## 1NC

## 1

#### Nuclear PRODUCTION must be for the PURPOSE of energy generation

International Atomic Energy Agency 7

<http://www-pub.iaea.org/MTCD/publications/PDF/Pub1290_web.pdf>

 Under the terms of Article III of its Statute, the IAEA is authorized to establish or adopt standards of safety for protection of health and minimization of danger to life and property, and to provide for the application of these standards. The publications by means of which the IAEA establishes standards are issued in the IAEA Safety Standards Series. This series covers nuclear safety, radiation safety, transport safety and waste safety, and also general safety (i.e. all these areas of safety). The publication categories in the series are Safety Fundamentals, Safety Requirements and Safety Guides.

 The process of inducing radioactivity.􀁌 Most commonly used to refer to the induction of radioactivity in moderators, coolants, and structural and shielding materials, caused by irradiation with neutrons.􀁌 The BSS definition — “The production of radionuclides by irradiation.” [1] —is technically adequate; however, the term ‘production’ gives a connotation that this is being done intentionally rather than, as is normally the case,incidentally.

All demonstration gets class 104 licenses – that’s research, not production

Matuzan and Walker 85

 Controlling the Atom:

The Beginnings of Nuclear Regulation, 1946-1962

 George T. Mazuzan is Assistant Professor of History at State University of New York at Geneseo. University of Vermont awarded him his B.S. and M.A., and his Ph.D. was conferred by Kent State University. He has published several articles.

 Sections of the 1954 act reflected the state of the technology by establishing two classes of licenses for atomic facilities. One section authorized the AEC to issue commercial or "class 103" licenses (after the section number in the law) whenever it had determined that a facility had been "sufficiently developed to be of practical value for industrial or commercial purposes." Since the agency and the Joint Committee interpreted "practical value" to mean that atomic facilities had to be judged eco- nomically competitive with other energy sources, issuance of class-103 licenses was postponed until the industry had passed through its research and development phase.33 Instead, early power reactor facilities received "class-104" licenses un- der the terms of section 104. Reactors used in medical therapy, university research, and power demonstration came under this category. A key phrase authorized reactor licenses that would lead to the "demonstra- tion of the practical value . . . for industrial or commercial purposes." Class-104 licenses, then, covered all power reactors used during the developmental period until the industry could find a design that would eventually meet the "practical value" criterion of a class-103 commercial license. Furthermore, section 104 specifically instructed the AEC to im- pose the minimum amount of regulation on a licensee consistent with the public health and safety. In other words, a class-104 license indicated that the government wanted to encourage the new industry to undertake research and development under minimum regulation that would lead to major advances in power-reactor technology.34

Limits and precision – research reactors are both formally and technically distinct. There are HUNDREDS of types

World Nuclear Assocation 10

http://www.world-nuclear.org/info/inf61.html

 The World Nuclear Association (WNA), formerly the Uranium Institute, is an international organization that promotes nuclear power and supports the many companies that comprise the global nuclear industry. Its members come from all parts of the nuclear fuel cycle, including uranium mining, uranium conversion, uranium enrichment, nuclear fuel fabrication, plant manufacture, transport, and the disposition of used nuclear fuel as well as electricity generation itself [1]. Together, WNA members are responsible for 95% of the world's nuclear power outside of the U.S. [2] as well as the vast majority of world uranium, conversion and enrichment production.[3] The WNA says it aims to fulfill a dual role for its members: Facilitating their interaction on technical, commercial and policy matters and promoting wider public understanding of nuclear technology. [4] Accredited to the United Nations, the WNA is an independent, non-profit organization, funded primarily by membership subscriptions

Many of the world's nuclear reactors are used for research and training, materials testing, or the production of radioisotopes for medicine and industry. They are basically neutron factories.

