem resilience. Part of the answer to the question “why has the world not collapsed?” lies in the **resilience of ecosystems**. The other part lies in **human creativity** and **adaptive behavior**. Human adaptability is the key to economists’ optimism about our ability to substitute for scarce materials and develop successful responses to environmental problems. However, the resilience of natural systems is not unlimited, and human adaptability is limited by specific environmental contexts.

### PPL

#### Obama only cut $10 million and it only slows PPPL work six months

Altmann, ‘12

[Jennifer, 3-21, “Obama budget proposal would mean big cuts for PPPL,” http://paw.princeton.edu/issues/2012/03/21/pages/8264/index.xml]

President Obama’s proposed budget for fiscal year 2013 calls for increases to several federal agencies that provide funding to the University, but would cut the Princeton Plasma Physics Lab’s $85 million budget by 12 percent. Stewart Prager, the lab’s director, said the proposed $10 million reduction would be “very severe” and could reduce the number of employees at the lab by 100. The current staff is 454. “This would impede our scientific progress greatly,” he said. PPPL, a leading fusion-research ­facility, is one of 10 national science laboratories supported by the Department of Energy’s Office of Science. The reductions would cut $3.2 million from the budget for the lab’s primary fusion experiment, the National Spherical Torus Experiment, which studies the physics principles of spherically shaped plasmas — hot ionized gases confined in a magnetic field in which nuclear fusion will occur. The experiment was shut down in November 2011 for an upgrade that will dramatically increase its physics capability. The budget cuts would extend the upgrade work until November 2014, six months longer than originally planned, Prager said. Other experiments, such as those that explore basic aspects of plasma physics, would be “greatly impeded,” he said.

#### Either way, the aff isn’t key to PPPL

Knovel, 1-4-13

[“South Korea, U.S. Plan Joint Project For Fusion Reactor,” <http://why.knovel.com/all-engineering-news/2181-south-korea-us-plan-joint-project-for-fusion-reactor.html>]

A new joint project between the U.S. and South Korea hopes to take engineering research and development in nuclear fusion to the next level by building a nearly commercial-scale pilot power plant. Announced late last year, **the project will provide** the U.S. Department of Energy's Princeton Plasma Physics Laboratory (**PPPL) with funding from the South Korean government's** National Fusion Research Institute (**NFRI**). Dubbed K-DEMO, **the project wil**l rely on research from both countries, and help **foster cooperation between the two prominent programs**. "We all share the same vision to deliver a possible DEMO design," Gyung-Su Lee, a research fellow at NFRI, said in a statement. "We will share our expertise so that the outcome will benefit not just K-DEMO, but a next-step U.S. fusion facility as well." Bigger and better K-DEMO will follow a similar pattern to the international project known as ITER - a large circular magnetic containment unit known as a tokamok, with fusion powered by high-energy lasers. However, unlike that project, currently being constructed in France, K-DEMO is intended to produce electricity over an extended period. ITER - a decades old project being promoted by the U.S., EU, South Korea and four other countries - is intended to generate electricity for only 500 second spurts. The researchers at PPPL and NFRI hope that a new array of advanced engineering tools will allow them to create a working fusion reactor capable of serving as a more reliable source of power, potentially operating for weeks at a time.

#### New data-processing solves solar storm predictions

**Montalbano 11** (Elizabeth, InformationWeek, August 22, 2011, “NASA Improves Solar Storm Forecasting”, <http://www.informationweek.com/news/government/enterprise-apps/231500464>, ZBurdette)

NASA is using new data-processing techniques aboard a solar observational spacecraft to better predict when solar storms may hit Earth, providing new forecasting ability that could help determine their effects.

NASA has been observing solar storms--called coronal mass ejections (CMEs)--from its twin Solar Terrestrial Relations Observatory (STEREO) spacecrafts since their launch in 2006.

Solar storms--billion-ton clouds of solar plasma launched by the same sun explosions that spark solar flares--can be dangerous because they can damage satellites, disrupt communications, and cause power grid failures on Earth, according to NASA. Because of this, scientists have been working to try to predict their occurrence and their behavior.

New image-processing techniques scientists are using on STEREO are allowing them to see how solar eruptions develop into space storms on Earth, providing better information for space weather models to improve storm forecasting, according to Lika Guhathakurta, STEREO program scientist at NASA headquarters in Washington.

Previously, STEREO could not clearly show an image of the structure of a solar storm as it traveled toward Earth. This meant forecasters had to estimate when storms arrived without knowing the details of how they might grow and the effect they might have, according to NASA.

New images from cameras on one of the spacecraft reveal detailed features of a large CME in late 2008 that was directed toward Earth. The images connect the original magnetized structure in the sun's corona to the anatomy of the storm as it hit the planet three days later.

The spacecraft's wide-angle cameras made the images possible by detecting ordinary sunlight scattered by free-floating electrons in plasma clouds, according to NASA. The clouds are bright and easy to see when they first leave the sun, but become more difficult to detect as they expand into the void.

"Separating these faint signals from the star field behind them proved especially challenging, but it paid off," said Craig DeForest, scientist at the Southwest Research Institute in Boulder, Colo.

Through these observations, NASA scientists **not only can predict the arrival time of a CME on Earth, but also its mass**, according to NASA. The brightness of the cloud enabled researchers to calculate the cloud's gas density throughout the structure and compare it to direct measurements by other NASA spacecraft.

In the future, scientists can use this same technique to determine whether the Earth will be hit by a small or large cloud, and where on the sun the material originated, according to NASA.

STEREO consists of two observatories that orbit the sun, one ahead of Earth and one behind. The observatories are a part of NASA's Solar Terrestrial Probes program, which seeks to understand the fundamental physical processes of the space environment.

**New forecasting techniques solve the case --- even solves preparedness**

**Montalbano 1/30** (Elizabeth, InformationWeek, 2012, “NASA Enhances Solar Storm Forecasting”

<http://www.informationweek.com/news/government/info-management/232500710?itc=edit_in_body_cross>, ZBurdette)

NASA is applying existing technology called "ensemble forecasting" that's been used to predict hurricanes in its observations of solar weather to better predict the path and effect of solar storms.

The use of the computational predictive technique couldn't come as a better time, as the sun is entering its solar maximum, or period of greatest activity, which will spur an increase in space weather, according to the agency.

Researchers at the Space Weather Laboratory of Goddard Space Flight Research Center have begun to implement ensemble forecasting--which allows them to produce as many as 100 computerized forecasts at once--with full implementation in three years' time, according to NASA.

Support from NASA's Space Technology Program Game Changing Program is allowing for the use of the technology, which meteorologists already use to track the potential path or impact of hurricanes and other forms of severe weather.

Ensemble forecasting uses computer modeling to calculate multiple possible space weather conditions to simultaneously produce forecasts that researchers can analyze. From this analysis they can create alerts for solar storms that could affect astronauts or NASA spacecraft, according to the agency.

**Double Bind: Either**

**Solar Flares empirically overhyped**

Ian **O’Neill**, 6/21/**08**, founder and editor of Astroengine, “2012: No Killer Solar Flare”, http://www.universetoday.com/14645/2012-no-killer-solar-flare/

“Killer” solar flares have been observed on other stars. In 2006, NASA’s Swift observatory saw the largest stellar flare ever observed 135 light-years away. Estimated to have unleashed an energy of 50 million trillion atomic bombs, the II Pegasi flare will have wiped out most life on Earth if our Sun fired X-rays from a flare of that energy at us. However, our Sun is not II Pegasi. II Pegasi is a violent red giant star with a binary partner in a very close orbit. It is believed the gravitational interaction with its binary partner and the fact II Pegasi is a red giant is the root cause behind this energetic flare event. Doomsayers point to the Sun as a possible Earth-killer source, but the fact remains that our Sun is a very stable star. It does not have a binary partner (like II Pegasi), it has a predictable cycle (of approximately 11 years) and there is no evidence that our Sun contributed to any mass extinction event in the past via a huge Earth-directed flare. Very large solar flares have been observed (such as the 1859 Carrington white light flare)… but we are still here. In an added twist, solar physicists are surprised by the lack of solar activity at the start of this 24th solar cycle, leading to some scientists to speculate we might be on the verge of another Maunder minimum and “Little Ice Age”. This is in stark contrast to NASA solar physicist’s 2006 prediction that this cycle will be a “doozy”. This leads me to conclude that we still have a long way to go when predicting solar flare events. Although space weather prediction is improving, it will be a few years yet until we can read the Sun accurately enough to say with any certainty just how active a solar cycle is going to be. So, regardless of prophecy, prediction or myth, there is no physical way to say that the Earth will be hit by any flare, let alone a big one in 2012. Even if a big flare did hit us, it will not be an extinction event.

**\*\*Or the impact is so big that info won’t solve solar storm impact—satellite protection measures must be done, which are currently impossible**

**Choi 9/27** (9/27/11 Editor of Space.com, http://www.space.com/13095-solar-storms-satellites-risk-geomagnetic-superstorms.html, “New Forecast: Sun's 'Superstorms' Could Doom Satellites”, nkj)

Magnetic storms set off by the sun could pose a bigger threat than thought to weather, communication, military and other satellites close to Earth, with a potentially devastating economic impact, scientists suggest.

In the new study, researchers found that solar radiation can energize a belt of high-energy particles that surrounds Earth more dramatically than previously believed.

The study focused on the possible effects of a particularly strong magnetic storm on the Van Allen radiation belts, the dangerous rings of high-energy particles that girdle the Earth. The belts are split into two distinct zones. The outer belt, which is made up of electrons, reaches from about 15,800 to 31,600 miles (25,500 to 51,000 kilometers) above the surface, while the inner belt, which consists of a mix of electrons and protons, reaches from about 4,000 to 8,000 miles (6,400 to 12,800 km) above. [Stunning Photos of Solar Flares & Sun Storms]

Scientists had known the outer belt could become far more intense during geomagnetic storms caused by high-energy particles spewed by the sun, such as the storm that supercharged Earth's northern lights display Monday night (Sept. 26). However, they have long thought such storms do not affect the inner belt.

Now computer simulations suggest that during a "superstorm" — which has occurred in the past and is likely to recur in the future ? the electrons in the inner belt, too, could become energized. Near-Earth radiation could then remain **dramatically more intense for several years afterward.**

**"The increase in radiation in the inner zone may last for up to a decade and continue damaging satellites for years after a very strong storm,"** study lead author Yuri Shprits, a space physicist at the University of California, Los Angeles, told SPACE.com.

This radiation would damage satellites in that zone and potentially cut their lifetimes by five-sixths or more. [Related: Space Radiation to Rise for Astronauts, Airline Passengers]

"It would not destroy all satellites at once," Shprits said. "However, at least according to our calculations, a very strong storm can increase the radiation dose in the inner zone by a factor of 10, and within a few years we may lose a significant portion of the satellites that traverse the inner zone."

In terms of new strategies that might be needed to protect satellite systems, "it's hard to say," Shprits said. "First of all, we need to estimate risks and estimate cost. If cost is too high, we may want to accept the risks and start getting ready to replenish the fleet in the case of such event."

"There are a number of rather expensive strategies that can be used to mitigate the risk, including redundancy in electronics and increased shielding," he added. **"Zero risk means infinite cost."**

Two missions to study the radiation belts are planned for 2012, Shprits noted: NASA's Radiation Belt Storm Probe will observe radiation belts in the equatorial plane, while Moscow State University's LOMONOSOV mission, with UCLA-built instruments on board, will observe radiation belts at low altitudes.

The scientists detailed their findings online in the Aug. 25 issue of the journal Space Weather.

## 2nc

### research link

#### Agenda-driven research backfires—leads to politicization

**Montgomery, 8** – Vice President of CRA International, directs CRA's Environment Practice. He is an internationally recognized authority in energy and environmental policy and regulation (W. David, “Developing Clean, Innovative Commercial Energy: Will Proposed Federal Subsidies Hurt or Help,” George C. Marshall Institute, 6/13, <http://www.marshall.org/pdf/materials/607.pdf>

This leads me to my conclusion, which is that we need to think about designing direct incentives at the R&D stage. There is really no reason to think about the government doing anything other than putting a price on carbon in order to get those technologies deployed in the market. So let’s take a look at those two ends of the problem. First, let’s talk about deployment and try to distinguish deployment from demonstration. I would argue that **a direct** **government role in** promoting **deployment** of technology for climate purposes is, first, unnecessary, because private investors can expect to capture the rewards of that innovation. The only thing the government needs to do is deal with the primary issue of climate policy, which is putting a price on CO2 emissions, rewarding technologies that have low CO2 emissions, and penalizing technologies that have high CO2 emissions. Then the market can sort it out. What I think we find in policymaking, and I think we have found this for decades, is that funding of large-scale commercial demonstrations really just means the government is picking technology winners and deciding to put billions of dollars into promoting one of them. It is an expedient based on an unwillingness to put in place a broader energy policy that actually deals with the policy problem. So it is working at the end of pushing on the technologies, “pushing on the rope,” if you like, rather than creating a policy which broadly changes the market environment for these policies. The other part, and we can see this very clearly in the analysis we have done of the recent energy bills, is that picking technologies just increases the cost of reducing CO2 emissions. For example, for the electric power sector, we could think about putting a cap on CO2 emissions from electricity generation. It would be better if it is broader, but we could think about doing that. And we could also have policies that require a renewable portfolio standard, for example, we could say that utilities must use a certain amount of what is classified as renewable, basically wind, solar, and biomass. Well, the two most cost-effective ways that are available on a broad scale for reducing greenhouse gas emissions are nuclear power and coal with carbon capture and sequestration, both of which are pushed out of the market by a renewable portfolio standard. Picking those renewable technologies and promoting them separately actually increases the cost of meeting that kind of cap for the utility sector overall.¶ It is this funding of large-scale demonstration projects, with the notion of producing a commercial technology and getting it into the market, where government failures have been most prominent. Everybody should read Linda Cohen and Roger Noll’s book on the pork barrel politics of energy R&D. This is a case where government is necessarily picking winners. The large scale of these projects attracts earmarking and makes the choice of projects something that goes to whomever has the most powerful political backers, rather than anything that has to do with the economics or the science and engineering of developing new technologies. I don’t think I need to go on with this much longer because there was an excellent example in the last couple of weeks. Secretary of Energy Bodman announced that the Department of Energy was going to cancel funding of a huge FutureGen demonstration project for carbon capture and sequestration. His reason was that the costs had been going up, and the private sector participants were unwilling to pay any of those increases in cost. He decided that this was good evidence that the project should not be continued. And he cancelled it. I thought this was a history-making event. This is the first time in my thirty-five years in Washington that a government agency voluntarily canceled a large-scale project, after it was underway, because they found things out that made it proper to cancel it. What happened? Three days later the senator for the state in which that project was going to be built put language into an authorization bill telling DOE it could not cancel the project. I think we have no hope of avoiding potential damages from climate change unless Congress stops doing this. I would say this is the second biggest obstacle to dealing with climate risks. The first biggest obstacle is that China and India, who are the world’s largest contributors of greenhouse gas emissions, are not willing to do anything at this point to reduce their emissions. The second biggest problem is that we need an effective R&D policy that creates new technologies, and if Congress continues with what they have done in the past and what they did with FutureGen, there is no hope of getting it. That is a task for all of you to go back and get to work on! Getting technology off the shelf is the right role for carbon pricing. Putting a price on CO2 emissions sends the right signal to private investors to build a demonstration plant, to put their money into figuring out how to get integrated gasification with combined cycle to work with coal, to do it more cheaply with more availability. There are a lot of things the private sector needs to do. The problem is that unless we have R&D first, the price is going to be much too high because we need the breakthroughs and the basis for new technology for the private sector to work on. The other part of it is that the price that it is going to take to deploy a successful technology is far lower than what it takes to motivate the R&D that will create it. That is the real policy problem that I see investors facing and this gets back to the credibility issue. If a massive amount of private investment by the electric power sector in carbon capture and sequestration or a massive investment by the biotechnology sector produced a biofuel that was not an environmental disaster and could be deployed widely and produce cheaply and efficiently, that would mean government wouldn’t need to put quite so high a price on carbon any more. It would be relatively cheap to achieve carbon goals, and therefore, all of the incentives for government would put a price on carbon that is sufficient to lead that technology to be deployed and will not provide any profits for those who had originally developed it. So we get back to the point that it is really necessary for the government to provide incentives at the R&D stage. And there I would say we clearly need both direct funding for basic science and credible incentives for private sector R&D. I suspect that the scale that we are looking at here is far more than doubling current DOE funding for technology in order to create the kind of breakthroughs that it takes to achieve net zero carbon emissions.

#### Undermines science credibility—especially in the context of funding earmarks

**Greenberg 01** (Daniel S., Guest Scholar at the Brookings Institution and Journalist and Author, Science, Money, and Politics, pg. 185-188)

The research-related earmarks not only elude congressional examination, but, by definition, they also bypass professional peer review, the system sanctified by scientific tradition as the sine qua non for optimal allocation of research resources. The review process varies among federal research agencies and private foundations. But basically it is a blue-ribbon jury system in which panels of researchers evaluate and rank research proposals. Aimed at achieving objective assessment by disinterested experts, peer review is often assailed as intrinsically biased against novelty and innovation because, the critics contend, it relies on people who constitute the status quo of science. Paraphrasing Churchill on democracy, some of the strongest defenders of peer review limply respond that it is the worst possible system, except for all others. As might be expected, the “haves” of federal academic research funding strongly favor peer review and are generally opposed to earmarks. Lesser institutions, however, angrily complain that peer review inevitably assures that the rich get richer while others are excluded. Inequity is inherent to the system, they insist, and justifies alternative means of getting at the money—specifically, earmarking. Despite repeated denunciations as unclean, earmarked money is irresistable for many universities, including some that also compete successfully for peer-reviewed funds. Though the trend is consistently upward, we should keep in mind that in any year, at least so far, the earmarks are a small portion of the many billions, depending on what’s counted, appropriated for academic research via aboveboard routes. In 2000, the official count for all academic research appropriations was over $15 billion, of which alleged earmarks constituted a small share. But the earmarks going to the universities are nonetheless substantial in the scarcity economy of research funding. The earmark process is galling to institutions that feel penalized for complying with the rules, even if the rules favor their success. ¶ The practice outrages the officials of the established system to the point of evoking extravagant recriminations—especially from program managers in federal agencies. When their budgets are hijacked to finance earmarks, decision-making authority over research projects passes to the political budget raiders on Capitol Hill. The right order of things is upset, with far-reaching undesireable consequences, they contend. In 1994, Martha Krebs, the director of energy research at the Department of Energy, told a congressional hearing that earmarks “may also inadvertently discourage young scientists from pursuing research careers because they believe it is not an honest or open process.” This may be so, but as with many provocative speculations and assertions in the politics of science, supportive evidence is lacking.

### ppl uniqueness

#### Vote neg on presumption

Mead, 1-27-13

[Derek, “South Korea Is Spending a Cool Billion on Fusion Power,” http://motherboard.vice.com/blog/south-korea-is-spending-a-cool-billion-on-fusion-power#ixzz2KW8bzWGd]

Energy rules everything around us: It's at the core of the interplay between our economy and environment, and is a major influencer in geopolitics. That's why so many dream of clean nuclear power, whether it be via a thorium-fueled molten salt reactor or cold fusion. Fairly limitless, relatively cheap energy would fundamentally change the way our world works. South **Korea** has **is the latest country to bet on** **fusion** reactors, **joining up** with the US Energy Department's **Princeton** Plasma Physics Laboratory **to drop a cool billion** on fusion research. The goal is to get a demonstration plant up and running by the 2030s. According to a Nature report you ought to read: South Korea is already developing the Korea Superconducting Tokamak Advanced Research (K-STAR) project and contributing to ITER, the €15-billion (US$20-billion) experimental reactor being built in Cadarache, France, under the auspices of an international collaboration. K-DEMO is intended to be the next step toward commercial reactors and would be the first plant to actually contribute power to an electric grid. “It is a very smart strategy to take advantage of the experience gained in constructing ITER and to immediately proceed to construct a fusion power plant like K-DEMO,” says Stephen Dean, president of Fusion Power Associates, an advocacy group in Gaithersburg, Maryland. K-DEMO will serve as prototype for the development of commercial fusion reactors. According to the PPPL, it will generate “some 1 billion watts of power for several weeks on end”, a much greater output than ITER's goal of producing 500 million watts for 500 seconds by the late 2020s. As noted in Nature, it's a sign of serious commitment from South Korea to put the won down on such a big project during the middle of the financial crisis, but the potential payoff is huge. Of course, the challenge is still massive. Creating a fusion reaction and sustaining it long enough to gain net-positive energy, and then putting that energy to use, is a monumental task, and ITER has suffered numerous delays, although new management has helped.

### terrorism

**No lashout**

**Jenkins-Smith 4** – professor of government at Texas A&M (Hank, “U.S. Public Response to Terrorism: Fault Lines or Bedrock,” http://www.spp.gatech.edu/current-students/exams/Fall-2004\_reviewmanuscript.pdf)

Our final contrasting set of expectations relate to the degree to which the public will support or demand retribution against terrorists and supporting states. Here our data show that support for using conventional U.S. military force to retaliate against terrorists initially averaged above midscale, but did not reach a high level of emotional demand for military action. Initial support declined significantly across all demographic and belief categories by the time of our survey in 2002. Furthermore, panelists both in 2001 and 2002 preferred that high levels of certainty about culpability (above 8.5 on a scale from zero to ten) be established before taking military action. Again, we find the weight of evidence supporting revisionist expectations of public opinion.

Overall, these results are inconsistent with the contention that highly charged events will result in volatile and unstructured responses among mass publics that prove problematic for policy processes. The initial response to the terrorist strikes, in the immediate aftermath of the event, demonstrated a broad and consistent shift in public assessments toward a greater perceived threat from terrorism, and greater willingness to support policies to reduce that threat. But even in the highly charged context of such a serious attack on the American homeland, the overall public response was quite measured. On average, the public showed very little propensity to undermine speech protections, and initial willing-ness to engage in military retaliation moderated significantly over the following year.

**Early detection checks**

**TMC 2009** – global online communications and news research cite. 10-22-2009. “Breaking News!! UNDT- Universal Detection Technology to Present Hand-Held Bioterrorism Detection for 2012 London Olympics at the Terrorism & Security 2009 Conference, Endorsed by ACPO TAM and NYPD Intelligence”. http://www.tmcnet.com/usubmit/2009/10/22/4437777.htm//TS Universal Detection Technology (www.udetection.com)

OTCBB: UNDT), a developer of early-warning monitoring technologies and counter-terrorism training programs to protect people from bioterrorism and other infectious health threats, announced today that it will present its rapid response biodetection kits to the 2012 London Olympics organizers at the 2009 Terrorism & Security Conference, held in London on November 17th and 18th. "The security risks associated with high-profile international events, such as the 2012 London Olympics, cannot be underestimated," said Jacques Tizabi, CEO of Universal Detection Technology. "Bio-weapons should be a particular concern to organizers, because for terrorists, they can be purchased or engineered at relatively low costs, can induce mass casualties and are oftentimes undetected by on-the-ground law enforcement; Universal Detection Technology is prepared to meet the bioterrorism detection needs of the 2012 London Olympics and similar global venues," continued Tizabi.  
UNDT was invited by the conference to present to the 2012 London Olympics organizers and security directors of international "high-value, soft-targets," including airports, sports stadiums, national infrastructure, shopping centers, prestigious hotels and mass transport hubs to and from the United Kingdom and Europe.  
Following the 2009 Terrorism & Security Conference in London, Universal Detection Technology will also be presenting its bioterrorism detection equipment at the upcoming 2009 Milipol Conference in Paris, November 17-20.  
Universal Detection Technology's 5-agent biodetection kits, recently certified by United States Department of Homeland Security as an "Approved Product for Homeland Security" under the Support Anti-terrorism by Fostering Effective Technologies (SAFETY) Act of 2002, are the industry's only hand-held assay designed to detect and identify up to five separate threats using one sample in a single, easy-to-use device. The kits equip first responders with an effective tool for the rapid onsite detection of up to five biological warfare agents: anthrax, ricin, botulinum toxin, Y. pestis (plague) and Staphylococcal Enterotoxin B (SEB). Detection time is under three minutes.

#### And, disregard all of their evidence, the entire bioterror industry is subsidized by fear-mongerers

**Reynolds, Former economic director at Hudson 5—**Senior Fellow at the Cato Institute. Formerly Director of Economic Research at the Hudson Institute. AB in economics from UCLA. (Alan, The Fear Industry, 6 May 2007, http://www.cato.org/pub\_display.php?pub\_id=8234, AMiles)

Neither gentleman has been at all apologetic about his role in grossly exaggerating the likely risks of biological terrorism. Mr. Wolfowitz once claimed Iraq had enough ricin to kill a million people, enough botulism to kill tens of millions and enough anthrax "to kill hundreds of millions." Terrorists throughout the world have managed to kill only five people with anthrax, one with ricin and zero with botulism or aflatoxin (added to the list by former Secretary of State Colin Powell). This not because terrorists don't want to kill people, but because killing is much easier to accomplish with bombs, guns and crashing airplanes. Even today, however, bureaucrats and politicians still remain easily persuaded to assign a higher priority (and bigger budgets) to extremely unlikely risks than to mundane but palpable threats to health and safety. I wrote a series of columns about the formidable obstacles to effectively delivering biological weapons, often quoting Mr. Wolfowitz or the CIA as examples of extreme gullibility or deception. I revealed many holes in the WMD fable before the Iraq invasion in, "The economics of war," "Hazy WMD definitions" and "The duct tape economy." Those were followed by "Intelligence without brains" in June 2003, "The CIA and WMD" in June 2004, "WMD Doomsday distractions" in April 2005 and "The cost of war in retrospect" in March 2006. Those columns can be found by sifting through archives under my bio at cato.org. The legacy of the 2002 WMD hoax lives on today in "Operation Bioshield" and other federal programs for doling out tax dollars to the multibillion-dollar fear industry. The fear industry begins by hiring lobbyists and subsidizing academics who, in turn, persuade journalists to write scary stories about hypothetical weapons. This science fiction game is not played for fun. It is played for money. It involves what Dale Rose of the University of California at San Francisco described as, "A cottage industry of risk analysts, disaster preparedness experts, psychologists, and others [who] have produced an array of theoretical work and conceptual grids around the issue of low probability, high consequence events." In response to pressure from academic centers whose main mission was to hype bioterrorism (including the infamously erroneous "Dark Winter" scenario of mid-2001), President Bush warned of "the use of the smallpox virus as a weapon of terror" in December 2002. The administration then spent hundreds of millions of dollars on smallpox vaccine for first responders and the military, but both groups (notably, physicians) shunned the risky shots. That was the most costly fiasco of its type since the swine flu vaccination program of 1976, which killed more people than swine flu did. Continuing the tradition, the U.S. government just contracted with Sanofi Pasteur to produce $100 million worth of avian flu vaccine -- of dubious effectiveness against avian flu acquired from birds, much less from any hypothetical pandemic strain that leaps to humans. Whether or not these programs save even one life per $100 million spent is irrelevant. The point is the millions spent. After most federal loot from research grants and vaccine stockpiles has been received, the mission is accomplished and the fear industry moves on to greener pastures. The scare stories about Danger A disappear, replaced with new stories about Danger B, then C and so on. The most reliable cash cow for the fear industry has been the five deaths from inhaling anthrax in October 2001. For those in the business of providing high-cost solutions to minuscule risks, this has been an endless bonanza. A recent news item provides a typical tip for fear investors: "Emergent BioSolutions of Rockville (Md.) said the U.S. government planned to order as many as 22.75 million doses of its anthrax vaccine." The government has spent at least $877 million on anthrax vaccine so far, or $175.4 million per death from anthrax. Sensing that sum may be pressing the limits, the fear industry is busily assembling new threats to scare up some more cash. The Health and Human Services Department reportedly plans to up its spending by more than $100 million on additional anthrax and smallpox vaccines. And it plans to spend more than $100 million to deal with radiation poisoning -- not even on this luxury list until former Russian spy Alexander Litvinenko was assassinated. Compared with anthrax vaccine, $100 million per death sounds cheap, even if he wasn't an American. But they did say "more than" $100 million, didn't they? The plan also "listed as a near-term priority the development of antibiotics for threats such as the plague or tularemia." Sure, why not? There was one unconfirmed case of plague in Texas in 1956. And in the summer of 2000, an outbreak of tularemia from lawn mowing in Martha's Vineyard resulted in one fatality. Whenever you hear the word "bioterrorism" in connection with large sums of federal money, just remember "WMD." Bioterrorism is just a different word for the same old WMD story retold in purely hypothetical terms, without even pretending someone actually has such agents or knows how to kill more than five people with them.

### 2nc at: perm

#### Cross-apply framework

#### The perm is bad:

1. The plan is a bad idea, and if it’s close we’ll win you should be skeptical about including a neoliberal concession

2. Doesn’t test competition, even if it’s compatible in the abstract—here’s an advocate for rejection

**Glover et al 2006** – \*Policy Fellow at the Center for Energy and Environmental Policy, University of Delaware, \*\*Directs the Urban Studies and Wheaton in Chicago programs, selected to the Chicago Council on Global Affairs Emerging Leaders Program for 2011-2013, \*\*\*2007 Nobel Peace Prize winner, Distinguished Professor of Energy & Climate Policy at the University of Delaware, Head of the Center for Energy and Environmental Policy (Leigh Glover, Noah Toly, John Byrne, “Energy as a Social Project: Recovering a Discourse”, in “Transforming Power: Energy, Environment, and Society in Conflict”, p. 1-32, http://www.ceep.udel.edu/energy/publications/2006\_es\_energy\_as\_a\_social\_project.pdf, WEA)

When measured in social and political-economic terms, the current energy¶ **discourse appears impoverished**. Many of its leading voices proclaim great¶ things will issue from the adoption of their strategies (conventional or sustainable), yet inquiry into the social and political-economic interests that¶ power promises of greatness by either camp is mostly absent. In reply, some¶ participants may **petition for a progressive middle ground**, acknowledging¶ that energy regimes are only part of larger institutional formations that organize political and economic power. It is true that the political economy of¶ energy is only a component of systemic power in the modern order, but **it**¶ **hardly follows that pragmatism toward energy policy** and politics **is the reasonable social response**. Advocates of energy strategies associate their contributions with distinct pathways of social development and define the choice¶ of energy strategy as central to the types of future(s) that can unfold. Therefore, **acceptance of appeals for pragmatist assessments of energy proposals**,¶ **that hardly envision incremental consequences**, would **indulge a form of self-deception rather than represent a serious discursive position**.¶ An extensive social analysis of energy regimes of the type that Mumford¶ (1934; 1966; 1970), Nye (1999), and others have envisioned is overdue. The¶ preceding examinations of the two strategies potentiate conclusions about¶ both the governance ideology and the political economy of modernist energy transitions that, by design, leave modernism undisturbed (except, perhaps, for its environmental performance).¶ The Technique of Modern Energy Governance¶ While moderns usually declare strong preferences for democratic governance, their preoccupation with technique and efficiency may preclude the¶ achievement of such ambitions, or require changes in the meaning of democracy that are so extensive as to raise doubts about its coherence. A veneration¶ of technical monuments typifies both conventional and sustainable energy¶ strategies and reflects a shared belief in technological advance as commensurate with, and even a cause of, contemporary social progress. The modern¶ proclivity to search for human destiny in the march of scientific discovery¶ has led some to warn of a technological politics (Ellul, 1997a, 1997b, 1997c;¶ Winner, 1977, 1986) in which social values are sublimated by the objective¶ norms of technical success (e.g., the celebration of efficiency in all things). In¶ this politics, technology and its use become the end of society and members¶ have the responsibility, as rational beings, to learn from the technical milieu¶ what should be valorized. An encroaching autonomy of technique (Ellul,¶ 1964: 133 – 146) replaces critical thinking about modern life with an awed¶ sense and acceptance of its inevitable reality.¶ From dreams of endless energy provided by Green Fossil Fuels and Giant¶ Power, to the utopian promises of Big Wind and Small-Is-Beautiful Solar,¶ technical excellence powers modernist energy transitions. Refinement of technical accomplishments and/or technological revolutions are conceived to¶ drive social transformation, despite the unending inequality that has accompanied two centuries of modern energy’s social project. As one observer has¶ noted (Roszak, 1972: 479), the “great paradox of the technological mystique¶ [is] its remarkable ability to grow strong by chronic failure. While the treachery of our technology may provide many occasions for disenchantment, the¶ sum total of failures has the effect of increasing dependence on technical¶ expertise.” **Even the vanguard of a sustainable** energy **transition seems swayed**¶ **by** the magnetism of **technical acumen, leading to the result that enthusiast**¶ **and critic alike embrace a strain of technological politics**.¶ Necessarily, the elevation of technique in both strategies to authoritative¶ status vests political power in experts most familiar with energy technologies¶ and systems. Such a governance structure derives from the democratic-authoritarian bargain described by Mumford (1964). Governance “by the people”¶ consists of authorizing qualified experts to assist political leaders in finding¶ the efficient, modern solution. In the narratives of both conventional and¶ sustainable energy, citizens are empowered to consume the products of the¶ energy regime while largely divesting themselves of authority to govern its¶ operations.¶ Indeed, systems of the sort envisioned by advocates of conventional and¶ sustainable strategies are not governable in a democratic manner. Mumford¶ suggests (1964: 1) that the classical idea of democracy includes “a group of¶ related ideas and practices... [including] communal self-government... unimpeded access to the common store of knowledge, protection against arbitrary external controls, and a sense of moral responsibility for behavior that¶ affects the whole community.” Modern conventional and sustainable energy¶ strategies invest in external controls, authorize abstract, depersonalized interactions of suppliers and demanders, and celebrate economic growth and¶ technical excellence without end. Their social consequences are relegated in¶ both paradigms to the status of problems-to-be-solved, rather than being¶ recognized as the **emblems of modernist politics**. As a result, modernist democratic practice becomes imbued with an authoritarian quality, which “deliberately eliminates the whole human personality, ignores the historic process,¶ [and] overplays the role of abstract intelligence, and makes control over¶ physical nature, ultimately control over man himself, the chief purpose of¶ existence” (Mumford, 1964: 5). Meaningful democratic governance is willingly sacrificed for an energy transition that is regarded as scientifically¶ and technologically unassailable.¶ **Triumphant Energy Capitalism**¶Where the power to govern is not vested in experts, it is given over to¶ market forces in both the conventional and sustainable energy programs. Just¶ as the transitions envisioned in the two paradigms are alike in their technical¶ preoccupations and governance ideologies, they are also alike in their political-economic commitments. Specifically, modernist energy transitions operate in, and evolve from, a capitalist political economy. Huber and Mills (2005)¶ are convinced that conventional techno-fixes will expand productivity and¶ increase prosperity to levels that will erase the current distortions of inequality. Expectably, conventional energy’s aspirations present little threat to the¶ current energy political economy; indeed, the aim is to reinforce and deepen¶ the current infrastructure in order to minimize costs and sustain economic¶ growth. The existing alliance of government and business interests is judged¶ to have produced social success and, with a few environmental correctives¶ that amount to the modernization of ecosystem performance, the conventional energy project fervently anticipates an intact energy capitalism that¶ willingly invests in its own perpetuation.¶ While advocates of sustainable energy openly doubt the viability of the¶ conventional program and emphasize its social and environmental failings,¶ there is little indication that capitalist organization of the energy system is¶ faulted or would be significantly changed with the ascendance of a renewables-based regime. The modern cornucopia will be powered by the profits of a¶ redirected market economy that diffuses technologies whose energy sources¶ are available to all and are found everywhere. The sustainable energy project,¶ according to its architects, aims to harness nature’s ‘services’ with technologies and distributed generation designs that can sustain the same impulses of¶ growth and consumption that underpin the social project of conventional¶ energy. Neither its corporate character, nor the class interests that propel¶ capitalism’s advance, are seriously questioned. The only glaring difference¶ with the conventional energy regime is the effort to modernize social relations with nature.¶ In sum, conventional and sustainable energy strategies are mostly quiet¶ about matters of concentration of wealth and privilege that are the legacy of¶ energy capitalism, although both are vocal about support for changes consistent with middle class values and lifestyles. We are left to wonder why such¶ steadfast reluctance exists to engaging problems of political economy. Does¶ it stem from a lack of understanding? Is it reflective of a measure of satisfaction with the existing order? Or is there a fear that critical inquiry might¶ jeopardize strategic victories or diminish the central role of ‘energy’ in the¶ movement’s quest?¶ **Transition without Change: A Failing Discourse**¶After more than thirty years of contested discourse, the major ‘energy¶ futures’ under consideration appear committed to the prevailing systems of¶ governance and political economy that animate late modernity. The new¶ technologies—conventional or sustainable—that will govern the energy sector¶ and accumulate capital might be described as centaurian technics¶ 21¶ in which¶ the crude efficiency of the fossil energy era is bestowed a new sheen by high¶ technologies and modernized ecosystems: capitalism without smoky cities,¶ contaminated industrial landscapes, or an excessively carbonized atmosphere.¶ Emerging energy solutions are poised to realize a postmodern transition¶ (Roosevelt, 2002), but their shared commitment to capitalist political economy¶ and the democratic-authoritarian bargain lend credence to Jameson’s assessment (1991) of postmodernism as the “cultural logic of late capitalism.”¶ Differences in ecological commitments between conventional and sustainable energy strategies still demarcate a battleground that, we agree, is¶ important—even fundamental. But so also are the common aspirations of the¶ two camps. Each sublimates social considerations in favor of a politics of¶ more-is-better, and each regards the advance of energy capitalism with a¶ sense of inevitability and triumph. Conventional and sustainable energy¶ visions equally presume that a social order governed by a ‘democratic’ ideal¶ of cornucopia, marked by economic plenty, and delivered by technological¶ marvels will eventually lance the wounds of poverty and inequality and start¶ the healing process. Consequently, silence on questions of governance and¶ social justice is studiously observed by both proposals. Likewise, both agree¶ to, or demur on, the question of capitalism’s sustainability.¶ 22¶ Nothing is said¶ on these questions because, apparently, nothing needs to be.¶ If the above assessment of the contemporary energy discourse is correct,¶ then the enterprise is not at a crossroad; rather, it has reached a point of¶ acquiescence to things as they are. Building an **inquiry into energy as a social**¶ **project will require** the recovery of a **critical voice that can interrogate**, rather¶ than concede, **the discourse’s current moorings in technological politics and**¶ capitalist **political economy**. A fertile direction in this regard is to investigate¶ an energy-society order in which **energy systems evolve in response to social**¶ **values** and goals, **and not simply according** to the dictates of technique,¶ **prices**, or capital. Initial interest in renewable energy by the sustainability¶ camp no doubt emanated, at least in part, from the fact that its fuel price is¶ non-existent and that capitalization of systems to collect renewable sources¶ need not involve the extravagant, convoluted corporate forms that manage¶ the conventional energy regime. But forgotten, or misunderstood, in the attraction of renewable energy have been the social origins of such emergent¶ possibilities. Communities exist today who address energy needs outside the¶ global marketplace: they are often rural in character and organize energy¶ services that are immune to oil price spikes and do not require water heated to¶ between 550º and 900º Fahrenheit (300º and 500º Celsius) (the typical temperatures in nuclear reactors). No energy bills are sent or paid and governance¶ of the serving infrastructure is based on local (rather than distantly developed¶ professional) knowledge. Needless to say, sustainability is embodied in the¶ life-world of these communities, unlike the modern strategy that hopes to¶ design sustainability into its technology and economics so as not to seriously change its otherwise unsustainable way of life.¶ Predictably, modern society will underscore its wealth and technical acumen as evidence of its superiority over alternatives. But smugness cannot¶ overcome the fact that energy-society relations are evident in which the bribe¶ of democratic-authoritarianism and the unsustainability of energy capitalism¶ are successfully declined. In 1928, Mahatma Gandhi (cited in Gandhi, 1965:¶ 52) explained why **the democratic-authoritarian bargain** and Western capitalism **should be rejected:**¶God forbid that India should ever take to industrialization after the manner of the¶ West. The economic imperialism of a single tiny island kingdom (England) is today¶ keeping the world in chains. If an entire nation of 300 million took to similar economic exploitation, **it would strip the world bare** like locusts. Unless the capitalists of¶ India help to avert that tragedy by becoming trustees of the welfare of the masses and¶ by devoting their talents not to amassing wealth for themselves but to the service of¶ the masses in an altruistic spirit, they will end either by destroying the masses or¶ being destroyed by them.¶ As Gandhi’s remark reveals, social inequality resides not in access to electric¶ light and other accoutrements of modernity, but in a world order that places¶ efficiency and wealth above life-affirming ways of life. This is our social¶ problem, our energy problem, our ecological problem, and, generally, our¶ political-economic problem.¶ The challenge of a social inquiry into energy-society relations awaits.

### anti politics

#### Cross-apply framework—discussions at the academic level are more productive—creates better a relationship to policy which is more important than trivial simulation—if this approach is better we should win

**Bilgin 5** Assistant Prof of International Relations at Bilkent University, REGIONAL SECURITY IN THE MIDDLE EAST A CRITICAL PERSPECTIVE, p54-

The point is that a broader security agenda requires students of security to look at agents other than the state, such as social movements, nongovernmental organisations (NGOs) and individuals, instead of restricting their analysis to the state’s agency. This is essential not only because states are not always able (or willing) to fulfil their side of the bargain in providing for their citizens’ security, as noted above, but also because there already are agents other than states – be it social movements or intellectuals – who are striving to provide for the differing needs of peoples (themselves and others). This is not meant to deny the salience of the roles states play in the realm of security; on the contrary, they remain significant actors with crucial roles to play.25 Rather, the argument is that the state’s dominant position as an actor well endowed to provide (certain dimensions of) security does not justify privileging its agency. Furthermore, broadening the security agenda without attempting a reconceptualisation of agency would result in falling back upon the agency of the state in meeting non-military threats. The problem with resorting to the agency of the state in meeting non-military threats is that states may not be the most suitable actors to cope with them. In other words, the state being the most qualified actor in coping with some kinds of threats does not necessarily mean it is competent (or willing) enough to cope with all. This is why students of critical approaches aim to re-conceptualise agency and practice.¶ Critical approaches view non-state actors, in particular, social movements and intellectuals, as potential agents for change (Cox 1981, 1999; Walker 1990b; Hoffman 1993; Wyn Jones 1995a, 1999). This echoes feminist approaches that have emphasised the role of women’s agency and maintained that ‘women must act in the provision of their own security’ if they are to make a change in a world where their security needs and concerns are marginalised (Tickner 1997; also see Sylvester 1994). This is not necessarily wishful thinking on the part of a few academics; on the contrary, practice indicates that peoples (as individuals and social groups) have taken certain aspects of their own and others’ security into their own hands (Marsh 1995: 130–5; Turner 1998). Three successful examples from the Cold War era – the Nestlé boycott, the anti-apartheid campaign for South Africa and the campaign against nuclear missile deployments in Europe – are often viewed as having inspired the social movements of the post-Cold War era (Lopez et al. 1997: 230–1; Marsh 1995). Christine Sylvester (1994) has also pointed to the examples of the Greenham Common Peace Camp in Britain (1980–89) and women’s producer cooperatives in Harare, Zimbabwe (1988–90) to show how women have intervened to enhance their own and others’ security. These are excellent examples of how a broader conception of security needs to be coupled with a broader conception of agency.¶ It should be noted here that the call of critical approaches for looking at the agency of non-state actors should not be viewed as allocating tasks to preconceived agents. Rather, critical approaches aim to empower nonstate actors (who may or may not be aware of their own potential to make a change) to constitute themselves as agents of security to meet this broadened agenda. Nor should it be taken to suggest that all non-state actors’ practices are emancipatory.¶ Then, paying more attention to the agency of non-state actors will enable students of security to see how, in the absence of interest at the governmental level (as is the case with the Middle East), non-state actors could imagine, create and nurture community-building projects and could help in getting state-level actors interested in the formation of a security community. It should, however, be noted that not all non-state actors are community-minded – just as not all governments are sceptical of the virtues of community building. Indeed, looking at the agency of nonstate actors is also useful because it enables one to see how non-state actors could stall community-building projects.¶ In the Middle East, women’s movements and networks have been cooperating across borders from the beginning of the Intifada onwards. Women’s agency, however, is often left unnoticed, because, as Simona Sharoni (1996) has argued, the eyes of security analysts are often focused on the state as the primary security agent. However, the Intifada was marked by Palestinian and Israeli-Jewish women’s adoption of non-zerosum, non-military practices that questioned and challenged the boundaries of their political communities as they dared to explore new forms of political communities (Mikhail-Ashrawi 1995; Sharoni 1995). Such activities included organising a conference entitled ‘Give Peace a Chance – Women Speak Out’ in Brussels in May 1989. The first of its kind, the conference brought together about 50 Israeli and Palestinian women from the West Bank and Gaza Strip together with PLO representatives to discuss the Israeli–Palestinian conflict. The follow-up event took place in Jerusalem in December 1989 where representatives of the Palestinian Women’s Working Committees and the Israeli Women and Peace Coalition organised a women’s day for peace which, Sharoni noted, ‘culminated in a march of 6,000 women from West to East Jerusalem under the banner “Women Go For Peace”’ (Sharoni 1996: 107). Aside from such events that were designed to alert public opinion of the unacceptability of the Israel/Palestine impasse as well as finding alternative ways of peacemaking, women also undertook direct action to alleviate the condition of Palestinians whose predicament had been worsening since the beginning of the Intifada (Mikhail-Ashrawi 1995). In this process, they were aided by their Western European counterparts who provided financial, institutional as well as moral support. In sum, women’s agency helped make the Intifada possible on the part of the Palestinian women, whilst their Israeli- Jewish counterparts helped enhance its impact by way of questioning the moral boundaries of the Israeli state.¶ The Intifada is also exemplary of how non-state actors could initiate processes of resistance that might later be taken up by policy-makers. The Intifada began in 1987 as a spontaneous grassroots reaction to the Israeli occupation and took the PLO leadership (along with others) by surprise.¶ It was only some weeks into the Intifada that the PLO leadership embraced it and put its material resources into furthering the cause, which was making occupation as difficult as possible for the Israeli government. Although not much came out of the Intifada in terms of an agree- ment with Israel on issues of concern for the people living in the occupied territories, the process generated a momentum that culminated in 1988 with the PLO’s denouncement of terrorism. The change in the PLO’s policies, in turn, enabled the 1993 Oslo Accords, which was also initiated by non-state actors, in this case intellectuals (Sharoni 1996). The point here is that it has been a combination of top-down and bottom-up politics that has been at the heart of political change, be it the 1989 revolutions in Eastern Europe, or Intifada in Israel/Palestine.¶ Emphasising the roles some non-state actors, notably women’s networks, have played as agents of security is not to suggest that all non-state agents’ practices are non-zero-sum and/or non-violent. For instance, there are the cases of Islamist movements such as FIS (the Islamic Salvation Front) in Algeria and Hamas in the Occupied Territories that have resorted, over the years, to violent practices as a part of their strategies that were designed to capture the state mechanism. However, although they may constitute threats to security in the Middle East in view of their violent practices, what needs to be remembered is that both FIS and Hamas function as providers for security for some peoples in the Middle East – those who are often neglected by their own states (Esposito 1995: 162–83). In other words, some Islamist movements do not only offer a sense of identity, but also propose alternative practices and provide tangible economic, social and moral support to their members. However, the treatment women receive under the mastery of such Islamist movements serves to remind us that there clearly are problems involved in an unthinking reliance on non-governmental actors as agents for peace and security or an uncritical adoption of their agendas.¶ Middle Eastern history is replete with examples of non-state actors resorting to violence and/or adopting zero-sum practices in the attempt to capture state power. In fact, it is often such violent practices of nonstate actors (that is, terrorism or assassination of political leaders) that are mentioned in security analyses. Nevertheless, the fact that not all non-state actors are fit to take up the role of serving as agents of emancipatory change should not lead one to downplay the significant work some have done in the past, and could do in the future. After all, not all states serve as providers of security; yet Security Studies continues to rely on their agency.¶ Then, in order to be able to fulfil the role allocated to them by critical approaches, non-state actors should be encouraged to move away from traditional forms of resistance that are based on exclusionist identities, that solely aim to capture state power or that adopt zero-sum thinking and practices. Arguably, this is a task for intellectuals to fulfil. This is not to suggest that intellectuals should direct or instruct non-state actors. As Wyn Jones (1999: 162) has noted, the relationship between intellectuals and social movements is based on reciprocity. The 1980s’ peace movements, for instance, are good examples of intellectuals getting involved with social movements in bringing about change – in this case, the end of the Cold War (Galtung 1995; Kaldor 1997). The relationship between intellectuals and peace movements in Europe was a mutually interactive one in that the intellectuals encouraged and led whilst drawing strength from these movements.¶ Emphasising the mutually interactive relationship between intellectuals and social movements should not be taken to suggest that to make a change, intellectuals should get directly involved in political action. They could also intervene to provide a critique of the existing situation, what future outcomes may result if necessary action is not taken at present, and by pointing to potential for change immanent in world politics. Students of security could help create the political space that would enable the emergence of a Gorbachev, by presenting such critique. It should, however, be emphasised that such thinking should be anchored in the potential immanent in world politics. In other words, intellectuals should be informed by the practices of social movements themselves (as was the case in Europe in the 1980s). The hope is that non-state actors such as social movements and intellectuals (who may or may not be aware of their potential to make a change) may constitute themselves as agents when presented with an alternative reading of their situation.¶ Lastly, intellectuals could make a change even if they limit their practices to thinking, writing and self-reflection. During the Cold War very few security analysts were conscious and open about the impact their thinking and writing could make. Richard Wyn Jones cites the example of Edward N. Luttwak as one such exception who admitted that ‘strategy is not a neutral pursuit and its only purpose is to strengthen one’s own side in the contention of nations’ (cited in Wyn Jones 1999: 150). Still, such explicit acknowledgement of the political dimension of strategic thinking was rare during the Cold War. On the contrary, students of International Relations in general and Security Studies in particular have been characterised by limited or no self-reflection as to the potential impact their research could make on the subject of research (Wyn Jones 1999: 148–50).¶ To go back to the argument made above about the role of the intellectual as an agent of security and the mutually constitutive relationship between theory and practice, students of critical approaches to security could function as agents of security by way of reflecting upon the practical implications of their own thinking and writing. Self-reflection becomes crucial when the relationship between theory and practice is conceptualised as one of mutual constitution. State-centric approaches to security do not simply reflect a reality ‘out there’ but help reinforce statism. Although it may be true that the consequences of these scholarly activities are sometimes ‘unintended’, there nevertheless should be a sense of selfreflection on the part of scholars upon the potential consequences of their research and teaching. The point here is that critical approaches that show an awareness of the socially constructed character of ‘reality’ need not stop short of reflecting upon the constitutive relationship between theory and practice when they themselves are theorising about security. Otherwise, they run the risk of constituting ‘threats to the future’ (Kubálková 1998: 193–201).

### 2nc framework

#### We’ll impact turn their focus on discrete policy responses—the focus should be on which method of deliberation is best to analyze problems—you don’t have the power to implement either side’s strategy, but deeper understanding is the only way to be an informed decision-maker. Prefer it:

#### 1. They isolate policy from politics, that’s Madra—condensing advocacy to a 4 second plan means you can’t assess who debated better—plan focus trains you not to defend the process by which you make conclusions, which turns their offense

**Gunder et al**, Aukland University senior planning lecturer, **2009**

(Michael, Planning in Ten Words or Less: A Lacanian Entanglement with Spatial Planning pgs 111-2)

The hegemonic network, or bloc, **initially shapes the debates** and draws on¶ appropriate policies of desired success, such as the needs of bohemians, knowledge¶ clusters, or talented knowledge workers, as to what constitutes their desired¶ enjoyment (cobblestones, chrome and cappuccinos at sidewalk cafes) and what¶ is therefore lacking in local competitiveness. In tum, this defines what is blighted¶ and dysfunctional and in need of economic, spatial planning, or other, remedy.¶ Such an argument is predicated on a logic, or more accurately a rhetoric, that a¶ lack of a particular defined type of enjoyment, or competitiveness (for surely they¶ are one and the same) is inherently unhealthy for the aggregate social body. Lack¶ and its resolution are generally presented as technical, rather than political issues.¶ Consequently, technocrats in partnership with their "dominant stakeholders” can¶ ensure the impression of rationally seeking to produce happiness for the many,¶ whilst, of course, achieving their stakeholders' specific interests (Gunder and¶ Hillier 2007a, 469).

The current “post-democratic” milieu facilitates the above through avoidance¶ of **critical** policy **debate challenging** favoured orthodox positions and **policy**¶ **approaches**. Consideration of policy deficiencies, or alternative “solutions”, are¶ eradicated from political debate so that while “token institutions of liberal democracy”:¶ are retained, conflicting positions and arguments are negated (Stavrakakis 2003,¶ 59). Consequently, “the safe names in the field who feed the policy orthodoxy are¶ repeatedly used, or their work drawn upon, by different stakeholders, while more¶ critical voices are **silenced by** their **inability to shape policy debates**' (Boland 2007,¶ 1032). The economic development or spatial planning policy analyst thus continues¶ to partition reality ideologically by deploying only the orthodox "˜successful' or¶ "best practice' economic development or spatial planning responses. This further¶ maintains the dominant, or hegemonic, status quo while providing "a cover and¶ **shield against critical thought** by acting in the manner of a "buffer" isolating the¶ political held from any research that is independent and radical in its conception¶ as in its implications for public policy' (Wacquant 2004, 99). At the same time,¶ adoption of the hegemonic orthodoxy tends to generate similar policy responses¶ for every competing local area or city-region, largely resulting in a zero-sum game¶ (Blair and Kumar 1997).

#### 2. Turns fairness—our framework is grounded in comparative lit—that’s a more predictable basis for education—confining us to policy because the rez limits the aff is arbitrary and self-serving. It’s legitimate—they get 9 minutes to frame the round and should be accountable for the 1ac—these are substantive claims about their intellectual strategy that can be defended

#### 3. Key to deliberation—the alt is a process of investigation which solves better—coming to a debate tournament demanding political action is absurd and displaces agency—our arg is that the framework for analysis is itself a political choice

**Adaman and Madra** **2012** – \*economic professor at Bogazici University in Istanbul, \*\*PhD from UMass-Amherst, economics professor (Fikret and Yahya, Bogazici University, “Understanding Neoliberalism as Economization: The Case of the Ecology”, http://www.econ.boun.edu.tr/content/wp/EC2012\_04.pdf, WEA)

States as agents of economization

Neoliberal reason is therefore not simply about market expansion and the withdrawal of the ¶ welfare state, but more broadly about reconfiguring the state and its functions so that the state ¶ governs its subjects through a filter of economic incentives rather than direct coercion. In ¶ other words, supposed subjects of the neoliberal state are not citizen-subjects with political and ¶ social rights, but rather economic subjects who are supposed to comprehend (hence, ¶ calculative) and respond predictably (hence, calculable) to economic incentives (and ¶ disincentives). There are mainly two ways in which states under the sway of neoliberal reason ¶ aim to manipulate the conduct of their subjects. The first is through markets, or market-like ¶ incentive-compatible institutional mechanisms that economic experts design based on the ¶ behaviorist assumption that economic agents respond predictably to economic (but not ¶ necessarily pecuniary) incentives, to achieve certain discrete objectives. The second involves a ¶ revision of the way the bureaucracy functions. Here, the neoliberal reason functions as an ¶ internal critique of the way bureaucratic dispositifs organize themselves: The typical modus¶ operandi of this critique is to submit the bureaucracy to efficiency audits and subsequently ¶ advocate the subcontracting of various functions of the state to the private sector either by fullblown privatization or by public-private partnerships.

While in the first case citizen-subjects are treated solely as economic beings, in the second case ¶ the state is conceived as an enterprise, i.e., a production unit, an economic agency whose ¶ functions are persistently submitted to various forms of economic auditing, thereby suppressing ¶ all other (social, political, ecological) priorities through a permanent economic criticism. ¶ Subcontracting, public-private partnerships, and privatization are all different mechanisms ¶ through which contemporary governments embrace the discourses and practices of ¶ contemporary multinational corporations. In either case, however, economic **policy decisions** ¶ (whether they involve macroeconomic or microeconomic matters) **are isolated from** public ¶ debate and **deliberation, and** **treated as matters of** technocratic design and **implementation**, ¶ while regulation, to the extent it is warranted, is mostly conducted by experts outside political ¶ life—the so-called independent regulatory agencies. **In the process, democratic participation** in ¶ decision-making **is either limited to an already** highly-**commodified**, spectacularized, mediatized ¶ electoral **politics**, or to the calculus of opinion polls where consumer discontent can be ¶ managed through public relations experts. As a result, a **highly reductionist notion** of economic ¶ efficiency ends up being the only criteria with which to measure the success or failure of such ¶ decisions. Meanwhile, individuals with financial means are free to provide support to those in ¶ need through charity organizations or corporations via their social responsibility channels.

Here, two related caveats should be noted to sharpen the central thrust of the argument¶ proposed in this chapter. First, the separation of the economic sphere from the social-ecological whole is not an ontological given, but rather a political project. By treating social¶ subjectivity solely in economic terms and deliberately trying to insulate policy-making from ¶ popular politics and democratic participation, the neoliberal project of economization makes a ¶ political choice. Since there are no economic decisions without a multitude of complex and ¶ over-determined social consequences, the attempt to block (through economization) all ¶ political modes of dissent, objection and negotiation available (e.g., “voice”) to those who are ¶ affected from the said economic decisions is **itself a political choice**. In short, economization is ¶ itself a political project.

Yet, this drive towards technocratization and economization—which constitutes the second ¶ caveat—does not mean that the dirty and messy distortions of politics are gradually being ¶ removed from policy-making. On the contrary, to the extent that policy making is being ¶ insulated from popular and democratic control, it becomes **exposed to the “distortions” of** a ¶ politics of **rent-seeking and speculation**—ironically, as predicted by the representatives of the ¶ Virginia School. Most public-private partnerships are hammered behind closed doors of a ¶ bureaucracy where states and multinational corporations divide the economic rent among ¶ themselves. The growing concentration of capital at the global scale gives various industries ¶ (armament, chemical, health care, petroleum, etc.—see, e.g., Klein, 2008) enormous amount ¶ of leverage over the governments (especially the developing ones). It is extremely important, ¶ however, to note that this tendency toward rent-seeking is not a perversion of the neoliberal ¶ reason. For much of neoliberal theory (in particular, for the Austrian and the Chicago schools), ¶ private monopolies and other forms of concentration of capital are preferred to government ¶ control and ownership. And furthermore, for some (such as the Virginia and the Chicago ¶ schools), rent-seeking is a natural implication of the “opportunism” of human beings, even ¶ though neoliberal thinkers disagree whether rent-seeking is essentially economically efficient (as ¶ in “capture” theories of the Chicago school imply) or inefficient (as in rent-seeking theories of ¶ the Virginia school imply) (Madra and Adaman, 2010).

This reconfiguration of the way modern states in advanced capitalist social formations govern ¶ the social manifests itself in all domains of public and social policy-making. From education to ¶ health, and employment to insurance, there is an observable **shift from** rights-based policymaking forged through public **deliberation and participation, to policy-making based solely on** ¶ economic viability where policy issues are treated as matters of **technocratic calculation**. In this ¶ regard, as noted above, the **treatment of subjectivity** solely in behaviorist terms of economic ¶ incentives **functions as the key conceptual choice** that makes the technocratization of public ¶ policy possible. Neoliberal thinking and practices certainly have a significant impact on the ¶ ecology. The next section will focus on the different means through which various forms of ¶ neoliberal governmentality propose and actualize the economization of the ecology.

#### 4. Their vocational training model means skills are force multipliers for inequality—prior ethical responsibility is key for educators

**Giroux, cultural studies prof, 5**—Global Television Network Chair in English and Cultural Studies at McMaster University, selected as the Barstow Visiting Scholar for 2003 at Saginaw Valley State University, named as Distinguished Scholar at multiple institutions, Ph.D. (Henry, Fast Capitalism, 1.2 2005, “Cultural Studies in Dark Times: Public Pedagogy and the Challenge of Neoliberalism,” RBatra)

In opposition to these positions, I want to reclaim a tradition in radical educational theory and cultural studies in which pedagogy as a critical practice is central to any viable notion of agency, inclusive democracy, and a broader global public sphere. Pedagogy as both a language of critique and possibility looms large in these critical traditions, not as a technique or a priori set of methods, but as a political and moral practice. As a political practice, pedagogy is viewed as the outgrowth of struggles and illuminates the relationships among power, knowledge, and ideology, while self-consciously, if not self-critically, recognizing the role it plays as a deliberate attempt to influence how and what knowledge and identities are produced within particular sets of social relations. As a moral practice, pedagogy recognizes that what cultural workers, artists, activists, media workers, and others teach cannot be abstracted from what it means to invest in public life, presuppose some notion of the future, or locate oneself in a public discourse. The moral implications of pedagogy also suggest that **our responsibility as intellectuals** for the public cannot be separated from the consequences of the knowledge we produce, the social relations we legitimate, and the ideologies and identities we offer up to students as well as colleagues.¶ **Refusing to decouple politics from pedagogy** means, in part, creating those public spaces for engaging students in robust dialogue, challenging them to think critically about received knowledge and energizing them to recognize their own power as individual and social agents. Pedagogy has a relationship to social change in that it should not only help students frame their sense of understanding, imagination, and knowledge within a wider sense of history, politics, and democracy but should also enable them to recognize that they can do something to alleviate human suffering, as the late Susan Sontag (2003) has suggested. Part of this task necessitates that cultural studies theorists and educators anchor their own work, however diverse, in a radical project that seriously engages the promise of an unrealized democracy against its really existing and greviously incomplete forms. Of crucial importance to such a project is rejecting the assumption that theorists can understand social problems without contesting their appearance in public life. More specifically, any viable cultural politics needs a socially committed notion of injustice if we are to take seriously what it means to fight for the idea of the good society. Zygmunt Bauman (2002) is right in arguing that "if there is no room for the idea of wrong society, there is hardly much chance for the idea of good society to be born, let alone make waves" (p. 170).¶ Cultural studies' theorists need to be more forceful, if not more committed, to linking their overall politics to modes of critique and collective action that address the presupposition that democratic societies are never too just, which means that a democratic society must constantly nurture the possibilities for self-critique, collective agency, and forms of citizenship in which people play a fundamental role in shaping the material relations of power and ideological forces that affect their everyday lives. Within the **ongoing process** of democratization lies the promise of a society that is open to exchange, questioning, and self-criticism, a democracy that is never finished, and one that opposes neoliberal and neoconservative attempts to supplant the concept of an open society with a fundamentalist market-driven or authoritarian one.¶ Cultural studies theorists who work in higher education need to make clear that the issue is not whether higher education has become contaminated by politics, as much as recognizing that **education is already a space of politics**, power, and authority. At the same time, **they can make visible their opposition to** those **approaches** to pedagogy **that reduce it to a set of skills** to enhance one's visibility in the corporate sector or an ideological litmus test that measures one's patriotism or ratings on the rapture index. There is a disquieting refusal in the contemporary academy to raise broader questions about the social, economic, and political forces shaping the very terrain of higher education—particularly unbridled market forces, fundamentalist groups, and racist and sexist forces that unequally value diverse groups within relations of academic power.¶ There is also a general misunderstanding of how teacher authority can be used to create the pedagogical conditions for critical forms of education without necessarily falling into the trap of simply indoctrinating students. For instance, many conservative and liberal educators believe that any notion of critical pedagogy that is self-conscious about its politics and engages students in ways that offer them the possibility for becoming critical—what Lani Guinier (2003:6) calls the need to educate students "to participate in civic life, and to encourage graduates to give back to the community, which through taxes, made their education possible"—leaves students out of the conversation or presupposes too much or simply represents a form of pedagogical tyranny. While such educators believe in practices that open up the possibility of questioning among students, they often refuse to connect the pedagogical conditions that challenge how and what students think at the moment to the next task of prompting them to imagine changing the world around them so as to expand and deepen its democratic possibilities. Teaching students how to argue, draw on their own experiences, or engage in rigorous dialogue says nothing about why they should engage in these actions in the first place. How the culture of argumentation and questioning relates to giving students the tools they need to fight oppressive forms of power, make the world a more meaningful and just place, and develop a sense of social responsibility is missing in contemporary, progressive frameworks of education.¶ While no pedagogical intervention should fall to the level of propaganda, a pedagogy which attempts to empower critical citizens can't and shouldn't try to avoid politics. Pedagogy must address the relationships between politics and agency, knowledge and power, subject positions and values, and learning and social change while always being open to debate, resistance, and a culture of questioning. Liberal educators committed to simply raising questions have no language for linking learning to forms of public minded scholarship that would enable students to consider the important relationship between democratic public life and education, or that would encourage students pedagogically to enter the sphere of the political, enabling them to think about how they might participate in a democracy by taking what they learn into new locations and battlegrounds—a fourth grade classroom, a church, the media, a politician's office, the courts, a campus—or for that matter taking on collaborative projects that address the myriad of problems citizens face on a local, national, and global level in a diminishing democracy.¶ In spite of the professional pretense to neutrality, **academics** in the field of cultural studies **need to do more** pedagogically **than simply teach students how to argue** and question. Students need much more from their educational experience. Democratic societies need educated citizens who are steeped in more than the skills of argumentation. And it is precisely this democratic project that affirms the critical function of education and refuses to narrow its goals and aspirations to methodological considerations. As Amy Gutmann (1999) argues, education is always political because it is connected to the acquisition of agency, the ability to struggle with ongoing relations of power, and is a precondition for creating informed and critical citizens who act on the world. This is not a notion of education tied to the alleged neutrality of the academy or the new conservative call for "intellectual diversity" but to a vision of pedagogy that is directive and interventionist on the side of producing a substantive democratic society. This is what makes critical pedagogy different from training. And it is precisely the failure to connect learning to its democratic functions and goals that provides rationales for pedagogical approaches that strip critical and democratic possibilities from what it means to be educated.¶ Cultural studies theorists and educators would do well to take account of the profound transformations taking place in the public sphere and reclaim pedagogy as a central element of cultural politics. In part, this means once again recognizing, as Pierre Bourdieu (2003) has insisted, that the "power of the dominant order is not just economic, but intellectual—lying in the realm of beliefs"(p. 66), and it is precisely within the domain of ideas that a sense of utopian possibility can be restored to the public realm. Such a task suggests that academics and other cultural workers actively resist the ways in which neoliberalism discourages teachers and students from becoming critical intellectuals by **turning them into human data banks**. Educators and other cultural workers need to build alliances across differences, academic disciplines, and national boundaries as part of broader efforts to develop social movements in defense of the public good and social justice. No small part of this task requires that such groups make visible the connection between the war at home and abroad. If the growing authoritarianism in the U.S. is to be challenged, it is necessary to oppose not only an imperial foreign policy, but also the shameful tax cuts for the rich, the dismantling of the welfare state, the attack on unions, and those policies that sacrifice civil liberties in the cause of national security.¶ Opposing the authoritarian politics of neoliberalism, militarism, and neoconservatism means developing enclaves of resistance in order to stop the incarceration of a generation of young black and brown men and women, the privatization of the commons, the attack on public schools, the increasing corporatization of higher education, the growing militarization of public life, and the use of power based on the assumption that empire abroad entails tyranny and repression at home. But resistance needs to be more than local or rooted in the specificity of particular struggles. Progressives need to develop national and international movements designed to fight the new authoritarianism emerging in the United States and elsewhere. In part, this means revitalizing social movements such as civil rights, labor, environmental, and anti-globalization on the basis of shared values and a moral vision rather than simply issue-based coalitions. This suggests organizing workers, intellectuals, students, youth, and others through a language of critique and possibility in which diverse forms of oppression are addressed through a larger discourse of radical democracy, a discourse that addresses not only what it means to think in terms of a general notion of freedom capable of challenging corporate rule, religious fundamentalism, and the new ideologies of empire, but also what it might mean to link freedom to a shared sense of hope, happiness, community, equality, and social justice. Democracy implies a level of shared beliefs, practices, and a commitment to build a more humane future. Politics in this sense points to a struggle over those social, economic, cultural, and institutional forces that make democracy purposeful for all people. But this fundamentally **requires something prior**—a reclaiming of the social and cultural basis of a critical education that makes the very struggle over democratic politics meaningful and understandable as part of a broader affective, intellectual, and theoretical investment in public life (Couldry 2004).