These are much smaller than power reactors or those propelling ships, and many are on university campuses. There are about 240 such reactors operating, in 56 countries. Some operate with high-enriched uranium fuel, and international efforts are underway to substitute low-enriched fuel. Some radioisotope production also uses high-enriched uranium as target material for neutrons, and this is being phased out in favour of low-enriched uranium. Research reactors comprise a wide range of civil and commercial nuclear reactors which are generally not used for power generation. The term is used here to include test reactors, which are more powerful than most. The primary purpose of research reactors is to provide a neutron source for research and other purposes. Their output (neutron beams) can have different characteristics depending on use. They are small relative to power reactors whose primary function is to produce heat to make electricity. They are essentially net energy users. Their power is designated in megawatts (or kilowatts) thermal (MWth or MWt), but here we will use simply MW (or kW). Most range up to 100 MW, compared with 3000 MW (i.e. 1000 MWe) for a typical power reactor. In fact the total power of the world's 283 research reactors is little over 3000 MW.Research reactors are simpler than power reactors and operate at lower temperatures. They need far less fuel, and far less fission products build up as the fuel is used. On the other hand, their fuel requires more highly enriched uranium, typically up to 20% U-235, although some older ones use 93% U-235. They also have a very high power density in the core, which requires special design features. Like power reactors, the core needs cooling, though only the higher-powered test reactors need forced cooling. Usually a moderator is required to slow down the neutrons and enhance fission. As neutron production is their main function, most research reactors also need a reflector to reduce neutron loss from the core.As of October 2011 the IAEA database showed that there were 241 operational research reactors (92 of them in developing countries), 3 under construction, 202 shut down (plus 13 temporary) and 211 decommissioned.Types of research reactors There is a much wider array of designs in use for research reactors than for power reactors, where 80% of the world's plants are of just two similar types. They also have different operating modes, producing energy which may be steady or pulsed.A common design (67 units) is the pool type reactor, where the core is a cluster of fuel elements sitting in a large pool of water. Among the fuel elements are control rods and empty channels for experimental materials. Each element comprises several (e.g. 18) curved aluminium-clad fuel plates in a vertical box. The water both moderates and cools the reactor, and graphite or beryllium is generally used for the reflector, although other materials may also be used. Apertures to access the neutron beams are set in the wall of the pool. Tank type research reactors (32 units) are similar, except that cooling is more active.The TRIGA reactor is another common design (40 units). The core consists of 60-100 cylindrical fuel elements about 36 mm diameter with aluminium cladding enclosing a mixture of uranium fuel and zirconium hydride (as moderator). It sits in a pool of water and generally uses graphite or beryllium as a reflector. This kind of reactor can safely be pulsed to very high power levels (e.g. 25,000 MW) for fractions of a second. Its fuel gives the TRIGA a very strong negative temperature coefficient, and the rapid increase in power is quickly cut short by a negative reactivity effect of the hydride moderator.Other designs are moderated by heavy water (12 units) or graphite. A few are fast reactors, which require no moderator and can use a mixture of uranium and plutonium as fuel. Homogenous type reactors have a core comprising a solution of uranium salts as a liquid, contained in a tank about 300 mm diameter. The simple design made them popular early on, but only five are now operating.Research reactors have a wide range of uses, including analysis and testing of materials, and production of radioisotopes. Their capabilities are applied in many fields, within the nuclear industry as well as in fusion research, environmental science, advanced materials development, drug design and nuclear medicine.The IAEA lists several categories of broadly classified research reactors. They include 60 critical assemblies (usually zero power), 23 test reactors, 37 training facilities, two prototypes and even one producing electricity. But most (160) are largely for research, although some may also produce radioisotopes. As expensive scientific facilities, they tend to be multi-purpose, and many have been operating for more than 30 years.A total of over 670 research and test reactors has been built worldwide, 227 of these in the USA and 97 in the former Soviet Union. In the USA, 193 were commissioned in 1950s and 1960s.