#### \*\*\*No impact—we still inject a better basis for policy action, even if we have to operate within their framework. Not a voter or else contesting framework is impossible.

#### If we win a question-focus is better than reducing complex problems to their most visible element we win

**Scheer 7 –** Member of the German Parliament, President of the European Association for Renewable Energy EUROSOLAR, Chairman of the World Council for Renewable Energy WCRE

(Hermann, Energy Autonomy: The economic, social, and technological case for renewable energy pg 20, dml)

One of the consequences of starting from false premises is that discussions end up referring only to a section of the total problem, that guidelines for action are developed relating only to that part of the overall picture, and that these guidelines are subordinated to all other problems – so that one loses sight of solutions to other problems. These **patterns of reducing large problems to their smallest components pervade the energy debate**. If this debate is mainly conducted from the viewpoint of climate threats caused by fossil energy emissions, the dangers of nuclear energy and questions about energy security are pushed into the background. If it is mainly conducted from the viewpoint of nuclear dangers, this then confines perceptions about the dangers of energy usage. If it is conducted solely from the viewpoint of depleting oil stocks, this will cloud awareness of potential dangers arising from other fossil energy sources and from nuclear energy.

### no link

#### About ITER also ludicrously biased becuae quoting a worker at Livermore

Silverstein 12 – Ken, Editor of Energy Central and Contributor – Forbes, “The Tantalizing Promise And Peril Of Nuclear Fusion”, Forbes Magazine, 4-15, http://www.forbes.com/sites/kensilverstein/2012/04/15/nuclears-strongest-potential-weapon-fusion/

#### Not specific to any program or the failure of any other program that would solve

Holdren 99 – John P., Former Director and Faculty Chair in the Science, Technology and Public Policy Program – Belfer Center for Science and International Affairs, Harvard University, “Powerful Partnerships: The Federal Role in International Cooperation on Energy Innovation”, President’s Committee of Advisors on Science and Technology Report, June, http://large.stanford.edu/courses/2012/ph241/ferguson2/docs/pcast99\_full.pdf

#### From a lab director at INL and says R&D is needed for a host of other things—they have no ev that current detection fails

McCarthy 3 – Dr. Kathy, Deputy Associate Laboratory Director for Nuclear Science and Technology at the Idaho National Laboratory, Ph.D. in Nuclear Engineering at the University of California , Los Angeles and Chair of the FESAC Panel, “Non-Electric Applications of Fusion”, Final Report to FESAC, July 31, 2003, http://science.energy.gov/~/media/fes/fesac/pdf/2003/Fesac\_final\_non\_elec\_2003.pdf

#### Certainty in tech—optimism—jives with 1nc

**Labban 12** Preempting Possibility: Critical Assessment of the IEA's World Energy Outlook 2010 (e-mail: labban@rci.rutgers.edu) is visiting assistant professor of Geography at Rutgers University, Lucy Stone Hall, 54 Joyce Kilmer Ave, Piscataway, NJ 08854. His research interests include critical theory, political economy, development, energy, petroleum, geopolitics, international law, and finance. He is the author of Space, Oil and Capital (Routledge, 2008).

**Growing uncertainty about energy** markets **following the** crises of the **1970s boosted** long-term **energy forecasting as a planning device** to prepare for an increasingly unpredictable future, on one hand, and **as a techno**-scientific (read: politically neutral and respectable) support for public policies ostensibly aimed at increasing energy security and environmental protection, on the other. Long-range **forecasts, however, have invariably** failed to produce accurate predictions about all aspects of energy markets: primary energy supplies, energy substitutions, the relative shares of different fuels in the energy mix, aggregate and sectoral energy demand, as well as carbon emissions.6 Because they rely on trend projections, forecasts also rely on an assumption that the future is a smooth, gradual extension of the present at a constant rate with no structural changes or major interruptions or aberrations. They also rely on empirical correlation rather than causality and cannot therefore explain underlying forces that drive demand, price, etc. Thus forecasts cannot predict a future that looks very different from the present, let alone explain how possible futures might unfold, which makes them useful only in short-term, business-as-usual projections. Because of such inherent limitations, which prevent forecasts from accurately predicting long-term technical developments, capital markets and investment climates, let alone even more unpredictable processes such as government policies and geopolitical conflict, energy analysts, including the economists at the IEA, have shifted from long-range predictive forecasts towards more normative scenario building in the analysis of long-range energy-related developments. This technical move has a political dimension that is worth pondering in order to shed critical light on the significance of the WEO 2010 scenarios. Scenario analysis has its origins in corporate and military strategic planning.7 It was developed by Herman Kahn at the RAND corporation in the 1950s — to help the US Air Force think about ‘the unthinkable’— and pioneered by Shell in the early 1960s, initially as an internal communications vehicle, to help the company respond more readily to unexpected developments in energy markets that might affect the price of oil. Whereas forecasts predict what is most likely to happen in the future given current trends and projections, scenarios contemplate what is possible if certain choices are made from within a hypothetical range of possibilities which typically includes a reference case describing what would happen if no action is taken to alter the existing state of affairs in any fundamental manner. For this reason, scenarios not only describe hypothetical futures but must also prescribe pathways and roadmaps, policies and actions, and identify ways and means to arrive at a desirable future and avoid undesirable fate. Unlike forecasts, in which the future is determined by projections of current trends, scenarios assume a less deterministic development that allows subjects to make choices and whose agency, not the correlation of empirical facts, determines possible futures. Scenarios are ‘desiring machines', to borrow a term from Deleuze and Guattari (1983): at the same time that they produce the desired future, they also produce the subject and mechanism by which to actualize it. This occasionally operates in the form of blackmail: coercing action in the present by showing the dire consequences of not acting. Despite obvious differences and assertions to the contrary, energy scenarios are one type of predictive forecast which, however, does not treat current circumstances and trends as immutable, therefore allowing itself flexibility in projecting into the future (and an about-face if the future turns out differently) in order to effect change in the present. For one, energy scenarios rely on forecasts about economic growth, population growth, energy demand, production and generation capacities, prices and costs, etc., hence the possibilities they construct are based on a set of predictions. Also, forecasting is often negatively implicit in scenario analysis. The authors of WEO 2010, as of other Outlooks, are adamant that their scenarios are not forecasts. Yet, all three WEO 2010 scenarios are forecasts about the state of the global economy in that they assume continued economic growth. They also assert that no matter what it will look like, the future is certainly not going to look like the present because WEO 2010 predicts that governments will act on their policy promises, no matter how weakly, and in predictable manner: ‘it is certain that energy and climate policies in many — if not most — countries will change, possibly in the way we assume in the New Policies Scenario’ (p. 62). Thus, eliminating the abominable which is also impossible, WEO 2010 scenarios lay out two alternative futures that differ only quantitatively — one desirable, the other ‘realistic’, or likely. The possible becomes what ensues from action according to the scenario's prescriptions or from absolute lack of action and this is effected by actualizing future events and processes that may or may not occur, depending on what course of action governments take or fail to take in the present. Scenarios limit what is possible to what is desirable for their authors, or to its exact opposite, and exclude possibilities that do not fall within this range. At the moment that scenarios produce possibilities they negate the very notion of possibility.

#### Good things from funding, not social prioritization

**Juego, history prof, 9**—Cultural Studies/ History @ Aalborg U, Ph.D. (Bonn, © 2009, Global Development Studies, “Innovating ‘Innovation’, Competing ‘Competitiveness’: A Critical Political Economy Approach to Social Innovation System,” http://vbn.aau.dk/files/17849524/gds\_wp\_3.pdf, RBatra)

\*note: ICT = Information and Communications Technology

The progressive potentials of technological innovation in creating growth and wealth for humanity are well known. Today’s techno-economic paradigm is characterised by the intensification of ICT, which offers ‘tremendous potential’ and ‘great promise to raise new growth opportunities as well as bring greater equity’ (see Rasiah and Oyeyinka 2004: 2). This ICT-led development potential has however become an empty force and an empty promise amidst the growing national inequalities and poverty around the world (see Singh and Dhumale 2000). With the advent of the 21st century which is characteristic of the maturation of the ICT as the contemporary techno-economic paradigm since 1971, it is believed that the ‘new economy’ has the capability for generating sustained growth. This popular belief was formed by the globalisation of the two dominant discourses at that historical juncture: (i) the foreseen perpetual increases of productivity due to the promises of the information revolution and, (ii) the faith in the financial markets in unleashing the capitalist ethos for wealth generation. The collapse of the Internet bubble has however frustrated many of the then optimistic spectators of the rise of information revolution and finance capital. As Perez (2002) argues this kind of euphoria brought about by the excitement in new technology and in financial mania in the global economy, 7 eventually leading to a recession, is nothing unprecedented. The history of technological revolutions, which is inescapably linked with the power of finance capital, is one of continuity of the nature and logic of the capitalist system, of recurrence of its historical structure. Thus, what remains unchanged since the industrial revolution in the 18th century is the long held capitalist principles of letting the market forces be the sole director of the fate of human lives.

The current techno-economic paradigm is reinforcing the combined and uneven character of development under global capitalism. In this epoch of globalisation, the emergence of the three macro-regions for capital accumulation has become apparent: the East Asian region centred on Japan and the rising economies of China, South Korea, and India; the North American region centred on the US; and the European region centred on the EU. Africa seems to be of no interest to the global system (see Oyeyinka 2003; Lall 2005). Latin America remains to be an economic laggard which ‘seems to be living in a distributional world of its own, acting as though it were on a different planet’—even though its wealth and labour remain targets for exploitation (see Palma 2003; also Lall et al. 2004). Moreover, the international private capital movements across the globe in the era of globalisation for the period 1980-1997 suggests increasing inequality in inter-country development—specifically, while there is improvement in the material conditions of the majority of developing economies, those located in Africa and South Asia have remained seriously disadvantaged (see Rasiah 2000). Interestingly, even mainstream economists like Krugman finds that the wonders of technology are ‘not so wondrous’ at all as shown by recent economic data (see Krugman 1996) and that while the internet revolution props up growth it does not necessarily lead to stability (see Krugman 2001).

The widening of social divisions is resonated in ownership of and access to technology and finance. The widening gap is both a consequence of global inequalities arising from the capitalist international order, and in turn becomes reinforcing sources of its perpetuation. This is so because this is how technology is organised in a regime of capitalist market-led development: ‘Access to technology in the capitalist market demands access to capital’ (Freeman 2001: 209). Market is said to be the key factor in innovation. Technology, which is the material manifestation of innovation, is the end product of science. While science, especially in its conceiving stage of idea, is free, technology is commodified. Capitalism treats technology not as ‘power of knowledge objectified’, but as power of knowledge commodified. Innovation is thus mediated at every point by exchange (that is, by the market), and its selfreproduction likewise depends on the market.

As has been suggested above, the science behind the technology is by nature neutral; but the economic structure, to a large extent, defines—but not uniquely determines—its potentialities and propensities. Under conditions of capitalism, technical change creates diversity in unit costs within sectors. There is a tendency for capitalists to delay introducing new equipment to a particular industry to achieve the optimal trade-off between current operating costs and losses on capital value (Weeks 1999). For mature industrial capitalists, lack of knowledge of superior techniques is therefore not a fundamental problem, nor their lack of finance to acquire them. The problem is manifested in the enduring tension between the forces and relations of production. While technical change offers efficiency to produce commodities, techniques ultimately depend on capitalist rationality grounded on the iron law for profit and expansion, either they are the ‘profit-maximisers’ of the neo-classical school or the ‘profitseekers’ of the evolutionary school. In a word, **this logic of profitability somehow delays** technological **innovation**. Of course, there are risks involved in delaying innovations especially when new capital comes to play. This also means that **the logic** of profitability of businesspeople, especially the MNCs that are seen today as the force of innovation, **could make innovation sterile and uneven development prevalent**. As Reinert (2005) rightly argues, ‘From [a] businessman’s point of view the very simple explanation for the lack of investments in poor countries is the lack of profit opportunities’. This capitalist rationality suggests the contradictory potential of technological innovation for poorer countries, and in particular the highly concentrated FDI needed for their development. Pippa Norris (2000: 3) observes that ‘[t]he 29 OECD member states… contain 97 per cent of all internet hosts, 92 per cent of the market in production and consumption of computer hardware, software and services, and 86 per cent of all internet users’.

Further, the claim of Chris Freeman and Carlota Perez (1988) that the new techno-economic paradigm offers a wide-ranging scope of diversity, and hence opening ‘windows of opportunity’, while rational and valid, appears to be illusory at this historical moment globally dominated by market imperatives and global standardisation that are enforced and compelled at the local, regional, and global scales. This also means that the promise of increasing returns on the process and practice of innovation is likewise dependent on the market. For instance, the controversial issue on intellectual property rights globally enforced through the creation of the Trade-Related Intellectual Property Rights (TRIPS) Agreement has become an instrument of the developed countries in maintaining the status quo where they remain the dominant, and the poor countries in perpetual subordination. TRIPS has become the legal license (and a reflection of double-standard as well) of the developed countries in ‘pulling up the ladder’ by protecting their private intellectual property regimes, and hence depriving the poorer countries of the space to catch up with development and the development strategy they were once pursuing when they were still catching up (see Chang 9 2002, 2003). This resonates the relentless drive for capital accumulation, rather than for assimilation, under global capitalism.

The progressive potential of technology and innovation but is actually resulting in a regressive reality of uneven development is worsened by the systematic exclusion of most actors in the society in the system of innovation, in particular the workers who comprise majority of the population and without whom the system cannot work. Production is realised through a prior exercise of human imagination: human desires, purposes, and intentions are mobilised towards an end. Under industrial capitalism, however, not everyone has access to this process but a few; hence, the mass population is denied access to the full play of human creativity, subjecting them into an alienating situation (Harvey 1992). This traditional understanding on social exclusion vis-à-vis the process of innovation may not be absolutely valid today. But it may also be true that there still exists this kind of exclusion in some industries or firms where only a select few do the imagining and designing, and make all the decisions and set up technologies that regulate the actions of workers. Moreover, workers today may have been included in the process of innovation but they are excluded in enjoying the fruits of innovation. The 1995 World Development Report recognises this tragic reality of rising unemployment and poor labour conditions existing at a time of rapid growth in average levels of productivity per worker and a rapid growth in world trade amidst reductions in costs of movement, increasing trade liberalisation, and rising international flows of investments in the form of transnationally integrated production systems (see also Singh and Zammit 2000).

This reality of the market-dependent and socially disembedded nature of innovation under conditions of capitalism contradicts one of the main assumptions of neo-classical economics of the universal access to the means of innovation and the existence of perfect competition. Paul Samuelson’s (1948, 1949, 1953) factor-price equalisation theorem, which remains to be a dominant discourse in economic integration influencing policy formulations worldwide, posits that free trade among countries would result in equality in prices paid to the factors of production, namely capital and labour, all over the world. Its essential assumptions include: (a) that all countries have access to the same technology of production, (b) that output results from capital and labour, which can be substituted for each other in the production process; (c) that demand structure in the domestic economy in each country is the same; (d) that changes in wage rates as well as profit rates are not affected by the measures of the ‘factor-intensity’ of a product, and (e) that domestic markets are perfectly competitive. However, the falsity of each of these assumptions has been empirically and apparently proven over the years, specifically the assumptions of equality and perfect competition (see Weeks 1999; Reinert 1994, 2003). First, the economic policies being pressed on by global capitalist institutions and developed economies to developing countries ‘fail to address the fundamental blind spots of neo-classical economics’, blind spots that prevent poor countries to develop (Reinert 2005):

a) its [neo-classical economics] inability to register qualitative differences, including the different potentials of economic activities as carriers of economic growth,

b) its inability to register synergies and linkages, and

c) its inability to cope with innovations and novelties, and how differently these are distributed among economic activities.

Second, the factor-price equalisation theorem has tremendous implications for labour who comprise majority of the world’s population. Its inner rationality is that it is rational for wages to fall in the technologically developed countries (where wages are higher because labour is relatively less abundant). It also follows that it is irrational for labour to resist wage cuts (Carchedi 2001: 36-59). It thus gives intellectual justification to the hegemony of technologically leading countries, both in technologically advanced sectors and in decreasing wages.

The universality of market imperatives, and their concomitant contradictions, intensified in the current ICT techno-economic paradigm does not lead to the reproduction of high-tech societies across the world, but rather to the reproduction of the ‘social antagonisms that spring from the natural laws of capitalist production’. This process of combined and uneven development means that the logic of class struggle is increasingly global in character. Accordingly, this is contrary to the assertion of Manuel Castells (1996-1998, 2000) that today’s dominant mode of production referred to as ‘informational capitalism’, which is characterised by the tremendous annihilation of space through time, is leading to the demise of class inequalities. Castells’ obsession with the rise of network society in which the ‘space of flows’ is annihilated through ‘timeless time’ glosses over the contradiction of the market-dependent nature of innovation. Since capital is dependent upon the market for its self-reproduction and survival, the market thus compels it to drive for innovation while at the same time obstructing its own development. As Marx (1971: 50) puts it:

The real barrier of capitalist production is capital itself. It is that capital and its self-expansion appear as the starting and the closing point, the motive and the purpose of produSction; that production is only production for capital and not vice versa, the means of production are not mere means for the constant expansion of the living process of the society of producers…. The means – unconditional development of the productive forces of society – comes continually into conflict with the limited purpose, the self-expansion of existing capital.

Competitiveness for Capitalist Market Competition

Any development project is always for someone and for some purpose. Hence, it is a worthwhile endeavour to unpack the logic behind, and within which, the hegemonic discourse on competitiveness project is being pressed on national economies around the world by the multilateral, international, and regional institutions, and is being implemented by states.

### root cause

#### Also means systemic neoliberal violence outweighs their crapshoot security logic

**Hintjens 7** [Helen Hintjens is Lecturer in the Centre for Development Studies, University of Wales, “MDF Understanding Development Better,” http://udb.global-connections.nl/sites/udb.global-connections.nl/files/file/2923317.051%20-%20Position%20Paper%20Helen%20Hintjens.pdf]

From Johan Galtung, famous Norwegian peace ‘guru’, still alive and heads up TRANSCEND University on-line, has been working since 1960s on showing that violence is not OK. His Ghandian approach is designed to convince those who advocate violent means to restore social justice to the poor, that he as a pacifist does not turn a blind eye to social injustices and inequality. He extended therefore our understanding of what is violent, coercion, force, to include the economic and social system’s avoidable injustices, deaths, inequalities. Negative peace is the absence of justice, even if there is no war. Injustice causes structural violence to health, bodies, minds, damages people, and must therefore be resisted (non-violently). Positive peace is different from negative (unjust and hence violent) peace. Positive peace requires actively combating (struggling peacefully against) social injustices that underpin structural violence. Economic and social, political justice have to be part of peacebuilding. This is the mantra of most NGOs and even some agencies (we will look later at NGO Action Aid and DFID as examples). Discrimination has to end, so does the blatant rule of money, greater equality is vital wherever possible. All of **this is the opposite of neo-liberal recipes** for success, which in Holland as in Indonesia, tolerate higher and higher levels of social inequality in the name of efficiency. **Structural violence kills far more people than warfare –** for example one estimate in DRC is that 4 million people have been killed in war since 1998, but NGOs estimate that an additional 6 million people have died in DRC since then, from disease, displacement and hunger, bringing the total to an unthinkable 10 million of 90 million est. population. “**Since there exists far more wealth in the world than is necessary to address** the main **economic** causes of structural **violence, the real problem is one of priorities**”…p. 307 “**Structural violence…is neither natural nor inevitable**”, p. 301 (Prontzos).

### 2nc sustainability

#### Collapse is imminent—now is unique because public policy has exhausted the range of viable fixes

**Wallerstein, Ph.D., 11**—senior research scholar at Yale University, PhD from Columbia (Immanuel, January/ February 2011, “THE GLOBAL ECONOMY WON'T RECOVER, NOW OR EVER,” http://www.foreignpolicy.com/articles/2011/01/02/unconventional\_wisdom?page=0,9, RBatra)

The problem is that the basic costs of all production have risen remarkably. There are the personnel expenses of all kinds -- for unskilled workers, for cadres, for top-level management. There are the costs incurred as producers pass on the costs of their production to the rest of us -- for detoxification, for renewal of resources, for infrastructure. And the democratization of the world has led to demands for more and more education, more and more health provisions, and more and more guarantees of lifetime income. To meet these demands, there has been a significant increase in taxation of all kinds. Together, these costs have risen beyond the point that permits serious capital accumulation. Why not then simply raise prices? Because there are limits beyond which one cannot push their level. It is called the elasticity of demand. The result is a growing profit squeeze, which is reaching a point where the game is not worth the candle.

What we are witnessing as a result is chaotic fluctuations of all kinds -- economic, political, sociocultural. These fluctuations cannot easily be controlled by public policy. The result is ever greater uncertainty about all kinds of short-term decision-making, as well as frantic realignments of every variety. Doubt feeds on itself as we search for ways out of the menacing uncertainty posed by terrorism, climate change, pandemics, and nuclear proliferation.

**The only sure thing is that the present system cannot continue**. The fundamental political struggle is over what kind of system will replace capitalism, not whether it should survive. The choice is between a new system that replicates some of the present system's essential features of hierarchy and polarization and one that is relatively democratic and egalitarian.

The extraordinary expansion of the world-economy in the postwar years (more or less 1945 to 1970) has been followed by a long period of economic stagnation in which the basic source of gain has been rank speculation sustained by successive indebtednesses. The latest financial crisis didn't bring down this system; it merely exposed it as hollow. Our recent "difficulties" are merely the next-to-last bubble in a process of boom and bust the world-system has been undergoing since around 1970. The last bubble will be state indebtednesses, including in the so-called emerging economies, leading to bankruptcies.

Most people do not recognize -- or refuse to recognize -- these realities. It is wrenching to accept that the historical system in which we are living is in structural crisis and will not survive.

Meanwhile, the system proceeds by its accepted rules. We meet at G-20 sessions and seek a futile consensus. We speculate on the markets. We "develop" our economies in whatever way we can. **All this activity simply accentuates the structural crisis.** The real action, the struggle over what new system will be created, is elsewhere.

#### Not sustainable

**Naess**, Aalborg Urban Planning professor, **2006**

(Peter, “Unsustainable Growth, Unsustainable Capitalism”, Journal of Critical Realism, 5.2, ebsco, ldg)

The idea that greater eﬃciency and substitution of consumption away from¶ the most harmful categories are suﬃcient to ensure environmentally sustainable development has been criticised by a number of prominent economists.¶ 17¶ For one thing, there is an absence of institutional frameworks for¶ changing the quality of growth. The need for such frameworks in order¶ to prevent private initiatives from causing negative impacts was recognised¶ already by the classical economic theorist Adam Smith. History has so far¶ shown that capitalist companies are strongly opposed to the introduction¶ of such frameworks.¶ 18¶ Even if institutional frameworks were installed, it is doubtful that continual economic growth could be made environmentally sustainable. According to Herman Daly, ‘sustainable growth’ is an oxymoron. In its physical¶ dimension, the economy is an open subsystem of the earth’s ecosystem,¶ which is ﬁnite, non-growing and materially closed. As the economic subsystem¶ grows, it incorporates an ever greater proportion of the total ecosystem¶ into itself and must reach a limit at 100 percent, if not before.¶ 19¶ Admittedly,¶ the earth receives an amount of solar energy several orders of magnitude¶ greater than the energy utilised for human purposes. However, the natural¶ resources exploited in order to increase consumption and production are¶ not conﬁned to energy,

but include a range of raw materials, chemicals¶ and foodstuﬀs as well. Growth in production facilities, infrastructure and¶ housing standards also occupies space and contributes to the fragmentation¶ of ecosystems. Moreover, the utilisation and distribution of solar energy for¶ human purposes requires material installations (e.g., solar heat panels, photovoltaic cells, transmission lines and batteries), and some of the components¶ may cause pollution during material extraction, production or disposal after¶ use, and/or have a limited durability.¶ 20¶ As indicated above, shifting from the polluting production of industrial¶ society to the allegedly cleaner and less environmentally harmful commodities of post-industrial society has been mentioned as a way to change¶ the content of growth in an environmentally sound way.¶ 21¶ However, extensive outsourcing of manufacturing industries from wealthy countries to¶ Third World countries with lower labour costs during recent decades indicates that there is no post-industrial society on a global scale. There is also¶ a question as to whether there is not considerable material resource consumption associated with most of the activities of the service sector, which¶ is often highlighted as a less environmentally loading sphere than the manufacturing industries. Many of these service businesses are quite transport¶ intensive. The food and beverages served in a restaurant are, for example,¶ often imported from far corners of the world, and thus contain considerable¶ indirect energy consumption. Scientiﬁc work, which is often mentioned as¶ an activity leaving few ecological imprints in itself, is also increasingly based¶ on heavily polluting international air travel.¶ 22¶ Moreover, new scientiﬁc¶ knowledge often facilitates extended material consumption. Apart from its¶ growth impetus through technological development, the contribution of science to economic growth is probably quite limited.¶ Basically, almost all kinds of service represent the results of human labour¶ in connection with some capital asset. Any increase in service activities in¶ order to obtain economic gains would need to be performed without any¶ increase in these service-oriented capital assets if the ecological requirements¶ were to be met.¶ 23¶ The microchip is often considered an outstanding example¶ of dematerialisation since both its economic value and its user-value are¶ high, whereas the weight of the product is minimal. However, the production¶ of such a complex system as a microprocessor involves a number of more¶ or less hidden costs. According to a study conducted by the United Nations¶ University in Tokyo, the relative consumption of secondary materials is substantially higher in the production of microchips than is the case for traditional commodities. The results of the study suggest that the production¶ of such complex and highly organised systems as microprocessors involves¶ a mechanism—termed ‘secondary materialisation’—working in the opposite¶ direction to dematerialisation. Secondary materialisation is the apparent¶ tendency for ever more complex products to require increasing amounts¶ of secondary materials and energy in order to render possible the lower¶ level of entropy characterising these products, compared to traditional commodities. Entropy is the thermodynamic notion for the opposite of order.¶ A highly organised system is a low-entropy system obtained through the¶ input of labour and energy. It requires enormous amounts of energy to¶ transform the heap of sand making up the raw material of the microchip¶ into a microchip that can function inside a computer. The production of¶ a microchip weighing two grammes requires more than one and a half¶ kilograms of fossil energy, 72 grammes of chemical substances, 32 litres of¶ water and 700 grammes of nitrogen and other gases.¶ 24¶

### at: inevitability

#### Overwhelming research disputes their inevitability claims—there’s no social or genetic basis for neoliberal ethics—subscribing to that logic naturalizes social Darwinism—independent reason to vote neg

**Krishna, pol sci prof, 9**—Professor of Political Science at U Hawaii, Ph.D. in political science (Sankaran, © 2009, Globalization & Postcolonialism: Hegemony and Resistance in the Twenty-first Century, RBatra)

p. 158-160

Polanyi pointed out that historical and anthropological research does not bear out Smith’s idea that humans had a natural tendency to barter, truck, and trade. In fact, the weight of such research indicated that most societies were more concerned with reciprocity, redistribution, and prevention of an excessive concentration of wealth. Trade, exchange, and business were subordinate activities that did not preoccupy premodern societies and were seen as at best a means to an end, rather than ends in themselves. The ideas of the importance of the trading spirit of man, the commodification of everything, and the emergence of the self-centered, utility-maximizing homo economicus were not merely attributes of modern societies; they were self-fulfilling prophecies in that if we began to interact with others on these premises, our very actions would create the world that was ostensibly our referent.5¶ It was, however, based on this essentialization of the core characteristic of individuals in all times and at all places as a homo economicus that the idea of the self-regulating market as the ideal and rational social order gained its sway. Polanyi observed that there were some aspects that were simply not susceptible to commodification, notably nature (land) and labor (humans): ¶ [L]abor, [and] land are obviously not commodities; the postulate that anything that is bought and sold must have been produced for sale is emphatically untrue in regard to them. In other words, according to the empirical definition of a commodity they are not commodities. Labor is only another name for a human activity which goes with life itself, which in its turn is not produced for sale but for entirely different reasons, nor can that activity be detached from the rest of life, be stored or mobilized; land is only another name for nature, which is not produced by man. . . . The commodity description of labor [and] land . . . is entirely fictitious.

Nevertheless, it is with the help of this fiction that the actual markets for labor [and] land are organized; they are being actually bought and sold on the market; their demand and supply are real magnitudes; and any measures or policies that would inhibit the formation of such markets would ipso facto endanger the self-regulation of the system. . . . To allow the market mechanism to be the sole director of the fate of human beings and their natural environment . . . would **result in the demolition of society**. For the alleged commodity “labor power” cannot be shoved about, used indiscriminately, or even left unused, without affecting the human individual who happens to be the bearer of this particular commodity. In disposing of a man’s labor power the system would, incidentally, dispose of the physical, psychological, and moral entity “man” attached to that tag. Robbed of the protective covering of cultural institutions, human beings would perish from the effects of social exposure; they would die as victims of acute social dislocation through vice, perversion, crime and starvation. Nature would be reduced to its elements, neighborhoods and landscapes defiled, rivers polluted, military safety jeopardized, the power to produce food and raw materials destroyed.6 ¶ Polanyi saw the politics of Britain and other Western societies from the nineteenth century onward as oscillating between a conservative market-mandated morality and a more ethical position that saw the economy (the production of material goods for the satisfaction of needs) as merely a small part of a larger set of concerns that should animate a society. He was objecting to the use of the market metaphor to ethically justify and promote a form of social Darwinism within countries as well as in the realm of interstate relations. To the enthusiasts of an unbridled free market, just as inefficient firms and producers fall by the wayside under competitive capitalism, so too must inefficient humans (races) and societies (poorer nations) pay the price for their lack of ability or competitiveness. Such an ethic, Polanyi argued, went against the grain of history and was unique to the modern epoch. He made a powerful case for the intervention of politics to ensure that capitalist growth based on private enterprise and the market did not destroy those who were weaker and less able. As was indicated in Chapter 1, the ascendancy of such commodification of human relations and the sanctity of the market were critical in what Mike Davis described as the holocausts of the Victorian era, resulting in between 30 and 60 million deaths in the third world.7¶ Polanyi’s critique is philosophically crucial as it reminds us that far from being the reservoir of the ethical, a market society derives its ethics from an impoverished logic of the economy, which is then used to depoliticize society. Postcolonialism, in its narration of the history of capitalist development as inextricably intertwined with colonialism, racism, and genocide, in its critique of modernization theory and the myth of laissez-faire, and in its contemporary engagement with neoliberal globalization has anchored itself precisely against this reduction of the ethicopolitical realm to that of the economy. And it has done this by consistently historicizing the claims of neoliberal globalization and showing them to be empirically untrue and historically false. In making this argument, postcolonial study, especially in its emphasis on capitalism as a worldwide process that simultaneously produces development and underdevelopment, growth and poverty, affluence and misery, has consistently refuted the tendency of neoliberal theories of modernization to confine our focus to the level of competitive nation-states. It is to this critique of the method of neoliberalism that we now turn.

## 1nr

\*the 1nr read some K cards, but I kept them in their corresponding location on the 2nc flow—see above

### 2nc overview

#### Fusion is not topical – the US NRC defines nuclear power production as exclusively nuclear fission, and excludes attempts at nuclear fusion – their inclusion of fusion blows the lid off of the topic and decimates substantive and educational debate –

#### Two Impacts ---

#### 

#### First, limits – allowing nuclear fusion, means the definition of nuclear power is no longer confined and allows infinite malleable interpretations – in fact – 16 state legislatures have tried to define it as including ALL Renewables – holding the line on what constitutes “nuclear power” and “production” is key

UCS, 09 [Union of Concerned Scientists, Nuclear Power:¶ A Resurgence We Can’ t Af ford, <http://www.ucsusa.org/assets/documents/nuclear_power/nuclear-economics-fact-sheet.pdf>]

¶ notes: **sixteen states have policies** in place that support the development of new nuclear reactors, including recovery of pre-construction¶ costs and construction work in progress as well as defining nuclear power as an eligible resource under a state renewable electricity standard¶ (a policy that requires utilities to obtain a percentage of their electricity from renewable resources). indiana and oklahoma are considering¶ new cost recovery policies. **Legislation pending in florida**, indiana, south carolina, and west Virginia would define nuclear power¶ as an eligible renewable resource. illinois, Kentucky, Minnesota, and wisconsin are considering legislation that would repeal existing¶ state moratoria on new nuclear plant construction.

#### The impact to this argument is two fold

#### A subpoint – the depth of education – limits enable pedagogical depth, breadth is inevitable, so no offense for them – depth key to access debates portable benefits like research skills which are a part of being an academic or a lawyer – cutting cards not like MSU and focusing on core policy issues is the vital internal link to that offense – this is vital to any substantive discussion

Fox, 10 [Gray, Yahoo News, Is Nuclear Power Dangerous? It Depends on Who is Using It, http://voices.yahoo.com/is-nuclear-power-dangerous-7235544.html

The answer is it depends on who is using the nuclear power. For the sake of discussion, **we will** define [nuclear power](http://voices.yahoo.com/topic/15557/nuclear_power.html) as fission created power and not fusion. I'll save fusion for another article.¶ Bear with me for a brief description of nuclear fission. Nuclear fission is the absorption of a neutron by an isotope (we'll use uranium 235 for our discussion) which results in the instability and splitting of the uranium molecule into two new isotopes and the release of additional neutrons. The two new isotopes release a high kinetic energy imparting that energy to the surrounding structure creating heat. The new isotopes are radioactive (which is where nuclear waste comes from). The neutrons (usually two or more) released by fission and absorbed by other molecules creating a chain reaction. Such reactions occur at a fantastic rate. Nuclear bombs react with billions of such fissions virtually instantaneously. However, the controlled chain reactions produce heat relatively slowly; this controlled reaction is what we call nuclear power, that is, the creation of heat using the fission process. Nuclear power is a sophisticated way of boiling water to produce steam, spinning turbine generators, and generating electricity.

#### B) Sub Point – ground

Discovery, 2011 [How are nuclear fission and nuclear fusion different?, <http://curiosity.discovery.com/question/difference-nuclear-fission-nuclear-fusion>]

**Nuclear power plants use** a process called nuclear fission **to create heat energy for making electricity.** It's not to be confused with the term only one letter off -- nuclear fusion. **Although both** of these processes can **create energy**, **they're very different.** For one, **nuclear fusion does not produce** radioactive wastes, which has been one of the criticisms of nuclear fission and the reason many people oppose nuclear power [source: [University of Texas at Austin](http://www.utexas.edu/news/2009/01/27/nuclear_hybrid/)].¶ In nuclear fission, a neutron splits a heavy atom of uranium into two lighter ones. The split is accompanied by a large amount of heat energy and more neutrons. The neutrons go on to split nearby uranium atoms in a chain reaction. The rate of fission in this chain reaction is controlled by the nuclear reactor's control rods. The lighter atoms are the radioactive wastes that cannot be harnessed for more energy. The downside is toxic waste that hangs around for centuries and has to be disposed of somewhere.¶ In contrast, nuclear fusion combines lighter atoms to form heavier ones. Specifically, isotopes of hydrogen combine to form helium isotopes and energy. It's much more similar to how stars -- including the sun -- create energy and heat in their cores.¶ It's not easy to get hydrogen isotopes close enough to fuse in a controlled environment here on Earth. It takes intense heat and pressure to overcome the repulsive forces between their atoms. Nuclear fusion reactors are being developed that use high-intensity magnetic fields or high-intensity laser beams to bring the isotopes together for fusion to occur.¶ Although nuclear fission-powered plants have been in use since the 1950s, prototype nuclear fusion reactors are still not practical or economical for commercial use. Nuclear fission plants also carry the danger of meltdowns such as those that occurred recently in the Fukushima-Daiichi nuclear power plant in Japan, which was damaged by an earthquake and tsunami in March 2011. As a result of this accident, many nations are reevaluating their use of nuclear fission power.¶

#### Better ev

E AND T , No Date [Nuclear energy The dilemmas surrounding nuclear power, The 3TU.Centre for Ethics and Technology (3TU.Ethics) brings together the expertise of the philosophy departments of the three technical universities in the Netherlands (Delft, Eindhoven, Twente) in the field of ethics of science, technology and engineering. 3TU.Ethics builds upon the [excellent international reputation](http://www.ethicsandtechnology.eu/news/comments/research_judged_excellent/#continued) of the three participating universities in this field. The joint venture allows for close collaboration in research as well as teaching, outreach and contract research in both the private and public sector. More specifically the mission of 3TU.Ethics is:

To stimulate and undertake interdisciplinary and applied research in the field of ethics and technology;

To stimulate and undertake fundamental research in ethics relevant for the field of ethics and technology;

To stimulate and undertake activities in the field of teaching in ethics and technology;

To act as an intermediary between the philosophy departments involved in 3TU.Ethics on the one hand and public debates and the media on the other, <http://www.ethicsandtechnology.eu/expertise/nuclear_energie/>]

Before deciding whether **to opt for nuclear power** or for other forms of energy generation, one first needs to define nuclear power production and clarify what precisely it is. Ultimately, the major problem always remains that of waste disposal. ¶ When discussing the matter of nuclear power one soon thinks in terms of being for or against it. According to the engineer [Behnam Taebi](http://www.ethicsandtechnology.eu/taebi) that is a sensible approach to take but before one can properly provide answers one has to establish what exactly nuclear energy is. **There are** variousproduction methods and different kinds of waste products. Whichever method you adopt, there will be consequences for the ethical considerations and the matter of whether, both for present and future generations, it is fair to use the method chosen, he explains. Broadly speaking, there are at present two common techniques. There is the American approach in which all the nuclear fuel is used once and then the waste is stored underground but remains radiotoxic that is to say dangerously radioactive for 200,000 years. The European approach, also sometimes referred to as the closed fuel cycle method, recycles the nuclear fuel so that the waste that is finally produced is only radiotoxic for 10,000 years. On first inspection, the latter approach seems much more favourable but the recycling of fuel is very energy-consuming and demands more nuclear processes, all of which adds to the risks. It also leads to the need to transport dangerous substances, substances that are more suitable for nuclear weapon production. When choosing between these two methods moral decisions have to be made between the long-term burdening of future generations with this toxic waste and the creating of greater risk for the present generation, Taebi points out. I cannot easily say where our priorities should lie. Today technologies are being developed (that will only be ready for use in several decades time) in which nuclear waste will be so thoroughly consumed and processed that it will only remain radiotoxic for 500 to 1000 years. Apart from being a much shorter period, it is also one that is much easier to conceive in human terms. It is a technology that will be very expensive and time-consuming but particularly aimed at diminishing the burden for future generations. You might question whether we are morally obliged to make such investments in the interests of future generations, Taebi asks. I am inclined to think that we are. Present technological circumstances and possible future improvements provide us with much more complicated moral dilemmas regarding nuclear energy than people sometimes think, certainly if one compares it all to alternative ways of producing energy. Just to give one example, greenhouse gases may not, it is true, be directly toxic but they do constitute a risk for future generations and since they are everywhere in the atmosphere it may well be harder to make them non-noxious with new technologies in a hundred years time than nuclear waste in an underground bunker. In all cases, with nuclear energy, coal, oil and gas, the resources required are from raw materials that will one day be exhausted Taebi adds. The risks for the future are not always crystal clear. In the case of nuclear energy there is also the danger of the resources being used for nuclear weapon production and accidents occurring in the plants but the risks can be minimized. You can, of course, be opposed to nuclear energy on principal but whatever the case, the arguments that have to be thought through are not straightforward. **All that we do know for certain is that things have to be considered now and not once the various choices have been made.**

#### The material failings of their debate ensures they don’t solve – presumption

Smith, 88 [[Smith, E.T.](http://www.osti.gov/energycitations/searchresults.jsp?Author=%22Smith,%20E.T.%22)Nuclear power: A public policy issue, Journal Name: Transactions of the American Nuclear Society; (USA); Journal Volume: 57; Conference: Joint meeting of the European Nuclear Society and the American Nuclear Society, Washington, DC (USA), 30 Oct - 4 Nov 1988,m <http://www.osti.gov/energycitations/product.biblio.jsp?osti_id=5528757>]

Today, the United States has an adequate supply of electrical energy. To maintain an adequate supply in the future, additional generating capacity will be required. In the present environment, one major source of electrical energy will not be a part of this additional capacity - nuclear power. Various areas are investigated for their impacts on the growth of nuclear power. The nuclear industry is taking appropriate actions to address the technical and economic issues it faces. So why is nuclear power growth nonexistent A conclusion is reached that for the use of nuclear power to increase in the United States, the nuclear industry must first elevate the topic of energy to an issue of public policy and define nuclear power's role in implementing the policy rather than trying to sell nuclear power on its own. This is what has happened in other countries. To do this, the industry needs to elevate the debate both in the Congress and in the media that now is the time to take action on energy in this country before we have another energy crises. The failure to raise the issue of energy to a public policy level will result in the United States finding itself in a critical situation sometime in the future. The failure to actively participate and help direct the debate on energy, and nuclear in particular, will result in nuclear power providing a shrinking percentage of this country's energy supply.

### AT: Contrived

The UN excludes their AFF and also says that things that aren’t useful shouldn’t be considered topial

United Nations General Assembly Resolution, 12 Nuclear Power Safety Act, http://www.nationstates.net/page=WA\_past\_resolutions/council=1/start=202

Description: The General Assembly,¶ **DEFINING nuclear power as the use of sustained nuclear fission to generate heat and do** useful **work**,¶ RECOGNIZING that nuclear power is an efficient and abundant source of power,¶ AWARE that many nations use nuclear power as a source of power and some use it as a main source of power,¶ REALIZING the potential hazards of nuclear power such as nuclear waste and nuclear accidents that can cause long term damage to people’s health and the environment,¶ BELIEVING that most hazards caused by nuclear power can be easily prevented or dealt with responsibly,¶ CONCERNED that some nations may not have well-established safety standards for nuclear power and may be at risk of nuclear hazards,¶ ESTABLISHES the Nuclear Energy Safety Commission (NESC) to promote and oversee the safety standards of nuclear power plants,¶ SHALL grant the NESC the responsibilities of: I. The inspection of nuclear energy power plants for the purpose of evaluating safety protocols, II. Determining the level of compliance of safety protocols in conjunction with standardized practices, III. Determining which safety protocols are lacking, and inform facility management and the controlling government of deficiencies, IV. Advising courses of action(s) needed to bring safety protocols and standards in line with standardized practices, V. Receiving and evaluating outstanding safety practices for implementation for standardization as “best practices”,¶ MANDATES the following for nations: I. Take prime responsibility for risks caused by exposure to radiation while handling radioactive material for the purpose of nuclear power, II. Establish procedures and arrangements to maintain safety and stability while operating nuclear power plants, III. Have safety measures in place to prevent or have arrangements to deal with exposure to radiation while handling radioactive material, IV. Follow adequate building designs for the construction of nuclear power plant facilities, V. Establish proper regulations for facilities and activities dealing with the handling of radioactive materials for the purpose of generating power, VI. Enforce regulations placed upon nuclear facilities and attempt to pass legislation to better the safety of said nuclear facilities,¶ Co-authored by Lestaria and neuchies¶ Votes For: 7,976 (73%) Votes Against: 2,884 (27%)¶ Implemented: Thu Jun 21 2012

And, the aff isn’t useful – they are more contrived – also proves the universe solves all their fusion business on the K

NF, No Date Paradox ¶ We live in a sea of infinite power struggling for tiny solutions that produce nothing¶ 2011 - Enabling the Inevitable¶ http://2011nuclearfusion.alternate-healing-science-christian.ca/nuclear\_fusion\_political.html

If the Universe has no provision for nuclear-fusion power, but has set up protective barriers against it, why would we waste any effort with it, in developing it? **Our experience has already been amply clear that attempting nuclear-fusion power** isuseless **for all practical purposes.** The **resulting tragedy is**, in pursuing this course, such as **by focusing our efforts on this useless pursuit**, that we tend to close our eyes to the powerful principles that we do have at hand to meet our needs. Instead of keeping ourselves tied into knots for a hundred years, hoping against all odds that nuclear-fusion power might yet succeed, shouldn't we rather utilize what we've got within reach that promises infinite energy, **as it pervades the Universe in which we live?**

### AT: Mueller

#### Concede expert standards are good – US NRC key – basis for all neg research – DA to their counter interp

#### Mueller concedes including fusion means they don’t solve – neg on presumption

Mueller, 12 (Danielle, and Jessica Mermigos, Graduate Students in Engineering – University of Pittsburgh, "Nuclear Fusion: Energy for the Future", Conference Paper ~%232232, 3-1, p. 1-2)

Though nuclear power has been around for many years, it still faces a great deal of hurdles before a majority of **the public is willing to rely on nuclear** fission as a main source of energy. Incidents like the meltdown at Chernobyl in 1986 and Japan in 2011 have greatly affected the way nuclear power plants are looked at by many [13 & 14]. Engineers and researchers across the globe are currently attempting to design more efficient ways to produce energy via nuclear means. **The most promising idea is using nuclear fusion** reactions, as opposed to fission reactions, to produce energy that can be harnessed and used for a multitude of purposes. Nuclear fusion as a means to generate energy has the potential to be the most effective and most powerful way of producing energy. Even though nuclear fusion has great potential, there are some **drawbacks that have many** hesitant to rely on nuclear **fusion** as a stable energy source. Fear of meltdowns will always be an overwhelming fear when discussing nuclear power, but other concerns like waste disposal and production costs cause hesitation to support nuclear power plants. However, when looking at all the facts, it is clear that the benefits of nuclear fusion to produce energy greatly outweigh the fears lingering in the minds of the public. Projects like ITER and GET are aiming to show that nuclear fusion can be created in a safe and efficient environment. They hope that by doing this, they can gain support for nuclear power plants across the globe. Though the words ‘nuclear power’ can induce fear in many people, if they would take the time to educate themselves, they would realize that the benefits of nuclear power greatly outweigh the risks.

#### They violate the word nuclear which is a precursor to defining the term power

PCAST, 97 [President’s Council of Advisors on Science and Technology, CHAPTER 5

NUCLEAR ENERGY: FISSION AND FUSION, http://belfercenter.ksg.harvard.edu/files/pcast97\_ch5.pdf

2 Fission energy has a vocabulary that is well established in both **technical and popular communication:** It has adopted¶ “nuclear” as its own. In this report, “**nuclear power**,” “nuclear plants,” and other uses of the word “nuclear,” when applied to¶ existing energy generation capability, refer to nuclear fission only. As nuclear fusion has not achieved that state of¶ development, there should be no confusion.

Best ev

Answers. com [http://wiki.answers.com/Q/Why\_isn%27t\_fusion\_used\_in\_the\_production\_of\_nuclear\_power]

Fusion is not used in the production of nuclear power, other than in the Sun and stars, due to technological problems, primarily in containment. The Sun has it easy, so to speak, because its large gravity and mass causes the temperature and pressure necessary to initiate and sustain fusion, while its gravity also eliminates the need for containment. Attempting to do this on the Earth would not work because the size of the reactor would vastly exceed the size of the Earth. The alternative, building a containment vessel, is not working because the many millions of degrees of heat required for the plasma would destroy any vessel we have. Building a magnetic containment vessel, such as the tokamak (ITER) shows promise, but the technical problems of having supercold magnets in close proximity to superhot plasma are very overwhelming fusion for this project is set for 2019, and my guess is that commercial power from fusion is at least 50 to 100 years away.

# round 8 neg v. emory ps

## 1nc

### DA

#### Sequester deal now—top priority

Susa Crabtree (writer for the Washington Times) 2/6, 2013 “Obama ramps up pressure to resolve sequester;¶ Sets up another partisan battle” Lexis

Warning of serious repercussions for the economy and the military if Congress fails to halt the next round of $85 billion in budget cuts next month, President Obama on Tuesday called for replacing the automatic spending "sequesters" with a vague mix of smaller cuts and more tax increases.¶ At a time when many top Republicans have said the cuts should take effect, Mr. Obama's call renews the battle over spending that has dominated Washington for the past two years, but which seemed to cool after the January deal that raised taxes across the board.¶ The president said he would like another big tax reform that targets the wealthy, cutting deductions and loopholes, but said at the very least Congress should avert the sequester, which he called an avoidable self-inflicted economic wound.¶ "If they can't get a bigger package done by the time the sequester is scheduled to go into effect, then I believe they should at least pass a smaller package," he said. "There is no reason that the jobs of thousands of Americans who work in national security or education or clean energy - not to mention the growth of the entire economy - should be put in jeopardy."¶ His offer is a rehash of proposals he has made to end tax breaks and lower projected increases in health care spending, though the White House has yet to lay out a full list of deductions it wants Congress to target.¶ Even before Mr. Obama spoke, Republicans were rejecting his offer.¶ House Speaker John A. Boehner, Ohio Republican, issued a statement saying it was the president who came up with the sequester idea. He also said House Republicans have passed two bills to avert the sequesters, so Mr. Obama must lay out his own specific plan.¶ Still smarting from his "fiscal cliff" deal with Democrats in which Republicans agreed to increase taxes without spending cuts, the speaker made it clear that he was ruling out any need to increase taxes further.¶ "President Obama first proposed the sequester and insisted it become law. Republicans have twice voted to replace these arbitrary cuts with common-sense cuts and reforms that protect our national defense," he said. "We believe there is a better way to reduce the deficit, but Americans do not support sacrificing real spending cuts for more tax hikes.¶ "The president's sequester should be replaced with spending cuts and reforms that will start us on the path to balancing the budget in 10 years," he said.¶ Senate Minority Leader Mitch McConnell, Kentucky Republican, rebuked Mr. Obama for lecturing Congress about the need to avoid the cuts he proposed.¶ "If Democrats have ideas for smarter cuts, they should bring them up for debate," he said. "But the American people will not support more tax hikes in place of the meaningful spending reductions both parties already agreed to and the president signed into law."¶ Mr. McConnell also criticized Mr. Obama for failing to submit a budget by the statutory deadline this year.¶ "The clock is ticking. It's time to get serious," he added.¶ The White House first came up with the idea of the arbitrary, across-the-board spending cuts during budget talks in summer 2011 as a way to pressure Democrats and Republicans in Congress into coming up with their own spending cut plan to reduce the deficit over the next decade.¶ But partisan Washington gridlock quickly took hold and a supercommittee of lawmakers tasked with coming up with a plan to find alternative spending cuts to replace the sequester failed to reach a deal after negotiating for months.¶ As the country braced for the cuts to kick in and Washington to tumble off the fiscal cliff Jan. 1, lawmakers struck a last-minute deal that shifted the first two months of cuts into future spending bills and replaced the rest with an increase in the way retirement accounts are taxed. Still, the deal postponed another $85 billion in cuts to March 1 - a way to buy more time to find alternative sources of revenue.¶ The Pentagon in recent weeks has grown increasingly pessimistic about the chances of avoiding the cuts, and the branches of the military have issued memos outlining what programs and sections would be hit hardest.¶ Washington think tanks and policy centers have warned repeatedly of the havoc that the cuts could wreak on the economy. The Bipartisan Policy Center has estimated that 1 million jobs could be lost this year and next as a direct result of the spending cuts, and defense industry analysts say that number could rise to 2 million this year alone.¶ The president made his plea as Senate Democrats were meeting in Annapolis for their annual retreat. Mr. Obama is scheduled to address the group Wednesday.

#### Maintaining post-election PC is key to get a deal

Wolf Blitzer and Gloria Borger (CNN political analysts) 2/1, 2013 “Wall Street Soars; Senate Scandal; Super Bowl Advertising; Al Gore Defends Selling to Al Jazeera; The Most Expensive Election; Hillary Clinton Resigns; Kerry Arrives at Swearing in Ceremony; Geraldo Rivera for Senator?; New Jersey Senate Showdown; Once Powerful Cardinal Disciplined; $8M a Minute; Controversy Over Some Super Bowl Ads; New York Mourns Ed Koch” Lexis

BLITZER: So, there's more jobs created, another 150,000 last month. They revised figures for November and December, another 200,000 beyond those earlier announced.¶ So how is this going to impact his legislative agenda on some of these critically important issues?¶ BORGER: Before he gets to immigration and everything else, he has to go through all of the business speed bumps, the economic speed bumps.¶ BLITZER: And there are plenty of them.¶ BORGER: And there are plenty of them coming up.¶ And I think both sides can make the case, Wolf, and they will, that a dysfunctional Washington really hurts consumer confidence and hurts business hiring. Republicans will say you have got to decrease the deficit and the president will say, you know what, we have to perhaps think about spending a little bit of money to get out of this and to try and reduce that unemployment rate.¶ So they are going to come at it from different sides, Wolf. The big thing to think about here is the president's approval rating. It is now at 52 percent. That gives him an awful lot of leverage on these economic issues.¶ BLITZER: He's going to need that if he's going to get some of these agenda items through.¶ BORGER: He will need every bit of it. Yes.

#### Starting a new fight on wind post-PTC is political suicide—allies are exhausted and the balance of lobbying will be AGAINST additional wind support

**Harder, 13** (Amy, National Journal, “Battle Over Wind Subsidy Leaves Industry Bruised” 1/3,

[www.nationaljournal.com/congress/influence/battle-over-wind-subsidy-leaves-industry-bruised-20130103](http://www.nationaljournal.com/congress/influence/battle-over-wind-subsidy-leaves-industry-bruised-20130103))

The battle to get Congress to renew the wind-energy production tax credit before year’s end strained relationships among utilities, splintered support within the industry’s biggest trade group and is setting up the industry—and its supporters in Congress—for a 2013 even more contentious than 2012.¶ Many utilities, environmental groups and lawmakers from both parties are cheering the news that the PTC was extended by one year as part of the fiscal cliff deal. But the bruising fight over the last year doesn’t bode well for the sector as it must now agree on how to ramp down the tax subsidy that was first created 21 years ago.¶ Xcel Energy, which is among the top 10 biggest utilities in the country and had the largest wind capacity of any utility in 2011, is reviewing its membership in AWEA largely because of how the trade group handled the PTC debate. A final decision from the company is expected soon about what, if anything, it plans to do.¶ "We are in the process of reviewing our relationship with AWEA,” Xcel lobbyist John O’Donnell told NJ. “It's our concern that they continue to represent the interests of developers to the exclusion of customers."¶ O’Donnell is referring to both individual households and businesses whose electricity bills from utilities are affected by the production tax credit either directly or indirectly. O’Donnell doesn’t think extending the PTC, which is a tax credit that goes to wind-energy developers, benefits customers paying electricity bills or the utilities buying wind from renewable-energy generators. He went so far to say that because Congress extended the PTC without any additional policies to benefit customers, the Minnesota-based Xcel may not buy more wind.¶ "As the largest provider of wind to customers by far, we feel this action doesn’t nearly enough for customers, and throws into immediate question any further plans we have to buy more wind on their behalf,” O’Donnell said.¶ Another bruise from last year’s fight that will wear on into 2013 is lobbying by Exelon, the country’s biggest nuclear generator, to eliminate the PTC altogether. The Chicago-based Exelon, which is also the 11th-ranked utility in terms of wind generation, has aggressively lobbied lawmakers to end right away the tax credit because the policy distorts electricity market prices and hurts the company’s bottom line.¶ Exelon spent $6.4 million on lobbying through October (fourth-quarter lobbying numbers are due out later this month). In response to Exelon’s lobbying push, which was first reported by National Journal in August, AWEA kicked the company out of its group in September. Exelon is going to keep up its push against the policy now that Congress renewed it.¶ “In the coming months Exelon will work with legislators to inform them of the unintended negative consequences to power markets and investments in other sources of generation from the continuation of the PTC,” Exelon lobbyist David Brown told National Journal in an e-mail.¶ The lobbying power of Exelon, whose position against the PTC aligns the company with deep-pocketed conservative tea-party groups like Americans for Prosperity and the American Energy Alliance, could be even more concerning to the wind industry moving forward.¶ “Most people supportive of renewable energy are concerned about all the money they’re putting into this,” said one wind-energy lobbyist who would speak on the condition of anonymity only. “The renewable energy and wind energy specifically need to come up with a much better defense and push back…You’re going to see industry hit back harder now.”¶ But for now, AWEA is regrouping. Amid internal claims that the group’s leadership on the PTC was lacking, its CEO and president of the past four years, Denise Bode, announced last month she was resigning to return to the private sector as a tax attorney. AWEA’s top lobbyist, Rob Gramlich, will serve as interim CEO as the group finds a new one.¶ AWEA spent $1.81 million on lobbying through October, which is much less than Exelon and a $1 million less than NextEra Energy, the biggest renewable-energy generator that was the most outspoken company supporting the PTC. NextEra, whose lobbyists have clashed with Exelon executives over the PTC, did not immediately have a comment in response to this article.¶ AWEA has publicly announced it supports phasing out the tax credit, but consensus within the industry doesn’t exist (yet) about how and for how long that should happen.¶ Sen. Mark Udall, D-Colo., who is the most outspoken supporter of the policy in Congress and gave almost 30 floor speeches on the issue over the last several months, said he remains committed on a way forward.¶ “I plan on pushing my colleagues this year to pursue a multiyear extension in conjunction with a well-crafted phase-out,” Udall said to National Journal. “Such a phase-out would need to provide market certainty, and I believe that is the direction we need to head.”¶ Toward the end of last year, Xcel lobbied lawmakers on a proposal that would have replaced the production tax credit with a combination of an investment tax credit and a customer renewable credit.¶ The investment tax credit would be given to renewable-energy developers to help finance projects, and the customer renewable credit would be awarded to utilities that integrate more wind and solar onto the grid in order to incentivize such renewable-energy integration. The two credits combined would cost the government between $6 billion and $7 billion over 10 years. The one-year extension will cost taxpayers about $12 billion over 10 years.¶ “There is some merit to that,” said the wind-energy lobbyist about Xcel’s proposal. “Maybe that is a way to compromise and get utilities more supportive of tax credits for renewable energy.”¶ Udall expressed initial support for the proposal last month, but at that point he—and all other congressional wind backers—was focused chiefly on extending the PTC.¶ Another big problem lurking in the background for the wind industry is what, if any, legislative vehicle they can use to advance their proposal, if and when the industry can agree on a way forward. **But that’s a fight for another day.**

#### The impact is the military—global war

Sydney Freedberg and Colin Clark (writers for AOL Defense) 1/17, 2013 “Sequester's A Nightmare But Year-Long CR Is Just As Bad: SecNav Mabus, Under Sec. Work” http://defense.aol.com/2013/01/17/sequesters-a-nightmare-but-year-long-cr-is-just-as-bad-secn/

The automatic budget cuts known as sequestration aren't the only nightmare scenario looming in March for the Department of Defense, Navy Secretary Ray Mabus said this morning. If Congress keeps on funding the federal government on the current ad hoc basis, by simply extending the current "continuing resolution" -- now set to expire March 27 -- instead of by finally passing proper appropriations bills, the impact would be equally bad.¶ "Most of the attention is put on sequestration because it was such a big deal leading up to the fiscal cliff," Mabus told reporters after his public remarks at the Surface Navy Association's annual conference. "We have an equal, equal concern about CR."¶ Asked about remarks earlier in the conference by uniformed leaders that the Navy was sailing for a readiness crisis -- the infamous "hollow force" -- Mabus said, "I agree with Adm. Gortney that if these things are triggered, in the sort of mindless automatic way they work, you do run a big risk of becoming hollow."¶ [Updated: Speaking later at the same conference, Mabus's Under Secretary, the gloriously outspoken Robert Work, said it was entirely possible that both disasters might strike at once. "We are planning as if sequestration occurs and a year-long CR occurs," he said. "If that happens, ladies and gentlemen, the world as we know it will end. There's just no way you can keep the Navy whole and keep the Marine Corps whole."¶ [If he had to guess, Work went on, "we're going to get some type of deal that take sequestration off the table, but we're going to have a year-long CR."]¶ Either disaster would have an equal financial impact on the Navy, but it would be distributed in different ways.¶ Sequestration "would be $4.6 billion hit for the Department of the Navy," said Mabus in his speech. "If that continuing resolution is extended for the rest of the fiscal year that's another -- exactly the same number -- $4.6 billion hit."¶ The second similarity is "the mindless way both those things operate," Mabus continued. "Under sequestration, you just whack a certain percentage off virtually every program. Continuing resolution says you stay at the levels you were at last year and no new starts."¶ A memo last week from Deputy Defense Secretary Ash Carter instructed the services to prepare for sequestration by economizing on readiness, including -- if sequester takes effect -- cancelling the "availabilities" of Navy warships for major maintenance in port. But a continuing resolution only allows the government to keep spending on existing programs, not to start new ones (unless Congress makes a specific exception), and each "availability" is technically a new program unto itself.¶ So the CR would have exactly the same crippling impact on maintenance as the sequester, Mabus explained to AOL Defense: "If you put a ship in for a shipyard availability, that may be considered a new start, and so we couldn't do that."¶ That said, the two disasters aren't identical. Sequestration has its own unique and nasty wrinkles for the Navy. For example, the sea service has pushed hard for multi-year procurement contracts, in which it guarantees contractors the same amount every year for several years running in return for a lower overall price. Such steady-state expenditures are allowed under a continuing resolution. But sequestration cuts multi-year payments by the same amount it does almost all other programs, about 8.8 percent, which means the Navy couldn't pay the whole sum. That, in turn, would violate the contract and send everyone back to the bargaining table. So, said Mabus to reporters, "if we can't pay under sequestration, we breach a multi-year and the price just goes through the roof."¶ The Navy Secretary wasn't the only senior defense official bemoaning the current budgetary state of the United States early today. The head of Air Force Space Command, Gen. William Shelton, told reporters that the absence of a 2013 appropriations bill adds to the uncertainty engendered by sequestration. "That affects the planning for 2014 and that affects the planning for 2015, which we are deep into," Shelton said at a breakfast put on by the Defense Writers Group. So far, the general said readiness has not been affected. "Day to day we are carrying on," but he made clear that the Air Force would soon have to pare back or forgo flying hours, purchases of information technology, office furniture and the like.¶ Mabus made clear that he understood that budget cuts are probably coming no matter what, even if Congress and the White House cut a deal to avert sequestration. But rather than sequestration's automatic cuts to every program or a continuing resolution's auto-pilot continuation of last year's spending levels, he begged political leaders to give the military discretion of how to apply the cuts: Give us a bill, he said, and let us figure out how to pay it so we can protect our priorities.¶ "Nobody likes budget cuts, but if Defense or the Navy has to be a part of some ... grand bargain," Mabus told the audience at the Surface Navy conference, "then give us the top line, let us manage how any cuts , how any reductions, are made. Let us put dollars against strategy instead of simply cutting the top line."¶ Beset just a few years ago by out-of-control shipbuilding costs on programs like the Littoral Combat Ship, the Navy has vastly improved its management, Mabus argued. "We have shown, I believe pretty decisively so, that we know how to manage the budget, that we know how to set some priorities, that we know how to get money into programs, that we know how to drive a hard bargain, that we know how to get the most money for the taxpayers' dollars," he said. "Instead of mindlessly cutting, give us that chance to manage to whatever the final number is."¶ "We've shown," he said, "that we're willing to make some pretty hard choices, that we're willing to cancel some stuff."¶ Mabus mentioned both shipbuilding and maintenance as priorities he wanted to protect. But what else is left to cut?¶ "I learned a long time ago," said the veteran politician in answer to AOL Defense, "I only get in trouble when I answer what-if questions."¶ [Updated: Under Secretary Work was far more direct, as is his wont: "Shipbuilding is the No. 1 priority in the Department of the Navy. If given a choice between an aviation program and a shipbuilding program, the Secretary will choose shipbuilding."]¶ Any specifics now would just inflame key programs' partisans in Congress. But there's the rub: Sequestration and the continuing resolution may be mindless, but precisely for that reason they save political leaders from making painful choices. The sequester law actually allows the President's Office of Management and Budget to submit an alternative proposal for how to achieve the required cuts, while Congress can exempt any program it wishes from the restrictions of the CR -- but either way requires sacrificing some constituency's favorite program to save another's, and it requires legislators to step up and vote to do so. America's political class may no longer have the courage -- and there's no one left to beat it into them.

### T

#### Increase means to make greater – excludes extending duration

**Martinez, 06** – Justice for the Supreme Court of Colorado (SUPREME COURT OF COLORADO, 129 P.3d 988; 2006 Colo. LEXIS 395, Plaintiff-Appellee: DOUGLAS BRUCE, v. Defendants-Appellants: CITY OF COLORADO SPRINGS and KATHRYN YOUNG, City Clerk, in her official capacity as election officer for the city, 2/27, lexis)

Turning, then, to the language of section (3), itself, we assess the plain meaning of "tax increase" as it appears in that section.

 [\*995]  In examining "tax increase" as it appears in Amendment 1, we look to the intent of the voter as it is an initiated constitutional provision. See In re Interrogatories Relating to the Great Outdoors Colo. Trust Fund, 913 P.2d 533, 538 (Colo. 1996) ("[A] court's duty in interpreting a constitutional amendment is to give effect to the will of the people in adopting such amendment."). We also consider how the typical voter would interpret "tax increase," because our concern here is how the form of the election notice affects a voter's understanding of a proposed measure. Accordingly, we consider whether the practical, everyday meaning of "increase" is synonymous with "extension."

A tax "extension" suggests the continuation of a tax, whereas a tax "increase" suggests a greater amount will be taxed. Accordingly, a proposal to "extend" a tax implies that neither the amount nor rate of the tax will change from its current rate. Likewise, a tax "increase" indicates that the [\*\*22]  tax burden borne by an individual taxpayer will be greater than its present amount. The former indicates a continuation of the status quo, whereas the latter suggests a change that will impose a greater cost on the taxpayer.

#### Violation – the plan extends the duration of existing incentives, they don’t increase their overall amount

#### Voting issue –

#### 1. limits – allowing the aff to extend the duration of existing incentives opens the floodgates – every incentive policy that currently exists could be extended to have a longer duration. Most federal energy incentives have expiration dates

**Cunningham, 9 –** Information Research Specialist at the Congressional Research Service (Lynn, “Renewable Energy and Energy Efficiency Tax Incentive Resources” 3/23, http://fpc.state.gov/documents/organization/122318.pdf

The following list of authoritative resources is designed to assist in responding to a broad range of¶ constituent questions and concerns about renewable energy and energy efficiency tax incentives.¶ Links are provided for the following: the full text of public laws establishing and extending¶ federal renewable energy and energy efficiency incentives; federal, state, and local incentives¶ resources; incentive resources grouped by technology type (solar, wind, geothermal, and¶ biomass); CRS reports on this topic; and federal grants information resources. The last section of¶ this report includes tables displaying popular incentives, the corresponding US Code citations,¶ and current expiration dates of those incentives.

#### 2. negative ground – if you allow the aff’s interpretation, the neg won’t be able to ever win a single disad outside of politics – this should be a line in the sand to create a better topic

### DA

#### Transmission investments increasing now – but it will take a while

**POWERGRID International, 12/17/12** – from the editors based on an interview with Andre Begosso, managing director in the Accenture management consulting practice and is focused on the resources operating group. He has more than seventeen years of experience in the utility and energy industries and advises clients in the alternative energy, power generation and oil and gas sectors (“2013 trends for the power industry” December, <http://www.elp.com/blogs/eye-on-the-grid/2012/12/2013-trends-for-the-power-industry.html>)

In the absence of some major advance in energy storage, Andre said, he expects that renewable energy installation will probably start to slow as its shortcomings become more apparent to utilities and power companies.

"I would not expect these trends to continue because of the tremendous limitation that renewable technologies have. You cannot break the laws of physics or the laws of chemistry. The wind doesn't blow all the time and it never will, and the sun doesn't always shine and it never will," he said.

Trend No. 4: Energy back on the agenda

In my last blog post , I speculated about what it might take to get energy policy back on the agenda. When I asked about this, Andre said energy already is back on the agenda.

"Over the next 3 years, over $220 billion in new infrastructure will be built. But the problem with infrastructure is Rome wasn't built in a day. It takes time," he said.

This new wave of infrastructure upgrades will require a level of patience and understanding on the part of ratepayers that Andre wonders whether the average person is capable of. During Hurricane Sandy, for example, Con Edison had one of the most sophisticated electric grids available — yet it still failed, and people wonder why.

#### The PTC drives overproduction – this causes negative pricing swings that drive out baseload producers and destroy grid reliability

**Huntowski, 12** – Director of the NorthBridge Group, an independent economic and strategic consulting firm serving the electric and natural gas industries, including regulated utilities and companies active in the competitive wholesale and retail markets (Frank, “Negative Electricity Prices and the Production Tax Credit” 9/10, <http://graphics8.nytimes.com/news/business/exelon.pdf>

As a matter of both economics and public policy, no government production tax subsidy should ever be so large that it creates an incentive for a business to actually pay customers to take its product. Yet, the federal Production Tax Credit (“PTC”) for wind generation is doing just that with increasing frequency in electricity markets across the United States. In some “wind-rich” regions of the country, wind producers are paying grid operators to take their generation during periods of surplus supply. But wind producers more than make up the cost of the “negative price” payment, because they receive a $22/MWH federal production tax credit for every MWH generated.

The federal wind Production Tax Credit (“PTC”) was originally enacted in 1992 to jumpstart the wind energy industry. 1 The PTC has since been extended on six occasions and is now due to expire on December 31, 2012. Today, policymakers on both sides of the issue are debating the merits of yet another extension of the subsidy on a variety of grounds. This paper focuses on one harmful, but often overlooked, aspect of the PTC - specifically how the PTC interacts with wholesale electricity markets to create the phenomenon of distortionary “negative prices.” While the concept of negative prices might at first glance seem to be a money-saver for electricity users, or at best a harmless phenomenon, in fact these negative prices are: (a) funded by taxpayers; (b) distorting wholesale electricity markets; and (c) harming conventional generation and imperiling reliability. As recently as September 6, 2012 the Public Utilities Commission of Texas Chairman Donna Nelson cautioned policymakers against further subsidies noting that the PTC had undermined Texas reliability:

“Federal incentives for renewable energy… have distorted the competitive wholesale market in ERCOT. Wind has been supported by a federal production tax credit that provides $22 per MWH of energy generated by a wind resource. With this substantial incentive, wind resources can actually bid negative prices into the market and still make a profit. We’ve seen a number of days with a negative clearing price in the west zone of ERCOT where most of the wind resources are installed….The market distortions caused by renewable energy incentives are one of the primary causes I believe of our current resource adequacy issue… [T]his distortion makes it difficult for other generation types to recover their cost and discourages investment in new generation.” 2

As part of our analysis, we have reviewed energy production and real time pricing information

from the Nation’s grid operators to understand the production characteristics and bidding behavior of

wind producers and to assess their impact on essential conventional electric resources.

We find that:

* The PTC undermines and distorts price signals in wholesale electricity markets by incenting PTC-subsidized wind producers to sell electricity at a loss to earn enormous tax subsidies.
* This taxpayer-funded subsidy artificially depresses wholesale power prices, and in hours of the year when demand for electricity is low it can result in negative pricing. Figure 1 shows the frequency of negative prices in a number of particularly wind-rich areas over 2006-11 alongside the growth in national installed wind capacity over the same period. This figure demonstrates the clear linkage between wind generation and negative prices.
* **Wind producers can** readily **turn** wind **turbines on and off, but have no incentive to** do so **because they still receive positive margins during negative price hours** due to the PTC subsidy they earn when they generate. They have no incentive to curtail their output – which, absent the PTC, would be in their economic interest. The failure of wind generators to curtail output when wholesale prices approach zero has both short term and long term negative consequences. In the short term, the failure of wind producers to curtail output makes it more difficult for system operators to maintain reliability, and also makes it more costly for them to operate the regional electric grid.
* In the long run, the PTC destabilizes the market for conventional electricity as generators that are not eligible for the PTC are significantly harmed by negative prices, both in terms of near-term daily operational decisions, as well as long-term decisions to build or retire generation.
* America’s continued reliance on the PTC subsidy therefore will invariably deter investments in the conventional power generation needed to maintain a reliable electric system. Conventional generation is critical to reliability because wind generation often does not produce energy during times of peak electricity demand, while producing at high levels (and driving negative prices) when demand is low. In recent years, about 85% of total wind capacity has not operated during the peak hours on the highest demand days of the year, on average. Controllable conventional generation is thus needed to backstop wind and ensure the lights stay on.

Our findings lead us to conclude that the PTC should be allowed to expire under current law. PTC-driven negative prices directly conflict with the performance and operational needs of the electric system and with federal energy policies supporting well-functioning competitive wholesale markets. We urge policymakers to: (1) reconsider a national energy policy based on a tax incentive so large it incents wind producers to pay system operators to take their wind power; (2) address the reality that wind energy, while an important part of the energy mix, remains unpredictable and cannot be relied upon, especially during periods of high demand; and (3) ensure policies promoting wind do not undermine the conventional technologies that are needed to maintain reliability.

#### Pushing wind in advance of upgrades will crash the grid—causes blackouts

**Electricity Journal, 9** (“How Much More Stress Can the Grid Handle?” October, Science Direct)

Speaking at an energy conference in Chicago this summer, Jon Wellinghoff, the new chairman of the Federal Energy Regulatory Commission (FERC) said, “As we add more and more wind power, the grid will get more stressed, and there's going to be a point where the grid can’t handle (the stress) anymore.” His conclusion: “The first thing we need is to build out transmission.”

Wellinghoff is certainly correct in pointing out that **the existing grid is ill-equipped to handle** the added stress brought about by **significant amounts of new** renewable **generation** – mostly in remote areas far from major load centers and intermittent in nature. But how “we” can bring about more transmission is less clear.

A case in point occurred on Feb. 26, 2008, in Texas, when the wind suddenly died, idling much of the 8,000 MW of wind turbines. During the episode, wind generation unexpectedly dropped 82 percent, bringing the system to the brink of collapse. As intermittent renewable resources are added to the nation's grid, the chances of these types of occurrences increases. Candidate Obama was once talking about getting up to 25 percent of U.S. power from renewables by 2025, or roughly 270 GW.

#### Blackouts cause nuclear meltdowns

**Cappiello ‘11** (Dina, reporter for the AP March 29, 2011 “AP IMPACT: Long Blackouts Pose Risk to US Reactors” The Post and Courier <http://www.postandcourier.com/news/2011/mar/29/ap-impact-long-blackouts-pose-risk-us-reactors/?print>)

Long before the nuclear emergency in Japan, U.S. regulators knew that a power failure lasting for days at an American nuclear plant, whatever the cause, could lead to a radioactive leak. Even so, they have only required the nation’s 104 nuclear reactors to develop plans for dealing with much shorter blackouts on the assumption that power would be restored quickly. In one nightmare simulation presented by the Nuclear Regulatory Commission in 2009, it would take **less than a day** for radiation to escape from a reactor at a Pennsylvania nuclear power plant after an earthquake, flood or fire knocked out all electrical power and there was no way to keep the reactors cool after backup battery power ran out. That plant, the Peach Bottom Atomic Power Station outside Lancaster, has reactors of the same older make and model as those releasing radiation at Japan’s Fukushima Dai-ichi plant, which is using other means to try to cool the reactors. And like Fukushima Dai-ichi, the Peach Bottom plant has enough battery power on site to power emergency cooling systems for eight hours. In Japan, that wasn’t enough time for power to be restored. According to the International Atomic Energy Agency and the Nuclear Energy Institute trade association, three of the six reactors at the plant still can’t get power to operate the emergency cooling systems. Two were shut down at the time. In the sixth, the fuel was removed completely and put in the spent fuel pool when it was shut down for maintenance at the time of the disaster. A week after the March 11 earthquake, diesel generators started supplying power to two other two reactors, Units 5 and 6, the groups said. The risk of a blackout leading to core damage, while extremely remote, **exists at all U.S. nuclear power plants**, and some are more susceptible than others, according to an Associated Press investigation. While regulators say they have confidence that measures adopted in the U.S. will prevent or significantly delay a core from melting and threatening a radioactive release, the events in Japan raise questions about whether U.S. power plants are as prepared as they could and should be. A top Nuclear Regulatory Commission official said Tuesday that the agency will review station blackouts and whether the nation’s 104 nuclear reactors are capable of coping with them. As part of a review requested by President Barack Obama in the wake of the Japan crisis, the NRC will examine “what conditions and capabilities exist at all 104 reactors to see if we need to strengthen the regulatory requirement,” said Bill Borchardt, the agency’s executive director for operations. Borchardt said an obvious question that should be answered is whether nuclear plants need enhanced battery supplies, or ones that can last longer. “There is a robust capability that exists already, but given what happened in Japan there’s obviously a question that presents itself: Do we need to make it even more robust?” He said the NRC would do a site-by-site review of the nation’s nuclear reactors to assess the blackout risk. “We didn’t address a tsunami and an earthquake, but clearly we have known for some time that one of the weak links that makes accidents a little more likely is losing power,” said Alan Kolaczkowski, a retired nuclear engineer who worked on a federal risk analysis of Peach Bottom released in 1990 and is familiar with the updated risk analysis. Risk analyses conducted by the plants in 1991-94 and published by the commission in 2003 show that the chances of such an event striking a U.S. power plant are remote, even at the plant where the risk is the highest, the Beaver Valley Power Station in Pennsylvania. These long odds are among the reasons why the United States since the late 1980s has only required nuclear power plants to cope with blackouts for four or eight hours. That’s about how much time batteries would last. After that, it is assumed that power would be restored. And so far, that’s been the case. Equipment put in place after the Sept. 11, 2001, terrorist attacks could buy more time. Otherwise, the reactor’s radioactive core could begin to melt unless alternative cooling methods were employed. In Japan, the utility has tried using portable generators and dumped tons of seawater, among other things, on the reactors in an attempt to keep them cool. A 2003 federal analysis looking at how to estimate the risk of containment failure said that should power be knocked out by an earthquake or tornado it “would be unlikely that power will be recovered in the time frame to prevent core meltdown.” In Japan, it was a one-two punch: first the earthquake, then the tsunami.

#### Extinction

**Lendman ‘11** (Stephen, Research Associate of the Center for Research on Globalization, “Nuclear Meltdown in Japan,” <http://www.opednews.com/articles/Nuclear-Meltdown-in-Japan-by-Stephen-Lendman-110313-843.html>)

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.

#### Plan reduces prices briefly, but causes a massive price increase over time

**Lesser, 13 -** Dr. Jonathan Lesser is the founder and President of Continental Economics, Inc., an economic and litigation consulting firm providing services to utilities, industry, and regulators on a broad array of market, regulatory, investment, and environmental issues affecting all segments of the energy industry in the U.S., Canada, and Latin America (“Wind Generation Patterns and the Economics of Wind Subsidies” The Electricity Journal, Volume 26, Issue 1, January–February 2013, Pages 8–16, Science Direct)

IV. Policy Implications

Our analysis shows that continued subsidies for wind generation represent both bad economics and bad energy policy, for at least three reasons. First and foremost, wind generation's production pattern not only is volatile and unpredictable, but even more significantly, has low economic value. Rather than displacing high-variable-cost fossil generating resources used to meet peak demand, wind generation's observed availability peaks when electricity demand is lowest. As a result, wind generation tends to displace low-variable-cost generation or simply forces baseload generators to pay greater amounts to inject power onto the grid because the units cannot be cycled cost-effectively. The low economic value of wind power is comparable to the government paying farmers to plow under high-value crops in order to plant low-value ones, or even weeds.

Second, as with all subsidies, subsidized wind generation distorts electric markets by artificially lowering electric prices in the short run, but leads to higher prices in the long run. This imposes economic harm on competitive generators and consumers, **thus** reducing economic growth.

Third, because geographic dispersion of wind resources does not address inaccurate forecasts of wind availability, additional fossil generating resources are required to maintain system reliability. Moreover, geographic dispersion requires billions of dollars to be spent on additional transmission lines. These costs, along with most of the system integration costs, are socialized across all grid customers, that is, borne by all generators and, ultimately, consumers. In other words, wind generation imposes external costs on other market participants.

After 35 years of direct and indirect subsidies, there is no economic rationale for continued subsidization of wind generation. At the federal level, direct subsidies, such as the federal **PTC**, **should not be continued**. State-level subsidies, whether feed-in tariffs established by state regulators or statutory RPS mandates, further exacerbate market distortions and raise electricity prices, again to the detriment of consumers.

#### This causes a depression

**Entine, 9** – adjunct fellow at the American Enterprise Institute (Jon, “U.S. and Climate Change--Rescue of the Planet Postponed?”, 2/24, <http://aei.org/publications/filter.all,pubID.29333/pub_detail.asp>)

**The correlation between** economic **growth and energy costs is high and negative**; when energy costs go up, productivity takes a nosedive. In these extraordinary times, arguably the top priority must be to ensure that a secular financial downturn doesn't turn into a worldwide structural depression. If that happens, both the economy and the environment will be losers.

### CP

#### The United States federal government should terminate the wind production tax credit. The Environmental Protection Agency should set technology-neutral performance standards requiring a state-specific, scalable reduction in carbon emissions from existing power plants in the United States, based on recommendations from the Natural Resources Defense Council.

#### The CP substantially decreases CO2 emissions, air pollution and boosts the economy by driving a mix of investments in energy efficiency and renewables

**NRDC, 12 –** Natural Resources Defense Council Issue Brief (“Using the Clean Air Act to Sharply Reduce Carbon Pollution from Existing Power Plants, Creating Clean Energy Jobs, Improving Americans’ Health, and Curbing Climate Change” December, <http://www.nrdc.org/air/pollution-standards/files/pollution-standards-IB.pdf>)

This administration can create jobs, grow the economy, and curb climate change by going after the country’s largest source of climate-changing pollution—emissions from the hundreds of existing power plants. NRDC’s proposal shows how the Environmental Protection Agency, in partnership with the states, can set new carbon pollution standards under existing authority in the Clean Air Act that will cut existing power plant emissions 26 percent by 2020 (relative to peak emissions in 2005). The approach includes an innovative provision that will drive investment in cost-effective energy efficiency, substantially lowering the cost of compliance, lowering electricity bills, and creating thousands of jobs across the country. Further, NRDC’s analysis shows that the benefits—in saved lives, reduced illnesses and climate change avoided—far outweigh the costs, by as much as 15 times.¶ Having endured a year when climate change contributed to damaging floods, widespread wildfires, record drought and superstorm Sandy, which cost Americans hundreds of lives and hundreds of billions of dollars, we can’t afford to wait any longer to act. For the health and welfare of Americans, for the nation’s economy, and for the stability of the planet, now is the time to reduce pollution from America’s power plants, dramatically increase the energy efficiency of our economy and reduce the threat of climate change.¶ We know where the pollution is; now we just have to go get it.¶ THE IMPERATIVE TO CUT CARBON POLLUTION¶ Unless heat-trapping carbon pollution is sharply reduced, negative impacts on the health of our families, communities, economy and our planet will only grow. ¶ Already, climate change is increasing the numbers of record heat waves, droughts, and floods—and these extreme weather events will become even more powerful and frequent, threatening both lives and the global economy. In the wake of superstorm Sandy, which devastated swaths of the U.S. coastline, states and cities must rebuild for this new reality. But simply preparing for more extreme weather is not an answer by itself. Future storms will be stronger and do even worse damage unless we act now to curb the carbon pollution that is driving dangerous climate change. ¶ To this end, nothing is more important than reducing carbon dioxide (CO2) emissions from the largest industrial source of pollution: electricity-generating power plants. In the United States these plants emit about 2.4 billion tons of CO2 each year, roughly 40 percent of the nation’s total emissions. ¶ To be sure, the EPA has taken important first steps by setting standards that will cut the carbon pollution from automobiles and trucks nearly in half by 2025 and by proposing standards to limit the carbon pollution from new power plants. But the EPA has yet to tackle the CO2 pollution from hundreds of existing fossil-fueled power plants in the United States. ¶ The EPA has both the authority and responsibility to reduce pollution from these plants under the Clean Air Act, the nation’s bedrock air pollution law adopted in 1970. NRDC has crafted an effective and flexible approach to cut carbon pollution from existing power plants that: ¶ n Uses the legal authority under the Clean Air Act.¶ n Recognizes differences in the starting points among states.¶ n Charts a path to affordable and effective emissions reductions by tapping into the ingenuity of the states and the private sector.¶ n Provides multiple compliance options, including cleaning up existing power plants, shifting power generation to plants with lower emissions or none at all, and improving the efficiency of electricity use.¶ Using the same sophisticated integrated planning model used by the industry and the EPA, NRDC calculated the pollution reductions that would result from the proposed approach—and the costs and benefits of achieving those reductions.¶ The plan would cut CO2 pollution from America’s power plants by 26 percent from 2005 levels by 2020 and 34 percent by 2025. The price tag: about $4 billion in 2020. But the benefits— in saved lives, reduced illnesses, and climate change avoided —would be $25 billion to 60 billion, 6 to 15 times greater than the costs. For Americans’ health and welfare, for the nation’s economy, and for the health of the planet, we can’t afford not to curb the carbon pollution from existing power plants. ¶ EPA HAS THE LEGAL AUTHORITY AND OBLIGATION TO REDUCE CARBON POLLUTION ¶ The Clean Air Act has been remarkably successful over its 40-year history. Most Americans now breathe much cleaner air, our cities are no longer enveloped in smoke and smog, the nation’s lakes and rivers are recovering from acid rain, and the ozone layer that shields us from dangerous ultraviolet radiation is healing after the phase-out of CFCs and other ozone-destroying chemicals.¶ The Clean Air Act can also help stem the threat of climate change by reducing carbon pollution. In 2007, in Massachusetts v. EPA, the U.S. Supreme Court ruled that the EPA has the authority and responsibility to curb heattrapping pollutants under the Clean Air Act, rejecting the Bush Administration’s claim that greenhouse gases are not pollutants under that law. In that case, the nation’s highest court ruled that if the science shows CO2 and other heattrapping pollutants endanger public health and welfare, then the EPA must set standards to reduce their emissions from new cars and trucks. In President Obama’s first term, the EPA responded to the Supreme Court decision by presenting overwhelming scientific evidence that CO2 and the other heat-trapping pollutants do indeed endanger public health and welfare. The administration then set new standards in 2010 and 2012 to dramatically cut the carbon pollution from new cars and SUVs and from heavy trucks and buses. ¶ In a second Supreme Court decision in 2011, American Electric Power v. Connecticut, the high court ruled that it is also the EPA’s responsibility to curb the carbon pollution from the nation’s power plants. The legal authority for power plant standards comes from Section 111 of the Clean Air Act, which directs the EPA to set “standards of performance” (typically a maximum emissions rate) for stationary sources like power plants that emit harmful air pollutants. Section 111(b) covers new facilities, while Section 111(d) gives the EPA and states shared responsibility for curbing pollution from existing facilities. Under Section 111(d), the EPA issues guidelines on “the best system of emission reduction,” and then each state is required to adopt and submit a plan for setting and meeting emissions standards. ¶ In April 2012, the agency took the first step toward addressing power plant pollution by proposing the “Carbon Pollution Standard for New Power Plants” under Section 111(b). The standard would require that new plants emit no more than 1000 pounds of CO2 per megawatt-hour (lbs/ MWh). To put that in context, coal power plants typically produce about 2100 lbs/MWh, while natural gas-fired plants emit 1000/MWh or less. Power companies building new facilities could thus meet the standard with existing natural gas power plant technologies, zero-emitting renewables, or with efficient coal plants equipped with systems to capture and sequester carbon dioxide. ¶ The EPA’s assessment, widely shared in the private sector, is that even without the proposed carbon pollution standard new power supply needs will be met by a combination of natural gas, renewables, energy efficiency, and other resources because the construction of new conventional coal-fired power plants is uneconomic. The new source standard is expected to be finalized in the next few months. EPA, however, still hasn’t addressed the largest source of carbon pollution, existing power plants. NRDC’s approach addresses the challenge of creating equitable regulations for these sources under Section 111(d), recognizing that the type and mix of power plants varies among the states. If all existing power plants were limited to 1000 lbs of CO2 /MWh, for instance, states with a high percentage of coal-fired plants would face a much larger task compared to those with lots of natural gas plants or renewables. The flexible approach NRDC proposes will help reduce the carbon pollution from existing power plants in a fair, affordable, and achievable manner.¶ STATE-SPECIFIC STANDARDS AND FLEXIBLE COMPLIANCE OPTIONS ¶ The NRDC plan has two key elements: ¶ (1) EPA would set state-specific emissions rates, reflecting the diversity of the nation’s electricity sector, as well as the state-by-state structure of Section 111(d).¶ (2) Power plant owners and states would have broad flexibility to meet standards in the most cost-effective way, through a range of technologies and measures.¶ Here’s how it would work: the EPA would first tally up the share of electricity generated by coal and gas-fired plants in each state during the baseline years (2008-2010 was used for this analysis). Then the agency would set a target emission rate for each state for 2020, based on the state’s baseline share of coal and gas generation. The state standards proposed and analyzed in this report were calculated by applying a rate of 1500 lbs of CO2 /MWh for the baseline coal generation share and 1000 lbs of CO2 /MWh for the baseline gas-fired generation share. ¶ For example, a state that now gets 90 percent of its fossilfueled electricity from coal and 10 percent from gas would be required to reduce its 2020 emissions rate to 1450 lbs/MWh [(90 percent x 1500) + (10 percent x 1000)]. In contrast, a state with 90 percent gas-fired generation would have a target of 1050 lbs/MWh [(10 percent x 1500) +(90 percent x 1000)]. A state starting with a 50:50 ratio of coal and gas generation would have a target of 1250 lbs/MWh. The allowable emissions rate would drop further in 2025.¶ The emissions standard for each state would be an overall emission rate average of all fossil fuel plants in the state. An individual plant could emit at a higher or lower rate. ¶ Each covered plant with an emission rate above the state standard could meet the standard by using one or more compliance options: First, a plant could reduce its own CO2 emission rate by retrofitting a more efficient boiler or installing CO2 capture systems, for instance, or it could burn a mixture of coal and cleaner fuels, such as gas or certain types of biomass.¶ Second, the owners of multiple power plants could average the emissions rates of their plants, meeting the required emission rate on average by running coal plants less often, and ramping up generation from natural gas plants or renewable sources instead. They could retire coal plants and build new natural gas and renewable capacity, if needed, creating a cleaner overall electricity-generating fleet. Low- or zero-emitting sources, such as wind and solar, would earn credits that generators could use to lower their average emissions rate. The plan also allows trading of credits between companies within a state, and across state lines among states that choose to allow it, further lowering the overall costs of compliance.¶ An innovative feature of the proposal is the inclusion of energy efficiency. State-regulated energy efficiency programs could earn credits for avoided power generation, and avoided pollution. Generators could purchase and use those credits towards their emissions compliance obligations, effectively lowering their calculated average emissions rate. Energy efficiency is one of the lowest cost energy resources and emission reduction options. States could use this provision to slash emissions without costly and lengthy power plant retrofits or new construction, reducing the overall cost of the regulations.

### Solvency

#### Ending the PTC only ends overdevelopment of wind

**Dismukes, 12** - professor, associate executive director, and director of Policy Analysis at the Center for Energy Studies, Louisiana State University. His research interests are related to the analysis of economic, statistical, and public policy issues in energy and regulated industries (David, “Removing Big Wind's "Training Wheels": The Case for Ending the Federal Production Tax Credit” October, http://www.americanenergyalliance.org/wp-content/uploads/2012/10/Dismukes-Removing-Big-Winds-Training-Wheels.pdf)

If anything, the federal wind PTC is contributing to an increasing degree of overdevelopment that is of questionable economics, and at least in part, may be creating a number of negative externalities for other generation suppliers and consumers. While the wind generation industry and its advocates argue that the federal PTC should be continued in order to maintain current wind generation development and jobs, these arguments overlook the fact the wind industry is already over-built with considerable excess capacity in many parts of the U.S. The federal wind PTC contributes to this excess development by over-subsidizing an industry that has become increasingly more competitive. Continuing the federal wind PTC is not needed to maintain profitability or grow an “infant industry,” and would serve no other purpose but continue recent trends that distort otherwise competitive wholesale power markets and lead to a host of hidden costs that will be paid by taxpayers and electricity customers today, and for many years to come.

#### It causes a market correction – overall wind growth will still happen

**Dismukes, 12** - professor, associate executive director, and director of Policy Analysis at the Center for Energy Studies, Louisiana State University. His research interests are related to the analysis of economic, statistical, and public policy issues in energy and regulated industries (David, “Removing Big Wind's "Training Wheels": The Case for Ending the Federal Production Tax Credit” October, http://www.americanenergyalliance.org/wp-content/uploads/2012/10/Dismukes-Removing-Big-Winds-Training-Wheels.pdf)

A recent statement from Siemens Wind Energy, a major wind turbine manufacturer, highlighted the over-subsidization created by the “one-size-fits-all” federal PTC. Siemens characterized 2012 wind generation installation levels of 6,000 wind turbines as “artificially high,” conceding not only that “[t]he PTC…brought this artificial peak,” but also identifying as major drivers for a needed industry correction“[natural] gas prices, which are traditionally projected at $4 to $5 per million BTUs have stabilized at about $2 per million BTU and, of course the economy is still lagging ... a perfect storm of events.”39

Siemens, in fact, offered an optimistic outlook for future post-PTC wind development, indicating new construction likely would “rebound” later in the decade even without the federal wind PTC, and even with continued moderate natural gas pricing. This highlights that any near-term, post-PTC wind capacity contraction likely reflects an efficient market correction to address considerable wind generation over-development, rather than any energy policy failure.

#### State RPS requirements create guaranteed wind market growth without the PTC

**Dismukes, 12 -** professor, associate executive director, and director of Policy Analysis at the Center for Energy Studies, Louisiana State University (“The Case for Ending the Wind PTC” 12/17, <http://www.instituteforenergyresearch.org/2012/12/17/dismukes-the-case-for-ending-the-wind-ptc/>)

Over the past few months, wind advocates have argued for the eighth extension of the federal wind Production Tax Credit (PTC), scheduled to expire at the end of the year. Contrary to popular rhetoric, the wind industry is no longer the infant industry it was when the federal wind PTC was first enacted in 1992, but one comprised of 50,000 megawatts (MWs) of nameplate capacity, representing close to a five-fold increase since 2006. The federal wind PTC no longer represents a subsidy needed to jump start a nascent, but promising industry, but instead, has devolved into a classic case of “rent seeking” by a well-established industry seeking to maintain profits through a generous tax subsidy.

Wind advocates often claim that recent gains in wind generation development will be compromised if the federal wind PTC is allowed to expire. The wind industry and its advocates cite thousands of jobs lost and paint a picture of permanently-shuttered green manufacturing in the wake of the tax subsidy’s sunset. What is not mentioned is that the Congressional Joint Committee on Taxation has found that a simple one year extension of the federal wind PTC will cost all U.S. taxpayers an additional $12.1 billion, or an amount equal to $300,000 for each active wind energy job in the industry at the end of 2011. While everyone in this economy wants to promote job growth, subsidizing green jobs at a rate of $300,000 per job seems a bit excessive.

Also missed is the fact that wind generation has a guaranteed opportunity for market growth afforded to no other type of traditional generation technology. Today some 30 states and the District of Columbia have renewable portfolio standard (RPS) mandates that require energy suppliers to provide renewable generation to their customers. These mandates increase to a level that by 2030 is almost three times the amount of wind capacity currently operational.

Wind advocates suggest the industry will simply fall apart should the federal wind PTC expire. Such a representation is melodramatic and entirely inconsistent with the facts. While some speculative wind generation development may contract, particularly the recent development stimulated by the sugar rush of the 1603 investment tax credits included as part of the Stimulus Plan, the longer term market growth opportunities for wind and other renewables is tremendous. Standards & Poor’s, for instance, recently estimated as much as $150 billion in new renewable energy investment opportunities over the next 10 years, even if the federal wind PTC is not renewed, driven in large part by opportunities in wind energy development.

#### Removing the PTC allows the industry adaption – causes greater innovation and cost competitiveness

**Dismukes, 12** - professor, associate executive director, and director of Policy Analysis at the Center for Energy Studies, Louisiana State University. His research interests are related to the analysis of economic, statistical, and public policy issues in energy and regulated industries (David, “Removing Big Wind's "Training Wheels": The Case for Ending the Federal Production Tax Credit” October, http://www.americanenergyalliance.org/wp-content/uploads/2012/10/Dismukes-Removing-Big-Winds-Training-Wheels.pdf)

Trade press reports also note that realistic wind developers in the industry are preparing for a post-PTC world. Paul Gaynor, CEO of First Wind, was recently reported as noting that he could see the elimination of PTC as being a “good thing” for the industry.33 Using the PTC to finance projects, through tax equity, is expensive, and the elimination of the PTC could lower the average cost of capital needed to finance projects by as much as $7 per MWh.34 Gaynor also noted that he sees a path that easily leads to making renewables subsidy-free and competitive with conventional forms of power.35 To get there, the wind industry needs to reduce turbine prices, which in 2012 are already reported to be 15 percent lower than 2011 levels, increase operating capacity factors (each 10 percent improvement in a project’s capacity factor is worth $7/MWh), and extend the rated lives of currently-operating projects from 25 to 30 years.36 Even if the federal wind PTC were allowed to expire, wind producers therefore have the opportunity to offset these losses not only through REC price increases and the previously detailed continued growth in a state renewable energy mandates, but also through continued efficiency gains. Such opportunities are supported by the recent comments of First Wind’s Senior Vice president Pete Keel, who concluded that in “our view is that the PTC is the wrong long-term solution.”37

### Economy

#### No internal link between wind manufacturing and US manufacturing, and components will be imported

**Institute for Energy Research, 11** (“Rebutting Ms. Bode’s Wind Comments” 11/14,

<http://www.instituteforenergyresearch.org/2011/11/14/rebutting-bodes-20-percent-by-2030/>)

Wind turbine manufacturing is responsible for a very small share (less than 1 percent) of the total manufacturing jobs (11.5 million) in the United States in 2010. According to the DOE report that evaluated the 20 percent wind energy in 2030, turbine assembly and component plants would supply about 32,000 manufacturing jobs in 2026. But the American Wind Energy Association’s assessment is that the number would be 3 to 4 times that amount under a long-term stable policy environment. As CRS notes, the real number will be dependent not only on the demand for wind, but also on corporate decisions of where to produce the needed components. Those decisions could very well result in manufacturing jobs outside of the United States. As CRS notes, imports of wind generating equipment increased from $482.5 million in 2005 to $2.5 billion in 2008, held at $2.3 billion in 2009 and decreased to $1.2 billion in 2010 due to lower relative demand for new wind energy, declining prices, and new manufacturing plants in the United States. While European suppliers were the leaders in wind equipment imports to the United States, South Korea and China are now becoming players in the U.S. market.

#### It won’t promote job growth – prior job stagnation under the PTC proves

**Brown, 12 -** Senior Vice President, Federal Government Affairs and Public Policy, Exelon Corporation (David, “It's Time to Pull the Plug on the PTC” 12/21, <http://energy.nationaljournal.com/2012/12/should-congress-support-wind-t.php>)

According to the Congressional Joint Committee on Taxation, the one year extension of the PTC approved by the Senate Finance Committee would cost taxpayers more than $12 billion. This is more money than our country can afford to support a mature, thriving technology. To support this unnecessary subsidy, over 4 million American families earning the median income of $50,000 would have to dedicate their entire tax burden to support this one industry. The PTC is costly and unnecessary.

Further, the wind lobby claims that a $12 billion extension of the PTC is necessary to save 37,000 wind jobs. That amounts to $322,000 per job. In actuality, many of these jobs are at risk regardless of whether the PTC is extended. With the PTC solidly in place, the wind industry lost 10,000 jobs between 2009 and 2010, and employment stagnated between 2010 and 2011. The record wind energy growth in 2012 is largely due to companies building wind farms only to qualify for the subsidy. The Congressional Research Service (CRS) has stated that even with a permanent wind PTC extension, the industry will lose jobs.

#### Job siphoning – federal investment in wind diverts investment from more productive parts of the economy

**Green, 9** - resident fellow at AEI (Kenneth, “Green Illusions”, 2/25, <http://aei.org/publications/filter.all,pubID.29443/pub_detail.asp>

Let's review the reasons why governments cannot create jobs, and why labelling them "green" doesn't change the basic dynamics.

Let's start with the fallacy that governments can create jobs. This fallacy was exploded all the way back in 1845 by a French politician and political economist named Frédéric Bastiat. Bastiat pointed out that the only way governments can create jobs is by first obliterating other jobs.

Sometimes, they obliterate other jobs by diverting taxpayer money away from the economic uses the taxpayer would have pursued if they had kept their taxes.

Other times, they obliterate jobs by imposing regulations that kill off one industry in favour of another. In still other situations, they impose mandates, such as using recycled paper to create an artificial market for recycled paper which reduce jobs in fresh-paper production.

In the green energy case, they are doing all of the above: Taxpayer dollars are being used to subsidize the renewable energy sector; damaging regulations are being implemented on the traditional fossil fuel sector, and mandates for the use of renewable energy are being issued, creating a false market in wind power at the expense of fossil fuel and nuclear power. Governments also invariably siphon off a good part of the money for "administration," creating civil service jobs that pay comparatively higher wages than the private sector for similar activity.

Inevitably, government efforts to create jobs cost the economy jobs and, adding insult to injury, divert limited resources to inefficient uses, causing economic underperformance.

#### Global growth will increase – long term trends

**Lowrey, 1/23/13** (Annie, “I.M.F. Forecasts Modest Global Economic Growth” New York Times, <http://www.nytimes.com/2013/01/24/business/economy/imf-forecast-global-economic-growth-modest-at-best.html?_r=0>)

The International Monetary Fund said on Wednesday that it continued to expect a modest upturn in global growth in 2013, with fewer risks of major policy mistakes and lower levels of financial stress.¶ The fund cautioned, however, that growth was not expected to snap back to precrisis levels in the coming years. Over all, the fund expects global growth of 3.5 percent in 2013 and 4.1 percent in 2014, up from 3.2 percent in 2012. In the years just before the global downturn, annual economic growth was 4.5 to 5.5 percent.¶ “If crisis risks do not materialize and financial conditions continue to improve, global growth could be stronger than projected,” the Washington-based fund said in its economic report. “However, downside risks remain significant, including renewed setbacks in the euro area and risks of excessive near-term fiscal consolidation in the United States. Policy action must urgently address these risks.”¶ The fund issued a routine update to the projections it makes in its twice-yearly World Economic Outlook report. This time, it whittled down many of the forecasts for 2013 that it had made in October, knocking 0.1 percentage point from its United States growth forecast, 0.3 percentage point from the euro area and 0.4 percentage point from the newly industrialized Asian economies, like Singapore and South Korea.¶ Still, the International Monetary Fund noted that financial stresses and the risk of a major policy shock in Europe and the United States had decreased. “Optimism is in the air,” said Olivier Blanchard, the fund’s chief economist, at a news conference. “Some cautious optimism may indeed be justified,” he added. “We may have avoided the cliffs, but we still face high mountains.”

#### Strong manufacturing growth inevitable – and long term, and will drive the entire economy

**Vavra, 1/21/13** - Content Manager, CFE Media (Bob, “'Manufacturing Renaissance' Will Boost North American Growth” Plant Engineering, <http://www.plantengineering.com/single-article/manufacturing-renaissance-will-boost-north-american-growth/77f334e43714030652426e6114f78407.html>

The continuing momentum around manufacturing’s growth over the past four years is changing the way suppliers are examining and serving the market, a top Siemens executive told a press conference at the opening of the ProMat Show, sponsored by the Material Handling International.

“North America is on the cusp of a manufacturing renaissance,” said Doug Keith, president of Siemens Drives Technology. “When you look at the U.S., Canada and Mexico, that’s 25% of the world’s economy. We think between now and 2018, North America will make up 20% of the global GDP growth. We think it will grow $600 billion between now and 2018.

“That means shortening product lifecycles, and reshoring of jobs to be closer to our customers,”

Keith added. “It’s important to understand what supplier like Siemens what can drive cost efficiency and automation efficiency. My personal opinion is that the manufacturing sector will have greater growth in the next few years than GDP as a whole.”

#### Even massive economic decline has zero chance of war

Robert **Jervis 11**, Professor in the Department of Political Science and School of International and Public Affairs at Columbia University, December 2011, “Force in Our Times,” Survival, Vol. 25, No. 4, p. 403-425

Even if war is still seen as evil, the security community could be dissolved if severe conflicts of interest were to arise. Could the more peaceful world generate new interests that would bring the members of the community into sharp disputes? 45 A zero-sum sense of status would be one example, perhaps linked to a steep rise in nationalism. More likely would be a worsening of the current **economic difficulties**, which could itself produce greater nationalism, undermine democracy, and bring back old-fashioned beggar-thy-neighbor economic policies. While these dangers are real, it is hard to believe that the conflicts could be great enough to lead the members of the community to contemplate fighting each other. It is not so much that economic interdependence has proceeded to the point where it could not be reversed – states that were more internally interdependent than anything seen internationally have fought bloody civil wars. Rather it is that even if the more extreme versions of free trade and economic liberalism become discredited, it is hard to see how without building on a pre-existing high level of political conflict leaders and mass opinion would come to believe that their countries could prosper by impoverishing or even attacking others. Is it possible that problems will not only become severe, but that people will entertain the thought that they have to be solved by war? While a pessimist could note that this argument does not appear as outlandish as it did before the financial crisis, an optimist could reply (correctly, in my view) that the very fact that we have seen such a sharp economic down-turn without anyone suggesting that force of arms is the solution shows that even if bad times bring about greater economic conflict, it will not make war thinkable.

### Warming

#### Wind output can’t meet peak demand

**Huntowski, 12** – Director of the NorthBridge Group, an independent economic and strategic consulting firm serving the electric and natural gas industries, including regulated utilities and companies active in the competitive wholesale and retail markets (Frank, “Negative Electricity Prices and the Production Tax Credit” 9/10, <http://graphics8.nytimes.com/news/business/exelon.pdf>

The fact that wind generation disproportionally influences prices in periods of low demand for power is a result of wind generation’s intermittent nature and unfavorable output pattern. To maintain reliability, electric system operators need generation resources to be available when electricity demand peaks and they need the most power to supply the system. Yet on both an hourly and seasonal basis, data from the system operators confirms that wind output is consistently lowest when demand is greatest, such as on hot humid summer days, and highest in Fall and Spring when electric demand is the lowest. Figure 9 utilizes actual hourly demand and wind output in MISO earlier in 2012 to illustrate this problem. On the left hand side of Figure 9 we plot the total hourly demand in MISO for the first nine days of April 2012 together with the MISO-wide wind output for the same period. On the right hand side we plot the same data for the first nine days of July 2012.

The difficulties that wind’s unfavorable production pattern creates for reliable system operation is further exacerbated by the typical daily patterns of wind production during summer months. For instance, we see that the daily production profile of wind in July is inversely correlated with demand; when demand is highest (during hot summer days) wind output is at its lowest and during the nighttime when demand is relatively low wind generation is at its highest. Furthermore, compared to wind production in April, production in July is much lower on average. This unfavorable wind production shape is not under the control of system operators; rather, it is purely a function of fluctuating wind patterns. Accordingly, controllable (or “dispatchable”) generation is required to substitute for wind generation if the wind does not blow during peak demand conditions. This phenomenon of wind generation not correlating with peak load conditions occurs consistently in all markets with significant wind generation.

Figure 10 shows the “wind gap” between demand and wind output during summer on-peak hours (the sixteen hours during each weekday roughly corresponding to daylight hours). Demand and wind output for the summer on-peak period are shown relative to their average level across all hours of the year. Throughout 2011 in MISO, PJM, and ERCOT summer on-peak demand ranged from 24% to 42% higher than average demand during the year, while wind output was between 33% and 61% lower than its average during the year.

During the most critical peak demand hours of the year from a reliability perspective (defined as the peak demand period of each of the 10 highest demand days in each year) most wind capacity does not deliver needed energy to the system. As shown in Figure 11, between 82 and 86% of designed wind capacity was not operating during the top 10 peak demand days in PJM, MISO, and ERCOT in 2012. 8 In contrast, only about 10% or less of conventional generation capacity will typically be unavailable during these periods.

The Federal PTC thus costs taxpayers billions of dollars for a generating resource that produces the least amount of electricity when it is needed the most. And, as explained below, the negative prices created by the PTC penalize other resources that are critical to backstopping wind’s fluctuating output.

#### Empirically – large wind penetration increases emissions – intermittence means stop-start fossil fuel backups that result in higher overall air pollution

**Michaels, 11 -** Professor of Economics at California State University, Fullerton and Senior Fellow at the Institute for Energy Research and Adjunct Scholar at the Cato Institute (Robert, “Panel Testimony on H.R. 1719 and H.R. 2915” 9/22, <http://www.cato.org/publications/congressional-testimony/panel-testimony-hr-1719-hr-2915>)

Because wind requires fossil-fuel generation as backup we cannot simply conclude that a mwh of wind power eliminates the pollutants in a mwh of conventional power. Research by gas marketer Bentek Energy found that in some areas additional wind power has strikingly perverse consequences. Bentek found that large increases in Texas and Colorado wind capacity indeed led to less coal-fired generation. Emissions of EPA “criteria pollutants” from these plants, however, actually increased, and CO2 emissions were unchanged.6 Operating data showed that wind’s variability required numerous quick adjustments by coal-fired units, which were responsible for the added pollution. Bentek’s controversial conclusion was that the total load in the area could have been served with lower total emissions had the wind units never existed.

#### Wind’s a net negative for CO2

#### Zehner, 12

(Green illusions, Visiting Scholar-UC Berkeley, MS-University of Amsterdam-Science & Technology Studies, Google Books)

The presumed carbon benefits of a remote wind farm, if thoughtlessly situated, could be entirely wiped out by the destructive impact of the deforestation surrounding it—a humbling reminder that the technologies we create are only as durable as the contexts we create for them. Wind proponents are keen to proclaim that their turbines don't spew carbon dioxide. This is correct, but it is the answer to the wrong question. We'll consider some more revealing questions soon, but let's begin with a basic one: turbines may not exhaust co2 but what about the total carbon footprint of the mining, building, transporting, installing, clearing, maintaining, and decommissioning activities supporting them? Fossil fuels (including, especially, toxic bunker fuels) supply the power behind these operations. The largest and most efficient turbines rest upon massive carbon-intensive concrete bases, which support the hulking towers and (usually) prevent them from toppling in heavy winds. Any thoughtful consideration of the carbon implications of wind turbines should acknowledge these activities. Nevertheless, carbon footprint calculations can be rather shifty, even silly at times, despite their distinguished columns of numerical support. They hinge on human assumptions and simplifications. They ignore the numerous other harms of energy production, use, and distribution. They say nothing of political, economic, and social contexts. They offer only the most rudimentary place to start. Former UK leader of Parliament David Cameron installed a wind turbine on his London home, winning him positive reviews from econnoisseurs. However symbolically valuable, it was likely a waste of time, money, and energy according to carbon hawks. That's because homes, trees, towers, and other structures in cities choke airflow, which too often leaves the turbines unmotivated to spin. A British study claims that a third of small wind turbine locations in the windy coastal city of Portsmouth will never work off the carbon footprint invested to build and install them. A full two-thirds of Manchester's wind turbines leave their homes with a higher carbon footprint, not a lower one.14

Warming won’t cause extinction

Barrett, professor of natural resource economics – Columbia University, ‘7

(Scott, Why Cooperate? The Incentive to Supply Global Public Goods, introduction)

First, climate change does not threaten the survival of the human species.5 If unchecked, it will cause other species to become extinction (though biodiversity is being depleted now due to other reasons). It will alter critical ecosystems (though this is also happening now, and for reasons unrelated to climate change). It will reduce land area as the seas rise, and in the process displace human populations. “Catastrophic” climate change is possible, but not certain. Moreover, and unlike an asteroid collision, large changes (such as sea level rise of, say, ten meters) will likely take centuries to unfold, giving societies time to adjust. “Abrupt” climate change is also possible, and will occur more rapidly, perhaps over a decade or two. However, abrupt climate change (such as a weakening in the North Atlantic circulation), though potentially very serious, is unlikely to be ruinous. Human-induced climate change is an experiment of planetary proportions, and we cannot be sur of its consequences. Even in a worse case scenario, however, global climate change is not the equivalent of the Earth being hit by mega-asteroid. Indeed, if it were as damaging as this, and if we were sure that it would be this harmful, then our incentive to address this threat would be overwhelming. The challenge would still be more difficult than asteroid defense, but we would have done much more about it by now.

Existing carbon triggers the impact

Daniel **Rirdan 12**, founder of The Exploration Company, “The Right Carbon Concentration Target”, June 29, <http://theenergycollective.com/daniel-rirdan/89066/what-should-be-our-carbon-concentration-target-and-forget-politics?utm_source=feedburner&utm_medium=feed&utm_campaign=The+Energy+Collective+%28all+posts%29>

James Hansen and other promi­nent cli­ma­tol­o­gists are call­ing to bring the CO2 atmos­pheric level to 350 parts per million. In fact, an orga­ni­za­tion, 350.org, came around that ral­ly­ing cry. This is far more radical than most politicians are willing to entertain. And it is not likely to be enough. The 350ppm target will not reverse the clock as far back as one may assume. It was in 1988 that we have had these level of car­bon con­cen­tra­tion in the air. But wait, there is more to the story. 1988-levels of CO2 with 2012-levels of all other green­house gases bring us to a state of affairs equiv­a­lent to that around 1994 (2.28 w/m2). And then there are aerosols. There is good news and bad news about them. The good news is that as long as we keep spewing mas­sive amounts of particulate matter and soot into the air, more of the sun’s rays are scattered back to space, over­all the reflec­tiv­ity of clouds increases, and other effects on clouds whose over­all net effect is to cool­ing of the Earth sur­face. The bad news is that once we stop polluting, stop run­ning all the diesel engines and the coal plants of the world, and the soot finally settles down, the real state of affairs will be unveiled within weeks. Once we fur­ther get rid of the aerosols and black car­bon on snow, we may be very well be worse off than what we have had around 2011 (a pos­si­ble addi­tion of 1.2 w/m2). Thus, it is not good enough to stop all green­house gas emis­sions. In fact, it is not even close to being good enough. A carbon-neutral econ­omy at this late stage is an unmit­i­gated disaster. There is a need for a carbon-negative economy. Essentially, it means that we have not only to stop emitting, to the tech­no­log­i­cal extent pos­si­ble, all green­house gases, but also capture much of the crap we have already out­gassed and lock it down. And once we do the above, the ocean will burp its excess gas, which has come from fos­sil fuels in the first place. So we will have to draw down and lock up that carbon, too. We have taken fos­sil fuel and released its con­tent; now we have to do it in reverse—hundreds of bil­lions of tons of that stuff.

#### 6 degree warming inevitable

**AP 9** (Associated Press, Six Degree Temperature Rise by 2100 is Inevitable: UNEP, September 24, <http://www.speedy-fit.co.uk/index2.php?option=com_content&do_pdf=1&id=168>)

Earth's temperature is likely to jump six degrees between now and the end of the century even if every country cuts greenhouse gas emissions as proposed, according to a United Nations update. Scientists looked at emission plans from 192 nations and calculated what would happen to global warming. The projections take into account 80 percent emission cuts from the U.S. and Europe by 2050, which are not sure things. The U.S. figure is based on a bill that passed the House of Representatives but is running into resistance in the Senate, where debate has been delayed by health care reform efforts. Carbon dioxide, mostly from the burning of fossil fuels such as coal and oil, is the main cause of global warming, trapping the sun's energy in the atmosphere. The world's average temperature has already risen 1.4 degrees since the 19th century. Much of projected rise in temperature is because of developing nations, which aren't talking much about cutting their emissions, scientists said at a United Nations press conference Thursday. China alone adds nearly 2 degrees to the projections. "We are headed toward very serious changes in our planet," said Achim Steiner, head of the U.N.'s environment program, which issued the update on Thursday. The review looked at some 400 peer-reviewed papers on climate over the last three years. Even if the developed world cuts its emissions by 80 percent and the developing world cuts theirs in half by 2050, as some experts propose, the world is still facing a 3-degree increase by the end of the century, said Robert Corell, a prominent U.S. climate scientist who helped oversee the update. Corell said the most likely agreement out of the international climate negotiations in Copenhagen in December still translates into a nearly 5-degree increase in world temperature by the end of the century. European leaders and the Obama White House have set a goal to limit warming to just a couple degrees. The U.N.'s environment program unveiled the update on peer-reviewed climate change science to tell diplomats how hot the planet is getting. The last big report from the Nobel Prize-winning Intergovernmental Panel on Climate Change came out more than two years ago and is based on science that is at least three to four years old, Steiner said. Global warming is speeding up, especially in the Arctic, and that means that some top-level science projections from 2007 are already out of date and overly optimistic. Corell, who headed an assessment of warming in the Arctic, said global warming "is accelerating in ways that we are not anticipating." Because Greenland and West Antarctic ice sheets are melting far faster than thought, it looks like the seas will rise twice as fast as projected just three years ago, Corell said. He said seas should rise about a foot every 20 to 25 years.

#### No impact to the environment

**Boucher 98** (Doug, "Not with a Bang but a Whimper," Science and Society, Fall, http://www.driftline.org/cgi-bin/archive/archive\_msg.cgi?file=spoon-archives/marxism-international.archive/marxism-international\_1998/marxism-international.9802&msgnum=379&start=32091&end=32412)

The political danger of catastrophism is matched by the weakness of its scientific foundation. Given the prevalence of the idea that the entire biosphere will soon collapse, it is remarkable how few good examples ecology can provide of this happening m even on the scale of an ecosystem, let alone a continent or the whole planet. Hundreds of ecological transformations, due to introductions of alien species, pollution, overexploitation, climate change and even collisions with asteroids, have been documented. They often change the functioning of ecosystems, and the abundance and diversity of their animals and plants, in dramatic ways. The effects on human society can be far-reaching, and often extremely negative for the majority of the population. But one feature has been a constant, nearly everywhere on earth: life goes on. Humans have been able to drive thousands of species to extinction, severely impoverish the soil, alter weather patterns, dramatically lower the biodiversity of natural communities, and incidentally cause great suffering for their posterity. They have not generally been able to prevent nature from growing back. As ecosystems are transformed, species are eliminated -- but opportunities are created for new ones. The natural world is changed, but never totally destroyed. Levins and Lewontin put it well: "The warning not to destroy the environment is empty: environment, like matter, cannot be created or destroyed. What we can do is replace environments we value by those we do not like" (Levins and Lewontin, 1994). Indeed, from a human point of view the most impressive feature of recorded history is that human societies have continued to grow and develop, despite all the terrible things they have done to the earth. Examples of the collapse of civilizations due to their over- exploitation of nature are few and far between. Most tend to be well in the past and poorly documented, and further investigation often shows that the reasons for collapse were fundamentally political.

CO2 isn’t key

Watts, 25-year climate reporter, works with weather technology, weather stations, and weather data processing systems in the private sector, 7/25/’12

(Anthony, <http://wattsupwiththat.com/2012/07/25/lindzen-at-sandia-national-labs-climate-models-are-flawed/>)

ALBUQUERQUE, N.M. — Massachusetts Institute of Technology professor Richard Lindzen, a global warming skeptic, told about 70 Sandia researchers in June that too much is being made of climate change by researchers seeking government funding. He said their data and their methods did not support their claims.

“Despite concerns over the last decades with the greenhouse process, they oversimplify the effect,” he said. “Simply cranking up CO2 [carbon dioxide] (as the culprit) is not the answer” to what causes climate change.

Lindzen, the ninth speaker in Sandia’s Climate Change and National Security Speaker Series, is Alfred P. Sloan professor of meteorology in MIT’s department of earth, atmospheric and planetary sciences. He has published more than 200 scientific papers and is the lead author of Chapter 7 (“Physical Climate Processes and Feedbacks”) of the International Panel on Climate Change’s (IPCC) Third Assessment Report. He is a member of the National Academy of Sciences and a fellow of the American Geophysical Union and the American Meteorological Society.

For 30 years, climate scientists have been “locked into a simple-minded identification of climate with greenhouse-gas level. … That climate should be the function of a single parameter (like CO2) has always seemed implausible. Yet an obsessive focus on such an obvious oversimplification has likely set back progress by decades,” Lindzen said.

For major climates of the past, other factors were more important than carbon dioxide. Orbital variations have been shown to quantitatively account for the cycles of glaciations of the past 700,000 years, he said, and the elimination of the arctic inversion, when the polar caps were ice-free, “is likely to have been more important than CO2 for the warm episode during the Eocene 50 million years ago.”

There is little evidence that changes in climate are producing extreme weather events, he said. “Even the IPCC says there is little if any evidence of this. In fact, there are important physical reasons for doubting such anticipations.”

Lindzen’s views run counter to those of almost all major professional societies. For example, the American Physical Society statement of Nov. 18, 2007, read, “The evidence is incontrovertible: Global warming is occurring.” But he doesn’t feel they are necessarily right. “Why did the American Physical Society take a position?” he asked his audience. “Why did they find it compelling? They never answered.”

Speaking methodically with flashes of humor — “I always feel that when the conversation turns to weather, people are bored.” — he said a basic problem with current computer climate models that show disastrous increases in temperature is that relatively small increases in atmospheric gases lead to large changes in temperatures in the models.

But, he said, “predictions based on high (climate) sensitivity ran well ahead of observations.”

Real-world observations do not support IPCC models, he said: “We’ve already seen almost the equivalent of a doubling of CO2 (in radiative forcing) and that has produced very little warming.”

He disparaged proving the worth of models by applying their criteria to the prediction of past climatic events, saying, “The models are no more valuable than answering a test when you have the questions in advance.”

Modelers, he said, merely have used aerosols as a kind of fudge factor to make their models come out right. (Aerosols are tiny particles that reflect sunlight. They are put in the air by industrial or volcanic processes and are considered a possible cause of temperature change at Earth’s surface.)

Then there is the practical question of what can be done about temperature increases even if they are occurring, he said. “China, India, Korea are not going to go along with IPCC recommendations, so … the only countries punished will be those who go along with the recommendations.”

He discounted mainstream opinion that climate change could hurt national security, saying that “historically there is little evidence of natural disasters leading to war, but economic conditions have proven much more serious. Almost all proposed mitigation policies lead to reduced energy availability and higher energy costs. All studies of human benefit and national security perspectives show that increased energy is important.”

He showed a graph that demonstrated that more energy consumption leads to higher literacy rate, lower infant mortality and a lower number of children per woman.

Given that proposed policies are unlikely to significantly influence climate and that lower energy availability could be considered a significant threat to national security, to continue with a mitigation policy that reduces available energy “would, at the least, appear to be irresponsible,” he argued.

Responding to audience questions about rising temperatures, he said a 0.8 of a degree C change in temperature in 150 years is a small change. Questioned about five-, seven-, and 17-year averages that seem to show that Earth’s surface temperature is rising, he said temperatures are always fluctuating by tenths of a degree.

Alt cause—deforestation

Idso, director of envt science – Peabody Energy, PhD Geography – ASU, Idso, professor – Maricopa County Community College, and Idso, PhD botany – ASU, ‘12

(Craig, Sherwood, and Keith, “Local to Regional Climatic Effects of Deforestation,” *CO2 Science* Vol. 15, No. 21, May)

The authors write that "deforestation exerts a number of regional and local climate effects," including "a decrease in water vapor mixing ratio (Sen et al., 2004), reduced precipitation (Werth and Avissar, 2005), and a change in the water cycle (Houghton, 1990)," along with "an increase in near-surface air temperature (

Sampaio et al., 2007)."

What was done

Focusing on the latter of these impacts, Gao and Liu studied the effect of the deforestation of portions of Heilongjiang Province in Northeast China, which has an annual temperature ranging from -4°C to +4°C, its winters being "long and frigid" and its summers being "short and cool." This they did over the period 1958 to 1980, when forest cover was reduced from 238,335 km2 to 216,009 km2, and from 1980 to 2000, when forest cover was further reduced to 207,629 km2.

What was learned

Over the entire period that the two researchers analyzed (from 1958-2000), there was a nation-wide warming of 0.99°C, while the annual temperature of Heilongjiang Province rose by 1.68°C, which suggests a concomitant deforestation-induced warming of 0.69°C.

What it means

In response to the 13% reduction in forest cover over the 42-year interval that Gao and Liu studied, the mean annual temperature of Heilongjiang Province rose by 0.69°C, which is a most substantial amount, considering that they note that global temperature has only risen by an average of 0.6°C since the start of the industrial revolution. Perhaps it is not so farfetched, therefore, to think that a goodly portion of that global warming may have been due to a number of other factors that have not yet been incorporated into the climate models that attribute the bulk of the post-Little Ice Age temperature increase to increases in CO2 and other greenhouse gas emissions of mankind.

## 2nc

### perm

#### The CP will increase renewable use by 30% by 2030 only assuming no additional policies to support them

**Lashof, 12** – director of the climate and clean air program at the Natural Resources Defense Council (Daniel, “Closing the Power Plant Carbon Pollution Loophole: Smart Ways the Clean Air Act Can Clean Up America’s Biggest Climate Polluters” December, <http://www.nrdc.org/air/pollution-standards/files/pollution-standards-report.pdf>)

The IPM® results show that the proposed carbon standards would begin to modernize and clean up America’s electricity sector. Energy efficiency programs adopted in response to the incentives created by the approach would cause overall demand to decline by 4 percent, rather than increase by 7 percent. Meanwhile, coal-fired generation would drop 21 percent from 2012 to 2020 instead of increasing by 5 percent without the proposed carbon standard. Natural gas generation would rise by 14 percent, while **renewables rise by about 30 percent (assuming no new** state or **federal policies to expedite an increase in market share** for renewables).

#### That expressly avoids our overproduction argument - capping grid penetration at 30% is vital to avoid massive price spikes

**Electricity Journal, 8** (“How Renewables Can Be Undermined By Intermittency” Volume 21, Issue 5, June 2008, Pages 5–6, Science Direct)

Currently, renewable energy resources are in vogue, everyone wants more of them, ASAP. And in some places, they are getting quite a bit of it, principally wind and solar energy. Last year, according to the American Wind Energy Association, U.S. wind power sector grew around 45 percent by adding over 5,000 MW of new capacity. The Global Wind Energy Council, a wind trade group based in Brussels, says that the corresponding figure worldwide was around 20,000 MW, requiring a $36 billion investment. More is in the pipeline.¶ The same is happening to solar, which is not as big as wind but is on a high growth trajectory. The more the merrier, right? As it turns out, as with everything else, even **a good thing can turn out** to be **bad if you get too much** of it. That reality is beginning to be a new concern for intermittent renewables.¶ The problem for solar-based technologies is that one can collect the heat or convert sunshine to electricity when the sun shines, which would be predictable if it were not for clouds, fog, and storms. As the proportion of solar-generated power increases, thermal storage becomes a big plus. Solar technologies, however, enjoy one big advantage over wind: generation tends to be strongly correlated with periods of high demand, usually on hot summer afternoons.¶ Wind, on the other hand, does not necessarily blow when it is most needed, and not usually close to load centers. Forecasting when it blows and at what speed has become more critical as significant amounts of capacity are added. Yet, wind forecasting – like weather forecasting, despite what the weatherman on the nightly news would have you believe – remains part art and part science. When the forecasts are good, the grid operator can schedule compensating thermal generation or rely on pumped-hydro or other means to manage the fluctuations in wind-generated power. But when the forecast is off, as sometime happens, it could create havoc and cause wholesale prices to spike erratically.¶ An example of the consequences of inaccurate wind forecasts happened on Feb. 26 in Texas. A cold front moved unexpectedly into West Texas, spinning some 1,700 MW of turbines. The grid operator, Electric Reliability of Texas (ERCOT), ramped down thermal generation to accommodate the wind-generated power. Hours later and with no warning, the winds subsided, dropping generation to 300 MW.¶ To balance load, **ERCOT had to declare an emergency** asking large customers with interruptible loads or demand response to shed load. In the mean time, **it had to purchase replacement energy on short notice, which caused** **wholesale prices** in the affected area **to surge** to $1,055/MWh while average prices elsewhere in the system jumped to around $300/MWh. Two days later, ERCOT prices hit the new allowed ceiling of $2,250/MWh during a similar episode, making for good newspaper headlines.¶ Referring to the problem, an embarrassed Kant Saathoff, vice president of system operations at ERCOT, said uncertainties in wind output, “showed us we need much better wind forecasting tools.” Nobody could disagree that improved forecasting would be a huge help but everyone knows that we cannot predict weather with perfect accuracy no matter how hard we try. Geothermal energy, by contrast, is a baseload source of power and does not suffer from intermittency.¶ Needless to say, integration of intermittent renewables will become more of an issue as their percentage within networks grows. In countries like Germany, Denmark, and Spain, this phenomenon has become noticeable and a source of increasing concern. In Germany, the transmission network has been reinforced to bring additional wind-generated power from wind-rich areas to major load centers. Additionally, thermal plants originally designed to operate as baseload units are now cycled up and down to accommodate fluctuations in wind-generated power.¶ In **Spain**, another country with significant new wind capacity, the grid operator, Red Electrica de Espana (REE), has **put a 30 percent limit on** the share of **wind** power **specifically to prevent grid reliability problems such as those** experienced in West Texas. Spain, which already has an installed wind capacity exceeding 15,000 MW, has ambitious plans to reach 20,000 MW by 2010 and 30,000 by 2030. Wind developers are naturally concerned about the new artificial constraint.

#### The permutation distorts electricity markets, incentivizes the use of wind over every other alternative, and undermines the stability of baseload power production

**Brown, 12 -** Senior Vice President, Federal Government Affairs and Public Policy, Exelon Corporation (David, “It's Time to Pull the Plug on the PTC” 12/21, <http://energy.nationaljournal.com/2012/12/should-congress-support-wind-t.php>)

This year has been a record year for the wind industry. More than 12,000 megawatts of new installed wind capacity have been added, surpassing all other electricity generation sources in new installations for the first time ever. This growth comes on the heels of wind accounting for 35 percent of new generation during the last five years. Ironically, the wind industry is trumpeting its success at the same time it is telling Congress that it still needs the production tax credit (PTC) for the industry to survive. Wind’s success this year proves that it is a mature industry and should compete on its own merits. The time for federal support to prop up wind is long past. It’s time for wind to step out of the nest and fly - or fail – on its own.

**The wind PTC** has achieved its goal of jumpstarting the industry and **is no longer necessary**. The subsidy is distorting today’s wholesale electricity markets, putting at risk the operation of more reliable clean generation. In order to collect the PTC, wind producers sell their power. They often pay the market to take that power and still profit because of the subsidy’s steep $35 per megawatt hour (mWh) (pre-tax) payout. A wind producer could pay the market $10 per mWh and still make $25 because of the value of the PTC. This threatens around-the-clock baseload power producers, forcing them to pay to run their plants or to shut down for long periods of the day when their power is needed most. In Texas, where new generation is needed, investors are reluctant to build new power plants – even low-cost natural gas – because subsidized wind has so distorted the market that generators face negative prices during an increasing number of hours each year.

Artificially lowering prices through government intervention undermines the market and stops the development of new generation, as well as retrofits of existing fossil units and uprates of nuclear plants. The artificial pricing also threatens to drive other reliable and clean competitors from the market. These market distortions lead to serious electricity reliability problems, costing electric consumers more.

#### The CP incentivizes competition between renewables – it limits overall price increases because it doesn’t favor one over the other

**Apt, 9** \*Distinguished Service Professor of Engineering & Public Policy and Associate Research Professor, Tepper School of Business, Carnegie Mellon University (Jay, Congressional Testimony, Hearing on The American Clean Energy Security Act of 2009, 4/23, <http://carboncontrolnews.com/hearing_docs/ccn04232009_apt.pdf>

I commend you for searching for ways to reach the goals of reducing greenhouse gas emissions and pollution, enhancing energy security, maintaining electric supply reliability, and controlling costs. Renewable energy sources are a key part of the nation's future, **but** I caution that **a singular emphasis** on renewable energy sources is not the best way to achieve these goals. One goal is paramount as the greatest challenge of the century: reducing air emissions and the atmospheric concentration of carbon dioxide.

I have two recommendations that I hope you will consider:

Focus on reducing carbon dioxide rather than singling out renewables as the answer. There are significant savings from letting all technologies compete in satisfying the goals of lowering greenhouse gas emissions, increasing energy security, and improving sustainability, ensuring that energy prices are not so high that they derail the economy.

#### The permutation destroys efficiency incentives

**Borenstein, 12** - Severin Borenstein is E. T. Grether Professor of Business Economics and Public Policy, Haas School of Business, University of California, Berkeley, California. He is a Co-Director of the Energy Institute at Haas, and Director of the University of California Energy Institute (“The Private and Public Economics of Renewable Electricity Generation” Journal of Economic Perspectives—Volume 26, Number 1—Winter 2012—Pages 67–92 <http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.26.1.67>)

First, subsidizing green power for reducing pollution (relative to some counterfactual) is not equivalent to taxing “brown” power to reflect the marginal social damage. If end-use electricity demand were completely inelastic and green and brown power were each completely homogeneous, they would have the same effect; the only effect of the subsidy would be to shift the production share towards green and away from brown power. But the underlying market failure is the underpricing of brown power, not the overpricing of green power, so subsidizing green power from government revenues artificially depresses the price of power and discourages efficient energy consumption.7 As a result, government subsidies of green power lead to overconsumption of electricity and disincentives for energy efficiency. In addition, for any given level of reduction, it will be achieved more efficiently by equalizing the marginal price of the pollutant across sectors as well as within sectors. This is not achievable through ad hoc subsidies to activities that displace certain sources of emissions. Fowlie, Knittel, and Wolfram (forthcoming) estimate that failure to achieve uniform marginal prices in the emissions of nitrogen oxides in the United States has raised the cost of regulation by at least 6 percent.

### certainty

#### Uncertainty inevitable – companies cope

**Anderson, 9/12**/12 – editor, AOL Energy (Jared, “The Flawed US Energy Policy Discussion,”  http://energy.aol.com/2012/09/12/the-flawed-us-energy-policy-discussion)

It could be the simplest explanation for why the US does not have a comprehensive, efficient or constructive energy policy set. On the most basic level, two-year and four-year election cycles are problematic for an industry that needs to make decisions and investments over twenty- to thirty-year time horizons.¶ If it takes as much as 30 years to explore, discover, evaluate, produce, refine and transport oil or natural gas from a reservoir to a market in a profitable manner, that means more than seven presidential administration and 15 congressional reshuffles will occur during the project's lifetime. The likelihood that the regulatory landscape at the project's outset will resemble anything like the political topography at project completion is **virtually nil**.¶ Nevertheless, **companies understand this is a fact of life** when doing business in the US – which is a great place to operate, given a well-established rule of law, a strong resource base, liquid markets, access to capital, etc. – and have found ways to deal with the political and regulatory uncertainty for well over 100 years.

#### They link harder—states are better

**Muro, 12**

(Fellow-Brookings Institution, 1/12, “Funding Growth: State Clean Energy Funds Can Help Invent the Future,” http://www.cleanegroup.org/blog/funding-growth-state-clean-energy-funds-can-help-invent-the-future/)

In sum, our new paper proposes a much greater focus in U.S. clean energy finance on "bottom up," decentralized clean **initiatives that rely on the states** to catalyze regional economic development in regions. Such an approach -- which reflects the emergence of an emerging "pragmatic caucus" in U.S. economic life -- is currently demanded by federal inaction. However, it might also be the smartest**, most durable way** to develop the clean energy industries of the future **without the partisan rancor and obtuseness** that has stymied federal energy policy. State clean energy funds -- having funded thousands of individual projects -- bring significant knowledge to bear as they focus now on building whole industries. For that reason, the funds' transition from project development to industry creation should be nurtured and supported.

### cp solves/natural gas turn

#### The percentage of natural gas generation will increase – but the total won’t. The percentage increases only because of demand reduction improvements

**Lashof, 12** – director of the climate and clean air program at the Natural Resources Defense Council (Daniel, “Closing the Power Plant Carbon Pollution Loophole: Smart Ways the Clean Air Act Can Clean Up America’s Biggest Climate Polluters” December, <http://www.nrdc.org/air/pollution-standards/files/pollution-standards-report.pdf>)

The shift in generation mix resulting from NRDC’s proposed policy is driven primarily by energy efficiency replacing deactivated coal generation. NRDC also analyzed a case, presented in Appendix VII, which demonstrates that assuming the same penetration of energy efficiency with weaker emission rate targets leads to efficiency replacing a mix of natural gas and coal generation, rather than primarily coal generation as found in the NRDC Case. The CO2 standard has the effect of ensuring that the energy efficiency savings displace higher-emitting coal generation rather than natural gas. The result of the CO2 policy is to reduce both total generation and the market share of coal, while increasing the market share of natural gas and renewables generation. Coincidentally, the increased market share of natural gas generation in the NRDC Case is almost exactly offset by the reduction in overall demand, leading to an absolute level of natural gas generation in the NRDC Case almost identical to that in the Reference Case. Figure 13.2, below, shows the resulting generation mixes in 2020 across the cases analyzed.

#### The CP won’t increase gas reliance at all

**Lashof, 12** – director of the climate and clean air program at the Natural Resources Defense Council (Daniel, “Cleaning Up Power Plant Carbon Pollution Without Getting Bloated on Gas” 12/14,

<http://switchboard.nrdc.org/blogs/dlashof/cleaning_up_power_plant_carbon.html>)

Here’s another piece of conventional wisdom the report overturns: Our analysis shows that reducing carbon pollution from the power sector doesn’t have to mean a big switch from coal-fired power plants to natural gas. How is that possible? One word: efficiency.

The report sets forth in detail (pdf) a proposal for how EPA can carry out its obligations under the Clean Air Act by setting state-specific CO2 emissions limits for existing power plants. One of the most striking and innovative parts of the proposal is that it will give credits to the pollution reductions that come from energy efficiency in America’s homes and businesses. This will lead to a massive increase in efficiency investments, which will make power plant CO2 limits more affordable and result in tremendous clear air benefits.

Our recommended standards encourage states to adopt policies that can drive over $90 billion in energy efficiency investments by 2020. Similarly, states will have an incentive to strengthen their renewable portfolio standards, as increases in renewable electricity generation would earn credit on the same basis as electricity savings through energy efficiency. In total, we project that energy efficiency would cause overall demand to decline by 4 percent, rather than increase by 7 percent. And renewables would rise by about 30 percent (not assuming any new measures to further boost their development, for which NRDC will, of course, continue to fight).

The proposal does not dictate any given amount of natural gas consumption, and our modeling shows that natural gas use remains unchanged from the business-as-usual forecast if we don’t have carbon pollution standards. By incorporating energy efficiency directly into our plan, the net effect of the program is that energy efficiency replaces coal rather than natural gas replacing coal.

#### The CP solves air pollution and the economy

**NRDC, 12 –** Natural Resources Defense Council Issue Brief (“Using the Clean Air Act to Sharply Reduce Carbon Pollution from Existing Power Plants, Creating Clean Energy Jobs, Improving Americans’ Health, and Curbing Climate Change” December, <http://www.nrdc.org/air/pollution-standards/files/pollution-standards-IB.pdf>)

The proposal also brings cuts in emissions of traditional pollutants like sulfur and nitrogen oxides spewing from power plants beyond what current regulations would achieve. The emissions reductions delivered by implementing the proposal would prevent more than 23,000 asthma attacks, avoid more than 2,300 emergency room visits and hospital admissions per year and prevent thousands of premature deaths.

The benefits of reducing CO2 and the traditional pollutants are both substantial, and add up to $25 to $60 billion. That’s 6 to 15 times higher than the costs of complying with the proposal (see Figure 4: Estimated Costs and Benefits From Reductions in SO2 , NOX , and CO2 (2020)). What’s more, this approach would stimulate investments of more than $90 billion in energy efficiency and renewables between now and 2020, **boosting local** and state **economies**. Establishing such CO2 emission standards now will give the power industry the investment certainty it needs **to avoid billions of dollars of stranded investment** in obsolete power plants.

### squo solves

#### Prefer our evidence –

#### a. the aff relies on lobbyist hype – no data actually proves their argument – that’s 1nc Dismukes

#### b. independent EIA studies prove our argument – ending the PTC creates a short-term market correction – it doesn’t stop the direction of growth

**Dismukes, 12** - professor, associate executive director, and director of Policy Analysis at the Center for Energy Studies, Louisiana State University. His research interests are related to the analysis of economic, statistical, and public policy issues in energy and regulated industries (David, “Removing Big Wind's "Training Wheels": The Case for Ending the Federal Production Tax Credit” October, <http://www.americanenergyalliance.org/wp-content/uploads/2012/10/Dismukes-Removing-Big-Winds-Training-Wheels.pdf>)

• The federal wind PTC is not needed to ensure an increase in future wind generation. The U.S. Energy Information Administration forecasts that even if the PTC and other incentives are eliminated, renewable generation will still be on track to rise from 500 billion kilowatt-hours in 2011 to approximately 750 billion kilowatt-hours by 2035.

• The “one-size-fits-all” federal wind PTC is an exceptionally inefficient and expensive means of supporting wind generation that fails to recognize the industry’s heterogeneity and operational differences, and grossly wastes limited fiscal resources by over-subsidizing many projects and driving over-development. The congressional Joint Committee on Taxation estimates that a one-year extension of the federal wind PTC will cost taxpayers an astronomical $12.1 billion. The fact that the wind industry may experience a market-driven downward correction in output and employment does not signify some type of policy failure justifying an expense of this nature.

#### c. Wind developers agree

**Dismukes, 12** - professor, associate executive director, and director of Policy Analysis at the Center for Energy Studies, Louisiana State University. His research interests are related to the analysis of economic, statistical, and public policy issues in energy and regulated industries (David, “Removing Big Wind's "Training Wheels": The Case for Ending the Federal Production Tax Credit” October, <http://www.americanenergyalliance.org/wp-content/uploads/2012/10/Dismukes-Removing-Big-Winds-Training-Wheels.pdf>)

If future RPS requirements were to be fulfilled by wind, the wind market would grow to almost 130 GW of capacity through 2030, about triple the current 50 GW already installed (see Figure 3). As such, even post federal PTC expiration, the outlook for future wind generation development continues to be exceptionally favorable, underscoring the reality that wind no longer needs a federal wind PTC “crutch.” Further, and in a clear sign that wind development will continue without the PTC, NextEra Energy Resources, a major wind developer, stated in its most recent Third Quarter earnings call, “we signed our first PPA for 2013 U.S. wind project, a project that is not dependent upon extension of the PTC program…we see it as supportive of the view we have publicly expressed that there will continue to be a wind development business in the U.S. post-2012 even if the PTC program is not extended.”25

### no manufacturing internal

#### Wind imports manufacturing components and wind job growth is net negative on the economy

**O’Keefe, 12** - CEO, George C. Marshall Institute (William, “Wind Tax Credit Advocacy: Blowing Smok” 12/31, <http://energy.nationaljournal.com/2012/12/should-congress-support-wind-t.php>

A number of the comments supporting extension of the wind production tax credit are based on half truths, illusions, and special interest politics.

One argument is that eliminating it will cost 37,000 jobs or more. There are two flaws in this argument. First, it assumes that there is no difference between jobs created by inefficient subsidies and more efficient allocation of resources. There is literature demonstrating that **green subsidies misallocate resources that cost more jobs than they create**. A study conducted by Spain’s Universidad Rey Juan Carlos concluded “ we find that for every renewable energy job that the state manages to finance, Spain’s experience…reveals with high confidence…that the U.S. should expect a loss of at least 2.2 jobs on average… .” Second, most of the jobs created by wind energy are in the manufacture of turbine blades and steel for wind towers, most of which are imported.

### manufacturing resilient

#### U.S. manufacturing is resurgent---slew of factors make it sustainable and immune to a double-dip

PWC 9-21 – Pricewaterhouse Coopers, “A Homecoming For U.S. Manufacturing?,” 9/21/12, http://www.manufacturing.net/articles/2012/09/a-homecoming-for-us-manufacturing?et\_cid=2861124&et\_rid=279915960&linkid=http%3a%2f%2fwww.manufacturing.net%2farticles%2f2012%2f09%2fa-homecoming-for-us-manufacturing

NEW YORK― Consensus views on a U.S. manufacturing resurgence have largely centered on rising labor costs in markets such as China as the key driver of re-shoring back to the U.S. However, a new PwC US report, A Homecoming for U.S. Manufacturing?, reveals that while rising labor costs are part of the story, a range of factors—including transportation and energy costs and protecting the supply chain—could drive a sustained manufacturing renaissance in the U.S. beyond any cyclical recovery, potentially improving investment, employment, production output and research & development (R&D).

PwC’s new report identifies seven factors—including transportation and energy costs; currency fluctuations; U.S. market demand; labor costs; U.S. talent; availability of capital; and the tax and regulatory climate—as the primary catalysts influencing manufacturers' decisions to establish production facilities domestically and produce products closer to their major customer bases. PwC's report also notes that localizing production can mitigate supply chain disruptions, which totaled $2.2 billion in financial impact for U.S. industrial products companies in 2011.

“The reviving industrial manufacturing sector is instrumental to U.S. economic recovery,” said Bob McCutcheon, PwC’s U.S. Industrial Products leader. “Beyond the cyclical rebound, however, a host of structural changes is emerging that may lead to the U.S. becoming an important location for basing production and R&D facilities for several industries. In addition to trends in labor costs, other factors include the need to reduce transportation and energy costs; the emergence of the U.S. as a more attractive exporter and the relative attractiveness of the U.S. markets.”

### warming—wind fails

#### Empirically – large wind penetration increases emissions – intermittence means stop-start fossil fuel backups that result in higher overall air pollution

**Michaels, 11 -** Professor of Economics at California State University, Fullerton and Senior Fellow at the Institute for Energy Research and Adjunct Scholar at the Cato Institute (Robert, “Panel Testimony on H.R. 1719 and H.R. 2915” 9/22, <http://www.cato.org/publications/congressional-testimony/panel-testimony-hr-1719-hr-2915>)

Because wind requires fossil-fuel generation as backup we cannot simply conclude that a mwh of wind power eliminates the pollutants in a mwh of conventional power. Research by gas marketer Bentek Energy found that in some areas additional wind power has strikingly perverse consequences. Bentek found that large increases in Texas and Colorado wind capacity indeed led to less coal-fired generation. Emissions of EPA “criteria pollutants” from these plants, however, actually increased, and CO2 emissions were unchanged.6 Operating data showed that wind’s variability required numerous quick adjustments by coal-fired units, which were responsible for the added pollution. Bentek’s controversial conclusion was that the total load in the area could have been served with lower total emissions had the wind units never existed.

### no warming impact

Low threshold for our defense—uncertainty disproves the need for action, takes out their impacts, and means you should vote neg on presumption

Dennis, PhD physics – UC Santa Barbara, senior fellow – Center for Industrial Progress, 3/16/’12

(Eric, “What the “Skeptics” of Climate Catastrophe are Skeptical Of: Nordhaus Reconsidered,” <http://www.masterresource.org/2012/03/what-the-skeptics-are-skeptical-of/>)

To say that modeling the climate for long-term predictions is difficult given the current state of climate science is like saying that it would be difficult for your five-year-old son to build a 400 horsepower car from re-purposed Toys ‘R’ Us purchases. Imagine that he comes to you with pages and pages of plans he’s sketched out in crayon. The “car” will cost $22,827.35 worth of toys.

Why wouldn’t you reach for your credit card? Is that because you’re against teaching kids engineering? Is it because his sworn enemy, your daughter, is paying you off? Or perhaps it’s because this project is obviously beyond the capability of a five-year-old, and that his crayon schematics don’t offer convincing evidence that he is in fact the kind of once-in-a-generation prodigy who could somehow pull it off.

If one understands how monumental an undertaking it would be to produce a sound climate model, one can see that today’s climate modelers are making assertions no less implausible than our five-year old’s fantasy.

In physics it is generally possible to exactly predict the behavior of systems involving two independent bodies, whether planets interacting through gravity or elementary particles through the electromagnetic field. More bodies means no exact solution to the dynamical equations and a zoo of different approximations, usually requiring computational simulation, which takes more and more time as the number of bodies being simulated increases. Indeed the computation time generally grows exponentially with the number of bodies.

The global climate system comprises an astronomical number (at least billions) of effectively independent “bodies,” which is to say of isolatable, relatively uniform chunks of air, ocean, and earth. Their interactions span the complexity spectrum, from the mechanical push-and-pull of an ocean current to the lesser-known dynamics of cloud formation to intricate, biological mechanisms like plant growth and respiration that have evolved over billions of years.

Solving this kind of complex system is outside the realm of controlled approximations and reasonable estimates. It’s in the realm of random stabs, on any objective assessment of our current scientific powers. Since attempts to model this system are the basis of claims for catastrophic global warming, the evidence we need to consider pertains to whether or not such models are capturing enough of the detailed mess of forces that actually drives the climate.

Many different climate processes affect the energy balance between the earth and outer-space and thus affect temperatures on the Earth. One such process is the greenhouse effect, by which CO2 and other gases trap some extra solar energy in the atmosphere and convert it into heat. It is widely acknowledged that the CO2-linked greenhouse effect itself can produce only a modest warming going forward because the incremental warming produced by each extra liter of CO2 gets smaller and smaller as more CO2 is added.

The catastrophist projections are based on the idea that this modest warming will trigger an entirely separate set of feedback mechanisms that will multiply the warming many times. For instance warming is projected to increase ambient levels of water vapor, itself a greenhouse gas; melting ice will expose more earth or open water, which tend to absorb more solar energy as heat; temperature-linked changes in cloud patterns affect how much solar energy gets reflected back to space or back to the Earth.

There are also negative feedbacks, meaning processes that come into play due to warming, or to CO2 increases, that wind up counteracting that warming. Examples include enhanced re-radiation of energy back into space at higher temperatures, increased absorption of CO2 into the oceans, and increased quantities of organic matter capturing CO2. Indeed some supposedly positive feedbacks, like certain cloud effects, may turn out actually to be negative ones.

Moreover, nature does not simply provide us with a list of all the relevant feedbacks, or climate processes in general. There is no systematic procedure by which the set of processes included in current climate models are picked out from the catalogue of all possible such processes. The procedure is simply for modelers to engage their own imaginations, given our current knowledge, to conceive possible effects and gather evidence to confirm or falsify them.

How many known ones have been intentionally discarded due to a lack of knowledge and evidence about how to incorporate them? How many have just not been thought of to date?

In a certain sense, this is the nature of any scientific theory. But this is why such theories have to produce specific, detailed predictions, confirmed by observation, to show that they have captured the relevant causal factors. Apart from this, there is a lot of room here for the ultimate outcome of the models to be controlled by ideological predispositions—like that, of all the underlying drivers, the decisive one just happens to be CO2, the one with a clear link to the functioning of modern, industrial capitalism.

What would be a rational response when your five-year-old car enthusiast presents you with his crayon plans, protesting that he’s also proven his case by putting together a scale model in Legos? First you might point out that while his plans are impressive for a boy his age, it’s rarely the case that reality works out just like a priori plans and models suggest.

Rather than setting him loose at toysrus.com with your credit card, you might suggest he start off with a scaled-down project, like an RC kit. Then, if that’s a success, maybe an introduction to simple wood and then metal work. As he gets older and proves himself at each stage, he could move on to machine shop projects, welding, and an apprenticeship with a real car mechanic.

This kind of demonstrated, step-by-step progress is how legitimate inventions, and inventors, are made. At the end of the process, they no longer agitate for sizable investments on the basis of their original crayon plans.

And such demonstrated, step-by-step progress is exactly what a reasonable person ought to demand from the global warming catastrophists. Not mere simulations, generated by model code that they control and have played with for years. Since the odds are so small, a priori, that they have actually cracked the excruciatingly complicated problem of global climate prediction, we need dramatic positive evidence. Lesser evidence is powerless to overcome the overwhelming odds against being able to delicately sort out the mess of climate drivers and feedbacks.

The catastrophists need to demonstrate their methodology by applying it to smaller problems whose outcomes we don’t have to wait a century for. They need to derive unambiguous, detailed predictions for these outcomes and see them borne out. By “detailed” I mean predictions of not just a single number, like a cumulative warming trend, that could just be accidentally correct—and they’re not even getting predictions on these simpler metrics right. I mean predictions of a more intricate, unaccidental nature.

For instance, climate models predict a detailed pattern of warming that occurs at different rates in different parts of the globe and, importantly, at different altitudes in the atmosphere. But when we look in actual climate data for the specific, altitude-dependent warming signature produced by these models, we find something entirely different.

And that’s only half the problem. Before we can test models, we need this historical climate data to be accurate in order for the comparison to mean anything. Even for the one central climate variable, global average temperature, the reconstructed data is fraught with uncertainties and scientific misconduct.

What has always to be kept in mind on these issues, is (i) the massive complexity of the problem the catastrophist modelers are claiming to have solved relative to the current state of climate science, and (ii) what this implies about the onus of proof. Their claim is to have accomplished a scientific miracle with tools that by any reasonable analysis are far from capable of the task.

Absent shocking evidence of success on their part, the conclusion to draw is not: catastrophic global warming has just moderate odds of occurring. The conclusion is that these models bear as much relationship to reality as your son’s crayon plans bear to a real car. And suggestions about how to transform the entire world economy based on these models should be treated accordingly.

No impact to warming

Mendelsohn, professor of forestry and environmental studies – Yale, ‘9

(Robert O., “Climate Change and Economic Growth,” <http://www.growthcommission.org/storage/cgdev/documents/gcwp060web.pdf>)

These statements are largely **alarmist and misleading.** Although climate change is a serious problem that deserves attention, society’s immediate behavior has an extremely low probability of leading to catastrophic consequences. The science and economics of climate change is quite clear that emissions over the next few decades will lead to only mild consequences. The severe impacts predicted by alarmists require a century (or two in the case of Stern 2006) of no mitigation. Many of the **predicted impacts assume there will be no or little adaptation.** The net economic impacts from climate change over the next 50 years will be small regardless. Most of the more severe impacts will take more than a century or even a millennium to unfold and many of these “potential” impacts will never occur because people will adapt. It is not at all apparent that immediate and dramatic policies need to be developed to thwart long‐range climate risks. What is needed are long‐run balanced responses.

Experts agree

Hsu 10 (Jeremy, Live Science Staff, July 19, pg. <http://www.livescience.com/culture/can-humans-survive-extinction-doomsday-100719.html>)

His views deviate sharply from those of most experts, who don't view climate change as the end for humans. Even the worst-case scenarios discussed by the Intergovernmental Panel on Climate Change don't foresee human extinction. "The scenarios that the mainstream climate community are advancing are not end-of-humanity, catastrophic scenarios," said Roger Pielke Jr., a climate policy analyst at the University of Colorado at Boulder. Humans have the technological tools to begin tackling climate change, if not quite enough yet to solve the problem, Pielke said. He added that doom-mongering did little to encourage people to take action. "My view of politics is that the long-term, high-risk scenarios are really difficult to use to motivate short-term, incremental action," Pielke explained. "The rhetoric of fear and alarm that some people tend toward is counterproductive." Searching for solutions One technological solution to climate change already exists through carbon capture and storage, according to Wallace Broecker, a geochemist and renowned climate scientist at Columbia University's Lamont-Doherty Earth Observatory in New York City. But Broecker remained skeptical that governments or industry would commit the resources needed to slow the rise of carbon dioxide (CO2) levels, and predicted that more drastic geoengineering might become necessary to stabilize the planet. "The rise in CO2 isn't going to kill many people, and it's not going to kill humanity," Broecker said. "But it's going to change the entire wild ecology of the planet, melt a lot of ice, acidify the ocean, change the availability of water and change crop yields, so we're essentially doing an experiment whose result remains uncertain."

### no solve

Warming’s inevitable—new industrial construction will lock in carbon emissions until 2017, when it’ll be too late to solve. No global climate deal means developing countries would swamp the plan—that’s Harvey.

Even if the plan spills over, it’s not fast enough—massive cuts need to happen immediately, followed by a carbon negative strategy to absorb the release of sequestered carbon—that’s Rirdan.

Low threshold—less than 2 degrees is sufficient to cause their impacts

Harvey, environment reporter – the Guardian, 11/9/’11

(Fiona, <http://www.guardian.co.uk/environment/2011/nov/09/fossil-fuel-infrastructure-climate-change>)

Climate scientists estimate that global warming of 2C above pre-industrial levels marks the limit of safety, beyond which climate change becomes catastrophic and irreversible. Though such estimates are necessarily imprecise, warming of as little as 1.5C could cause dangerous rises in sea levels and a higher risk of extreme weather – the limit of 2C is now inscribed in international accords, including the partial agreement signed at Copenhagen in 2009, by which the biggest developed and developing countries for the first time agreed to curb their greenhouse gas output.

Feedbacks already triggered, developing countries outweigh, and methane releases cause the impact

Mims, science and technology correspondent – BBC and Grist, 3/26/’12

(Christopher, “Climate scientists: It’s basically too late to stop warming,” <http://grist.org/list/climate-scientists-its-basically-too-late-to-stop-warming/>)

If you like cool weather and not having to club your neighbors as you battle for scarce resources, now’s the time to move to Canada, because the story of the 21st century is almost written, reports Reuters. Global warming is close to being irreversible, and in some cases that ship has already sailed.

Scientists have been saying for a while that we have until between 2015 and 2020 to start radically reducing our carbon emissions, and what do you know: That deadline’s almost past! Crazy how these things sneak up on you while you’re squabbling about whether global warming is a religion. Also, our science got better in the meantime, so now we know that no matter what we do, we can say adios to the planet’s ice caps.

For ice sheets — huge refrigerators that slow down the warming of the planet — the tipping point has probably already been passed, Steffen said. The West Antarctic ice sheet has shrunk over the last decade and the Greenland ice sheet has lost around 200 cubic km (48 cubic miles) a year since the 1990s.

Here’s what happens next: Natural climate feedbacks will take over and, on top of our prodigious human-caused carbon emissions, send us over an irreversible tipping point. By 2100, the planet will be hotter than it’s been since the time of the dinosaurs, and everyone who lives in red states will pretty much get the apocalypse they’ve been hoping for. The subtropics will expand northward, the bottom half of the U.S. will turn into an inhospitable desert, and everyone who lives there will be drinking recycled pee and struggling to salvage something from an economy wrecked by the destruction of agriculture, industry, and electrical power production.

Water shortages, rapidly rising seas, superstorms swamping hundreds of billions of dollars’ worth of infrastructure: It’s all a-coming, and anyone who is aware of the political realities knows that the odds are slim that our government will move in time to do anything to avert the biggest and most avoidable disaster short of all-out nuclear war.

Even if our government did act, we can’t control the emissions of the developing world. China is now the biggest emitter of greenhouse gases on the planet and its inherently unstable autocratic political system demands growth at all costs. That means coal.

Meanwhile, engineers and petroleum geologists are hoping to solve the energy crisis by harvesting and burning the nearly limitless supplies of natural gas frozen in methane hydrates at the bottom of the ocean, a source of atmospheric carbon previously considered so exotic that it didn’t even enter into existing climate models.

Only carbon-negative strategies solve

Lubin, reporter – Business Insider, 10/22/’11

(Gus, <http://articles.businessinsider.com/2011-10-22/news/30309712_1_global-warming-greenhouse-gases-sea-levels>)

We've ignored the climate change gurus for too long, and now it's probably too late to avoid dangerous levels of global warming.

This is the dire conclusion reached by Joeri Rogelj and other scientists in an article published in Nature Climate Chinage (via Science Magazine).

Using the latest data, Rogelj's team modeled 193 proposed emissions plans that were intended to keep global warming below 2°C. They found that most of these plans are already obsolete.

The only plans with any hope of preventing dangerous global warming are those in which global emissions peak during this decade.

The three plans that are "very likely" to work all require heavy use of energy systems that actually remove greenhouse gases from the atmosphere.

## 1nr

### resource wars

**Warming doesn’t necessitate wars over resources – the broader theory for their argument is bankrupt**

**Pinker, 11** [Steven, professor of psychology at Harvard University, *The Better Angels of our Nature Why Violence Has Declined*, ISBN: 067002295, for online access email alexanderdpappas@gmail.com and I will forward you the full book]

These days one other gloomy scenario is on people’s minds. Global temperatures are increasing, which in the decades ahead could lead to a rising sea level, desertification, droughts in some regions, and floods and hurricanes in others. Economies will be disrupted, leading to a competition for resources, and populations will migrate out of distressed regions, leading to friction with their unwelcoming hosts. A 2007 *New York Times* op-ed warned, “Climate stress may well represent a challenge to international security just as dangerous—and more intractable—than the arms race between the United States and the Soviet Union during the Cold War or the proliferation of nuclear weapons among rogue states today.”288 That same year Al Gore and the Intergovernmental Panel on Climate Change were awarded the Nobel Peace Prize for their call to action against global warming because, according to the citation, climate change is a threat to international security. A rising fear lifts all the boats. Calling global warming “a force multiplier for instability,” a group of military officers wrote that “climate change will provide the conditions that will extend the war on terror.”289 Once again it seems to me that the appropriate response is “maybe, but maybe not.” Though climate change can cause plenty of misery and deserves to be mitigated for that reason alone, it will not necessarily lead to armed conflict. The political scientists who track war and peace, such as Halvard Buhaug, Idean Salehyan, Ole Theisen, and Nils Gleditsch, are skeptical of the popular idea that people fight wars over scarce resources.290 Hunger and resource shortages are tragically common in sub-Saharan countries such as Malawi, Zambia, and Tanzania, but wars involving them are not. Hurricanes, floods, droughts, and tsunamis (such as the disastrous one in the Indian Ocean in 2004) do not generally lead to armed conflict. The American dust bowl in the 1930s, to take another example, caused plenty of deprivation but no civil war. And while temperatures have been rising steadily in Africa during the past fifteen years, civil wars and war deaths have been falling. Pressures on access to land and water can certainly cause local skirmishes, but a genuine war requires that hostile forces be organized and armed, and that depends more on the influence of bad governments, closed economies, and militant ideologies than on the sheer availability of land and water. Certainly any connection to terrorism is in the imagination of the terror warriors: terrorists tend to be underemployed lower-middle-class men, not subsistence farmers.291 As for genocide, the Sudanese government finds it convenient to blame violence in Darfur on desertification, distracting the world from its own role in tolerating or encouraging the ethnic cleansing. In a regression analysis on armed conflicts from 1980 to 1992, Theisen found that conflict was more likely if a country was poor, populous, politically unstable, and abundant in oil, but not if it had suffered from droughts, water shortages, or mild land degradation. (Severe land degradation did have a small effect.) Reviewing analyses that examined a large number (N) of countries rather than cherry-picking one or two, he concluded, “Those who foresee doom, because of the relationship between resource scarcity and violent internal conflict, have very little support in the large-N literature.” Salehyan adds that relatively inexpensive advances in water use and agricultural practices in the developing world can yield massive increases in productivity with a constant or even shrinking amount of land, and that better governance can mitigate the human costs of environmental damage, as it does in developed democracies. Since the state of the environment is at most one ingredient in a mixture that depends far more on political and social organization, resource wars are far from inevitable, even in a climate-changed world.

### 2nc DA overview

#### Nuclear meltdowns – outweigh their offense – Lendman says it causes extinction and ensures massive environmental harm – ensures that the plan will implode

#### Turns the case 1nc Entine says that higher energy costs collapse the economy – only evidence in the debate that says it causes a full scale depression which proves the magnitude of this internal link is larger than the one that the aff is capable of solving

#### Higher prices drives manufacturing overseas – this also means zero net emissions reductions

**Lea, 12 –** director of Global Vision and Non-Executive Director and Economic Adviser to Arbuthnot Banking Group She is the author of many papers on economic matters and writes regularly for the press. Ruth was Director of the Centre for Policy Studies from 2004-2007. She was also Head of the Policy Unit at the Institute of Directors (IoD) between 1995 and 2003, before which she was the Economics Editor at ITN, Chief Economist at Mitsubishi Bank and Chief UK Economist at Lehman Brothers (Ruth, “Electricity Costs: The folly of windpower” January, http://www.civitas.org.uk/economy/electricitycosts2012.pdf

The latest DECC estimates for the costs of “green policies” are shown in table 1. They show, for example, that such policies could be adding 45% to electricity costs by 2030 for mediumsized business users, on DECC’s central case. 5,6 In 2009 the estimates of the green “add-ons” were, if anything, higher. 7

These extra costs damage competitiveness and undermine viability, especially high energy users. They risk driving industry to migrate overseas, along with their CO2 emissions, thus having zero net impact on global emissions totals. Indeed such migration could increase global CO2 emissions if the recipient country is less energy efficient than the UK. Suffice to say the supply of competitively-priced, secure and reliable sources of electricity is vital to modern industry.

#### High energy prices destroy manufacturing jobs overall: the turn outweighs their solvency

**Lieberman, 8** – Heritage Foundation (Ben, “Green Jobs Are Con Jobs,” 10/24,

<http://blog.heritage.org/2008/10/24/green-jobs-are-con-jobs/>

Consider, for example, the proposed federal renewable portfolio standards (RPS), which mandate that a certain percentage of electricity be generated from wind power and other so-called renewable sources. Certainly, from the narrow perspective of the wind energy industry, this measure would create the jobs needed to build, install and run the additional windmills. However, the electricity generated by wind and other renewables is more expensive, which is why this industry needs government mandates in the first place. Higher energy prices destroy jobs, especially in the manufacturing sector.

#### The energy price effect on manufacturing is empirically true

**Schulz, 9** - senior fellow at the Manhattan Institute's Center for Energy Policy and the Environment. (Max, City Journal, "The Green-Jobs Engine That Can’t", Winter, lexis

The alternative technologies at the heart of Obama's plan, relying on more such government handouts and mandates, will inevitably raise energy prices--and high power prices are job killers. Industries that make physical products, whether cars or chemicals or paper cups, are energy-intensive and will gravitate to low-energy-cost locales--which is why California and New York, with some of the highest electricity prices in the country, have lost manufacturing jobs in droves. But it's not just manufacturers that need cheap electricity: Google, the poster child of California's information-technology economy, houses its massive server farms not in the Golden State but in places with lower electricity costs, like North Carolina and Oregon. Policies that drive up energy costs across the nation, as Obama intends, will drive many of these jobs not elsewhere in the country but overseas.

#### Overproducing wind risks grid collapse and will collapse the economy - also turns the case because it forces longer-term reliance on dirty power

**O’Keefe, 12** - CEO, George C. Marshall Institute (William, “The Wind Tax Credit: Green Welfare” 12/22, <http://energy.nationaljournal.com/2012/12/should-congress-support-wind-t.php>)

Senator Alexander makes a strong and compelling case for not just ending the wind tax credit but also corporate welfare designed to force technologies that either don’t exist or are not commercially viable.

Even if our fiscal condition was significantly better and the government wasn’t borrowing 42 cents of every dollar it spends, there is no justification for an energy industrial policy. As a nation, we have almost 40 years of experience with the government attempting to bring about alternative energy sources with various forms of subsidies and mandates. They have all failed. Attempts to force technological breakthroughs are a fools errand that only enrich those who figure out how to game the system.

It is a well established technological fact that wind is intermittent and not suited for baseload power generation without transmission, storage, and power conditioning. The technology for storage does not exist and even if it did, the cost of wind power is not economically competitive. The lack of storage and long distance transmission capabilities mean that it can fill a niche, at best.

Many European countries, especially Germany, have traveled the clean energy road and by doing so have put their economies into a ditch. An analysis of Germany’s rush to renewables by the European Institute for Climate and Energy warned of “impending doom for the German economy caused by the lemming like charge to the Green mirage of affordable renewable energy.” The report went on, “The problem is that these energy sources are weather-dependent and thus their sporadic supply is starting to wreak havoc on Germany’s power grid and is even now threatening to destabilize power grids all across Europe! … after tens of billions of euros spent on renewable energy systems and higher prices for consumers, not a single coal or gas-fired power plant has been taken offline. To the contrary, old inefficient German plants have been brought back into service in an effort to stabilize the grid.”

### AT: Grid solved now

#### Accelerating wind is what collapses the grid – current upgrades don’t matter because they are more long term

**Apt et al, 8** - executive director of the Electricity Industry Center at Carnegie Mellon University’s Tepper School of Business and Distinguished Service Professor in the Department of Engineering and Public Policy (Jay, Issues in Science and Technology, “A National Renewable Portfolio Standard? Not Practical,” Fall, <http://www.issues.org/25.1/apt.html>)

The timeframes for reaching these production goals are very short. Eighteen states require that by 2015 at least 10% of their electricity must come from renewable sources. California and New York require 25%. Satisfying the state mandates would require the production and siting of hundreds of thousands of wind turbines. Because there is little wind power near large population centers, tens of thousands of miles of new transmission lines would have to be built within the next few years. Not only can transmission costs double the cost of delivered power, but the median time to obtain permission and build long-distance transmission lines has been 7 years—when they can be built at all. A Wall Street executive responsible for financing transmission lines stated that of 35 lines he has been involved with at an advanced stage, 80% were never built.

As Massachusetts has already discovered, implementing an RPS is far more difficult than passing popular legislation. The proposed wind farm off Cape Cod is stalled, and Massachusetts is badly behind in meeting its RPS. Even beyond siting the wind farms, states and the federal government would have to expedite permitting and obtaining the land and permission to build transmission lines, as well as provide the resources to review interconnection applications quickly. Although the public supports renewable energy in the abstract, many groups object vociferously to wind farms in particular places and to transmission lines nearly everywhere.

### AT: Sovacool – more wind solves intermittence

#### 1. the CP solves this – it still adds more wind – our disad is about the pace of wind penetration – we think wind is good, we just think they do it in a terrible way.

#### 2. in fact, Sovacool is a negative card – the un-underlined parts are about promoting a mix of renewable generation – only the CP does this; the plan overincentives wind at the expense of other renewables. More renewables solving intermittence only makes sense if there is a mix of renewables so that other types can take over when the wind stops blowing

#### Empirical examples disprove Sovacool in the context of wind - increasing the percentage too much increases intermittence risks – Texas and EU countries prove

**Electricity Journal, 8** (“How Renewables Can Be Undermined By Intermittency” Volume 21, Issue 5, June 2008, Pages 5–6, Science Direct)

Currently, renewable energy resources are in vogue, everyone wants more of them, ASAP. And in some places, they are getting quite a bit of it, principally wind and solar energy. Last year, according to the American Wind Energy Association, U.S. wind power sector grew around 45 percent by adding over 5,000 MW of new capacity. The Global Wind Energy Council, a wind trade group based in Brussels, says that the corresponding figure worldwide was around 20,000 MW, requiring a $36 billion investment. More is in the pipeline.

The same is happening to solar, which is not as big as wind but is on a high growth trajectory. The more the merrier, right? As it turns out, as with everything else, even a good thing can turn out to be bad if you get too much of it. That reality is beginning to be a new concern for intermittent renewables.

The problem for solar-based technologies is that one can collect the heat or convert sunshine to electricity when the sun shines, which would be predictable if it were not for clouds, fog, and storms. As the proportion of solar-generated power increases, thermal storage becomes a big plus. Solar technologies, however, enjoy one big advantage over wind: generation tends to be strongly correlated with periods of high demand, usually on hot summer afternoons.

Wind, on the other hand, does not necessarily blow when it is most needed, and not usually close to load centers. Forecasting when it blows and at what speed has become more critical as significant amounts of capacity are added. Yet, wind forecasting – like weather forecasting, despite what the weatherman on the nightly news would have you believe – remains part art and part science. When the forecasts are good, the grid operator can schedule compensating thermal generation or rely on pumped-hydro or other means to manage the fluctuations in wind-generated power. But when the forecast is off, as sometime happens, it could create havoc and cause wholesale prices to spike erratically.

An example of the consequences of inaccurate wind forecasts happened on Feb. 26 in Texas. A cold front moved unexpectedly into West Texas, spinning some 1,700 MW of turbines. The grid operator, Electric Reliability of Texas (ERCOT), ramped down thermal generation to accommodate the wind-generated power. Hours later and with no warning, the winds subsided, dropping generation to 300 MW.

To balance load, ERCOT had to declare an emergency asking large customers with interruptible loads or demand response to shed load. In the mean time, it had to purchase replacement energy on short notice, which caused wholesale prices in the affected area to surge to $1,055/MWh while average prices elsewhere in the system jumped to around $300/MWh. Two days later, ERCOT prices hit the new allowed ceiling of $2,250/MWh during a similar episode, making for good newspaper headlines.

Referring to the problem, an embarrassed Kant Saathoff, vice president of system operations at ERCOT, said uncertainties in wind output, “showed us we need much better wind forecasting tools.” Nobody could disagree that improved forecasting would be a huge help but everyone knows that we cannot predict weather with perfect accuracy no matter how hard we try. Geothermal energy, by contrast, is a baseload source of power and does not suffer from intermittency.

Needless to say, integration of intermittent renewables will become more of an issue as their percentage within networks grows. In countries like Germany, Denmark, and Spain, this phenomenon has become noticeable and a source of increasing concern. In Germany, the transmission network has been reinforced to bring additional wind-generated power from wind-rich areas to major load centers. Additionally, thermal plants originally designed to operate as baseload units are now cycled up and down to accommodate fluctuations in wind-generated power.

In Spain, another country with significant new wind capacity, the grid operator, Red Electrica de Espana (REE), has put a 30 percent limit on the share of wind power specifically to prevent grid reliability problems such as those experienced in West Texas. Spain, which already has an installed wind capacity exceeding 15,000 MW, has ambitious plans to reach 20,000 MW by 2010 and 30,000 by 2030. Wind developers are naturally concerned about the new artificial constraint.

#### Pace matters – our disad is about speeding up production – not about current production

**Apt et al, 8** – executive director of the Electricity Industry Center at Carnegie Mellon University’s Tepper School of Business and the Department of Engineering and Public Policy, where he is a Distinguished Service Professor (Jay, “Generating Electricity from Renewables: Crafting Policies that Achieve Society's Goals,” 5/26,

<http://wpweb2.tepper.cmu.edu/ceic/pdfs_other/Generating_Electricity_from_Renewables.pdf>

Twenty-five states have indicated their dissatisfaction with the current electricity generation system by enacting binding renewables portfolio standards (RPS). They require that wind, solar, geothermal, biomass, waste or other renewable resources be used to generate up to 30% of the electricity sold by 2025. While the authors applaud using renewables to advance important social goals, we caution that forcing too rapid implementation of these technologies could lead to blackouts or unnecessarily high prices.

One reason for caution in forcing rapid deployment of renewables is that large scale wind and solar generation is qualitatively different from using fossil fuels, hydro-electric, or nuclear. Unlike the technologies that have served the industry for a century, wind and solar generation are variable and they generally do not generate electricity when demand is highest. In addition, generating companies face difficulties in fulfilling the RPS goals by the required dates. Getting sufficient wind turbines would require a major increase in manufacturing capacity, since there is about an 18-month delivery delay at present. Siting the wind farms and getting the power to market may be even more difficult because, while the public supports renewables in principle, there is formidable opposition to siting wind turbines and transmission lines. Cost is still another difficulty. Transmission costs can easily double the cost of delivered power. The fact that wind and solar generally do not help meet peak demand means that dispatchable generation is needed for peak demand and so renewables don’t reduce the investment in dispatchable power, but rather only reduce fuel use. The variable nature of wind and solar generation requires backup generation or storage to fill the gaps when the wind dies or clouds obscure the sun. The low capacity factors for wind, and especially solar, mean that if they were the only means of meeting the 15-25% RPS, much of the renewable generation would be spilled until large scale electricity storage and transmission lines become much less expensive.

#### Costs escalate if wind is overproduced due to overdependence on wind – when systems have to be feathered due to a lack of wind or excessive wind speed – it forces power shut downs. The relationship is linear

**Korchinski, 12** - chemical engineer who has spent his career working worldwide in the oil refining and chemical industries. His primary focuses include the development and deployment of rigorous process simulation technology, the design and installation of real-time multivariable controls, and economic studies related to the process industries (William, “The Limits of Wind Power,” October, <http://reason.org/files/thelimitsofwindpower.pdf>)

Sometimes there is too much wind and wind must be “dumped” or “spilled.” This can happen when wind speed exceeds the mechanical limitations of the turbine machinery, in which case “feathering” the turbines (i.e. turning the blades so that they do not catch the wind and become non-productive) prevents damage. Likewise, sometimes electrical demand is too low to consume all of the wind power. The interchangeable terms “wind dumping” or “wind spilling” describe these situations.

Figure 9 summarizes wind dumping data from Gross et al. 23 At low wind penetrations, there is very little need to dump wind. Above about 10% wind penetration, however, wind dumping increases linearly with wind penetration. 24

One implication of wind dumping is that at higher wind penetration levels, it is theoretically possible to build too many wind turbines for the size of the demand, placing an upper limit on wind penetration. When there are too many wind turbines, there will be large periods of time when many of the turbines are “feathered.” Due to the high installed cost of wind power, this leads to very expensive electricity. In other words, excessively high wind penetration leads to excessively high electricity costs.

#### Germany shows the danger of overproduction – it forces massive shutdowns and reliability problems

**Booker, 12** – columnist for the Sunday Telegraph (Christopher, “Germany's wind power chaos should be a warning to the UK” 9/22, <http://www.telegraph.co.uk/comment/9559656/Germanys-wind-power-chaos-should-be-a-warning-to-the-UK.html>)

Germany is way ahead of us on the very path our politicians want us to follow – and the problems it has encountered as a result are big news there. In fact, Germany is being horribly caught out by precisely the same delusion about renewable energy that our own politicians have fallen for. Like all enthusiasts for “free, clean, renewable electricity”, they overlook the fatal implications of the fact that wind speeds and sunlight constantly vary. They are taken in by the wind industry’s trick of vastly exaggerating the usefulness of wind farms by talking in terms of their “capacity”, hiding the fact that their actual output will waver between 100 per cent of capacity and zero. In Britain it averages around 25 per cent; in Germany it is lower, just 17 per cent.

The more a country depends on such sources of energy, the more there will arise – as Germany is discovering – two massive technical problems. One is that it becomes incredibly difficult to maintain a consistent supply of power to the grid, when that wildly fluctuating renewable output has to be balanced by input from conventional power stations. The other is that, to keep that back-up constantly available can require fossil-fuel power plants to run much of the time very inefficiently and expensively (incidentally chucking out so much more “carbon” than normal that it negates any supposed CO2 savings from the wind).

Both these problems have come home to roost in Germany in a big way, because it has gone more aggressively down the renewables route than any other country in the world. Having poured hundreds of billions of euros in subsidies into wind and solar power, making its electricity bills almost the highest in Europe, the picture that Germany presents is, on paper, almost everything the most rabid greenie could want. Last year, its wind turbines already had 29GW of capacity, equivalent to a quarter of Germany’s average electricity demand. But because these turbines are even less efficient than our own, their actual output averaged only 5GW, and most of the rest had to come from grown-up power stations, ready to supply up to 29GW at any time and then switch off as the wind picked up again.

Now the problem for the German grid has become even worse. Thanks to a flood of subsidies unleashed by Angela Merkel’s government, renewable capacity has risen still further (solar, for instance, by 43 per cent). This makes it so difficult to keep the grid balanced that it is permanently at risk of power failures. (When the power to one Hamburg aluminium factory failed recently, for only a fraction of a second, it shut down the plant, causing serious damage.) Energy-intensive industries are having to install their own generators, or are looking to leave Germany altogether.

### AT: Meltdowns Defense

#### Accidents are likely and devastate the environment.

Kopytko & Perkins, ‘11

[Natalie, PhD Researcher in the Environment Department, University of York, John, former chief economist at a major international consulting firm, advised the World Bank, United Nations, IMF, U.S. Treasury Department, Fortune 500 corporations, and countries in Africa, Asia, Latin America, and the Middle East, his books on economics and geo-politics have sold more than 1 million copies, spent many months on the New York Times and other bestseller lists, and are published in over 30 languages, “Climate Change, Nuclear Power, and the Adaptation-Mitigation Dilemma,” Energy Policy, [Volume 39, Issue 1](http://www.sciencedirect.com/science/journal/03014215/39/1), January 2011, Pages 318–333, Science Direct]

5.5. Other environmental problems Nuclear power has the potential for catastrophic accidents and consequently widespread environmental damage, unlike any other form of energy. The potential costs of not adapting nuclear operations to climate change are exceptionally high. Safe operation during extreme climate events remains a challenge. For one, the uncertainty in predicting climate change poses a problem for safety. Historical flood levels can no longer serve as an adequate predictor of future floods. As seen in France, recent floods have exceeded design basis levels. Regardless of design parameters, storms at coastal locations continue to be a problem because they often lead to the failure of multiple systems, and despite previous experience, failures in alarm and communication systems continue to occur. In certain cases, licensees have shown a low awareness of potential problems caused by external events. Moisture build-up leads to equipment failure; nonetheless, a licensee at one site did not recognize the problem as something requiring preventative and corrective measures. In addition, after a hurricane had passed a site in Florida, the missile shield doors that protected safety related equipment were found open and according to the licensee these doors could have been open for several years. These examples indicate that licensees do not always take proper action in dealing with external events; moreover, they are not prepared for the issues that will arise due to climate change.

#### They don’t assume ecological impact

Cairns, ‘4

[John, Department of Biology, Virginia Polytechnic Institute and State University, “Future of Life on Earth,” Ethics in Science and Environmental Politics, www.int-res.com/esepbooks/EB2Pt2.pdf]

One lesson from the five great global extinctions is that species and ecosystems come and go, but the evolutionary process continues. In short, life forms have a future on Earth, but humankind’s future depends on its stewardship of ecosystems that favor Homo sapiens. By practicing sustainability ethics, humankind can protect and preserve ecosystems that have services favorable to it. Earth has reached its present state through an estimated 4550 million years and may last for 15000 million more years. The sixth mass extinction, now underway, is unique because humankind is a major contributor to the process. Excessive damage to the ecological life support system will markedly alter civilization, as it is presently known, and might even result in human extinction. However, if humankind learns to live sustainably, the likelihood of leaving a habitable planet for posterity will dramatically increase. The 21st century represents a defining moment for humankind—will present generations become good ancestors for their descendants by living sustainably or will they leave a less habitable planet for posterity by continuing to live unsustainably?

### Econ Strong

#### The economy is improving – fundamentals are strong even if growth won’t be rapid

**Webman, 1/7**/13 – Oppenheimer Funds (Jerry, Forbes, “Despite Investors' Denial, The U.S. Economy Is Getting Better” <http://www.forbes.com/sites/oppenheimerfunds/2013/01/07/despite-investors-denial-the-u-s-economy-is-getting-better/>)

I accept that breakout growth may once again be out of reach this year. Despite considerable progress, the drag from household deleveraging still has months and billions to go. But to the naysayers calling for a recession this year, I acknowledge that the business cycle is getting longer in the tooth, but ask: Where are the excesses in the system?

* Household debt-to-income ratios are declining and the burden of servicing the debt has fallen to its lowest level in 31 years (representing roughly $2,000 in annual savings to American households).3
* The inventory of existing homes for sale has been halved as housing has become more affordable than at any point in decades. Even the nation’s home builders are increasingly optimistic,4 a very positive sign for residential investment and construction-sector job creation.
* Consumers, feeling more confident, are making bigger ticket purchases including automobiles. Although we’re buying roughly 15 million vehicles per year,5 the average life of a car on the road remains quite high.
* Even the much-maligned states have seen their finances improve6 as each passing quarter of growth has brought new revenues into the coffers.

#### Growth is rebounding slowly

**Bartash, 1/6/13** – MarketWatch (Jeffry, “U.S. out of slow lane, but can’t find fast lane” http://articles.marketwatch.com/2013-01-06/economy/36166919\_1\_economy-slow-lane-slow-growth)

The U.S. economy is likely to experience more of the “new normal” early on in the new year.

What’s the new normal? An economy growing around 2%, workers’ wages rising about 2% a year and roughly 150,000 jobs being created each month. Read latest employment report.

Not bad, but well below the nation’s typical performance. At this stage of a recovery, the U.S. economy normally grows around 3% a year and adds upward of 200,000 jobs a month. Wages also tend to rise a bit faster.

“The economy is growing, but not fast enough to move the needle in terms of its potential,’ said Steve Blitz, chief economist at ITG Investment Research. “We are on a low-trajectory growth rate.”

Investors won’t get any evidence to show otherwise this week, either. The economic calendar is extremely light, highlighted by the U.S. trade deficit and secondary reports on weekly jobless claims, small-business activity and the price of imported goods.

“The data is not going to be driving much activity this week,” said Julia Coronado, senior economist at BNP Paribas.

Several top officials at the Federal Reserve are also slated to give speeches. Although the central bank is not expected to change its strategy soon, markets always pay close attention to what Fed VIPs say.

In the middle lane

The trajectory of the U.S. economy has been remarkably stable — some would say flat — over the past two years. In both 2011 and 2012, the U.S. had created an average of 153,000 jobs a month.

The modest increase in jobs dovetails with modest growth in the economy. In some ways, the U.S. has been remarkably resilient despite a number of headwinds, such as a housing bust, manufacturing slowdown, frequent U.S. budget fights, European financial crisis and a global economic slump.

The problem is, the economy can’t break out of its slow-growth straitjacket and conditions are still not ripe for faster recovery.

#### The strong housing sector ensures sustained growth

**Gittlesohn, 1/4/13** (John, Bloomberg, “Housing a Sweet Spot for U.S. Economy as Recovery Expands” <http://www.bloomberg.com/news/2013-01-04/housing-a-sweet-spot-for-u-s-economy-as-recovery-expands.html>)

U.S. home sales and prices are poised to rise in 2013, solidifying a recovery that began last year after a half-decade slump that was the deepest since the Great Depression, according to analysts and economists surveyed by Bloomberg. Record-low mortgage rates and attractive prices, supported by declining unemployment, are luring buyers as the inventory of distressed homes shrinks. Homebuilders are responding by adding supply, bolstering economic growth.

“Increased new residential construction activity will lead to employment gains, which should translate into higher consumption and modest GDP growth,” Robert Wetenhall, a homebuilding analyst with RBC Capital Markets LLC in New York, said in a telephone interview. The U.S. budget deal reached this week removes a cloud to that outlook, he said.

Sales Gains

Sales of existing homes will rise about 7.2 percent in 2013 to 4.98 million, the highest since 2007, based on the median estimates of 15 economists and housing analysts surveyed by Bloomberg News for this story. Prices will gain 3.3 percent after an estimated 4.5 percent jump in 2012, according to the forecasters, who used varying measures of values.

Building is set to jump after the inventory of new homes fell last year to the lowest level in half a century. Housing starts, including single- and multifamily units, are expected to increase 24 percent to 967,000 in 2013, the most since 2007, according to the median of 17 estimates. Starts will reach an annual pace of 1 million by the end of this year and 1.5 million by the end of 2016, according to a report today by Goldman Sachs Group Inc. analysts led by Hui Shan, who said housing will remain a “bright spot” in 2013.

Purchases of new single-family houses will climb 23 percent to 448,000 this year, extending last year’s rebound from a record low 306,000 in 2011, according to estimates of 17 analysts surveyed for this story.

“We expect housing to continue this momentum into 2013 and in fact show stronger growth rates due to pent-up demand,” Mark Kiesel, managing director at Pacific Investment Management Co. in Newport Beach, California, wrote in an e-mail.

Buying Home

Kiesel, who predicted the home-price bubble would burst in 2006, is betting on an extended housing recovery with his investors’ money and his own. In May, six years after selling his last house near the real estate peak, Kiesel bought a Newport Beach home in a sign of his conviction that prices had bottomed. The Pimco Investment Grade Corporate Bond fund outperformed the broader Barclays US Credit index in 2012 because of its housing-related investments, he said.

“Residential investments potentially could grow between 20 percent and 30 percent” in 2013, adding as much as 0.75 percent to U.S. gross domestic product growth, he said.

The U.S. economy expanded at an annual pace of 3.1 percent in the third quarter, the Commerce Department said Dec. 20. Residential fixed investment climbed almost 14 percent from a year earlier to $370.9 billion, its highest level since the end of 2008. Gross domestic product will increase 2 percent this year, based on the median of 85 estimates in a Bloomberg survey.

Jobs Growth

U.S. payrolls rose by 155,000 workers last month following a revised 161,000 advance in November that was more than initially estimated, Labor Department figures showed today. The unemployment rate matched a four-year low, at 7.8 percent.

While new-home sales are at about a third of the level they were at the peak in 2005, builders are growing more bullish. The National Association of Home Builders/Wells Fargo Housing market index last month rose to its highest level since April 2006. The gauge, in which a number above 50 indicates more builders view sales conditions as good than poor, reached 47, compared with a low of 8 in January 2009.

The Standard & Poor’s Supercomposite Homebuilding Index (S15HOME) jumped 84 percent last year, the best performance since 2003. PulteGroup Inc. (PHM), the largest U.S. homebuilder by revenue, surged 188 percent for the biggest gain in the entire S&P 500. (SPX)

‘Virtuous Circle’

Increases in home prices, construction employment and consumer optimism can restart the “virtuous circle,” shifting housing from an economic drag to an economic engine, according to Michael Widner, an analyst with Stifel Nicolaus & Co.

“We see 2013 as the year the housing story progresses from ‘no way’ to consensus, and the GDP and job growth tailwinds being sustainable through 2015,” Widner, based in Baltimore, wrote in a Dec. 19 note.

### Manufacturing Up

#### Manufacturing improving rapidly

**Bloomberg, 1/2/13** (“Outlook for 2013 Improves as U.S. Manufacturing Climbs”

<http://www.bloomberg.com/news/2013-01-02/ism-index-of-u-s-manufacturing-increased-to-50-7-in-december.html>)

Manufacturing picked up in December, reflecting growth in orders, employment and exports that indicate the U.S. expansion will be sustained in 2013 following the budget deal.

The Institute for Supply Management’s manufacturing index climbed to 50.7 from a three-year low of 49.5 in November, the Tempe, Arizona-based group reported today. Fifty is the dividing line between expansion and contraction. Other data showed fewer outlays for non-residential projects pushed down construction spending in November for the first time in eight months.

A rebound in housing and stabilization in global growth point to a pickup in sales that will boost companies such as General Electric Co. (GE) Stocks surged, sending the Standard & Poor’s 500 Index to its biggest rally in a year, as Congress passed a bill averting spending cuts and tax increases that threatened to push the world’s largest economy into a recession.

“We are starting the new year on at least a fairly firm note,” said Tim Quinlan, an economist at Wells Fargo Securities LLC in Charlotte, North Carolina, who projected the ISM index would climb to 51. While some manufacturers have been holding back because of the budget debate, he said, “there is demand in this economy. As soon as businesses are able to take advantage of this, we’ll see a bigger contribution from manufacturing to overall economic growth.”

The S&P 500 advanced 2.5 percent, the biggest gain since Dec. 20, 2011, to 1,462.42 at the close in New York. Commodities surged and Treasuries fell after Congress passed a bill preventing tax increases for more than 99 percent of households.

Construction Spending

Homebuilding outlays increased 0.4 percent in November to a $295.3 billion annual rate, the most in four years, a report from the Commerce Department showed today. The pickup failed to offset declines in non-residential building and public works as total construction spending fell 0.3 percent in November after a 0.7 percent gain.

The median forecast of 71 economists surveyed by Bloomberg called for the ISM index to rise to 50.5. Estimates ranged from 48 to 52. For all of last year, the factory gauge averaged 51.7, down from 55.2 in 2011 and 57.3 in 2010.

“We can take away a lot of positives from the December report,” Bradley Holcomb, chairman of the ISM factory survey, said on a conference call with reporters. The agreement to avoid the so-called fiscal cliff “is positive news” and “bodes well for manufacturing,” said Holcomb, who predicted the index will gradually climb to the mid-50 level over the next few months.

Growing Orders

The ISM’s report showed a fourth consecutive month of expanding orders in December, prompting the biggest advance in the supply managers’ employment index in more than three years. The group’s export gauge showed sales overseas grew for the first time in seven months.

Manufacturing in the U.K. unexpectedly expanded in December at the fastest pace in 15 months, according to a report today from Markit Economics and the Chartered Institute of Purchasing and Supply in London. In the euro area, manufacturing continued to shrink, Markit said.

China’s manufacturing unexpectedly expanded in December at the fastest pace in 19 months, boosting optimism that a recovery in the world’s second-biggest economy is gaining traction, according to a Dec. 31 report from HSBC Holdings Plc and Markit Economics.

“We see China getting better,” Jeffrey Immelt, chairman and chief executive officer at General Electric, said at a Dec. 17 investor meeting. “The U.S. consumer continues to be stronger and housing gets better, but there’s no doubt that the fiscal uncertainty slowed activity in the fourth quarter of the year. We think Europe and Japan will remain slow, but stable.”

12 Percent

Manufacturing, which accounts for about 12 percent of the U.S. economy, was at the forefront of the recovery that began in June 2009.

The automobile industry remains one source of growth. Cars and light trucks sold at a 15.5 million annual rate in November, the most since February 2008, boosted in part by buyers replacing cars damaged by superstorm Sandy, according to data from Ward’s Automotive Group.

An improving housing market also is helping manufacturers such as Illinois Tool Works Inc. (ITW), a maker of welding equipment, construction supplies and auto parts.

“On the construction side, certainly we do expect housing starts to get better from where they’ve been,” Ronald Kropp, chief financial officer of the Glenview, Illinois-based company, said on a Dec. 14 conference call with analysts.

More Optimistic

American manufacturers are more optimistic about the outlook for sales and spending this year than service providers, signaling that factories will support the economic expansion after they slumped in recent months, according to a survey released Dec. 11 by the ISM group.

Purchasing managers at factories anticipate sales will grow 4.6 percent in 2013 and business investment will increase 7.6 percent, the report showed. By comparison, service providers estimate revenue will grow 4.3 percent this year and that capital spending will rise 7 percent, the ISM said.

Employers probably added jobs in December at about the same pace as the prior month, showing the labor market held up as lawmakers struggled to resolve the fiscal impasse, economists said before a report this week.

Payrolls rose by 150,000 workers after a 146,000 gain in November, according to the median forecast of 71 economists surveyed by Bloomberg ahead of Labor Department figures due Jan. 4. The unemployment rate may have held at 7.7 percent, the lowest since December 2008.