## 2

#### The aff’s invocation of death impacts is necrophilia, a blind obsession with body counts that ends in extinction. Vote neg to reject death impacts—this is a gateway issue—if they win death impacts are good, the rest of the 1NC applies—we won’t cross-apply to prove links

Erich **Fromm 64**, PhD in sociology from Heidelberg in 1922, psychology prof at MSU in the 60’s, “Creators and Destroyers”, The Saturday Review, New York (04. January 1964), pp. 22-25

People are aware of the possibility of nuclear war; they are aware of the destruction such a war could bring with it--and yet they seemingly make no effort to avoid it. Most of us are puzzled by this behavior because we start out from the premise that people love life and fear death. Perhaps we should be less puzzled if we questioned this premise. Maybe there are many people who are indifferent to life and many others who do not love life but who do love death. There is an orientation which we may call love of life (biophilia); it is the normal orientation among healthy persons. But there is also to be found in others a deep attraction to death which, following Unamuno's classic speech made at the University of Salamanca (1938), I call necrophilia. It is the attitude which a Franco general, Millán Astray, expressed in the slogan "Long live death, thus provoking Unamuno’s protest against this "necrophilous and senseless cry." Who is a necrophilous person? He is one who is attracted to and fascinated by all that is not alive, to all that is dead; to corpses, to decay, to feces, to dirt. Necrophiles are those people who love to talk about sickness, burials, death. They come to life precisely when they can talk about death. A clear example of the pure necrophilous type was Hitler. He was fascinated by destruction, and the smell of death was sweet to him. While in the years of success it may have appeared that he wanted only to destroy those whom he considered his enemies, the days of the Götterdämmerung at the end showed that his deepest satisfaction lay in witnessing total and absolute destruction: that of the German people, of those around him, and of himself. The necrophilous dwell in the past, never in the future. Their feelings are essentially sentimental; that is, they nurse the memory of feelings which they had yesterday--or believe that they had. They are cold, distant, devotees of "law and order." Their values are precisely the reverse of the values we connect with normal life; not life, but death excites and satisfies them. If one wants to understand the influence of men like Hitler and Stalin, it lies precisely in their unlimited capacity and willingness to kill. For this they' were loved by the necrophiles. Of the rest, many were afraid of them and so preferred to admire, rather than to be aware of, their fear. Many others did not sense the necrophilous quality of these leaders and saw in them the builders, saviors, good fathers. If the necrophilous leaders had not pretended that they were builders and protectors, the number of people attracted to them would hardly have been sufficient to help them seize power, and the number of those repelled by them would probably soon have led to their downfall. While life is characterized by growth in a structured, functional manner, the necrophilous principle is all that which does not grow, that which is mechanical. The necrophilous person is driven by the desire to transform the organic into the inorganic, to approach life mechanically, as if all living persons were things. All living processes, feelings, and thoughts are transformed into things. Memory, rather than experience--having, rather than being--are what counts. The necrophilous person can relate to an object--a flower or a person--only if he possesses it; hence, a threat to his possession is a threat to himself; if he loses possession he loses contact with the world. That is why we find the paradoxical reaction that he would rather lose life than possession, even though, by losing life, he who possesses has ceased to exist. He loves control, and in the act of controlling he kills life. He is deeply afraid of life, because it is disorderly and uncontrollable by its very nature. The woman who wrongly claims to be the mother of the child in the story of Solomon's judgment is typical of this tendency; she would rather have a properly divided dead child than lose a living one. To the necrophilous person justice means correct division, and they are willing to kill or die for the sake of what they call, justice. "Law and order" for them are idols, and everything that threatens law and order is felt as a satanic attack against their supreme values. The necrophilous person is attracted to darkness and night. In mythology and poetry (as well as in dreams) he is attracted to caves, or to the depth of the ocean, or depicted as being blind. (The trolls in Ibsen's Peer Gynt are a good example.) All that is away from or directed against life attracts him. He wants to return to the darkness {23} of the womb, to the past of inorganic or subhuman existence. He is essentially oriented to the past, not to the future, which he hates and fears. Related to this is his craving for certainty. But life is never certain, never predictable, never controllable; in order to make life controllable, it must be transformed into death; death, indeed, is the only thing about life that is certain to him. The necrophilous person can often be recognized by his looks and his gestures. He is cold, his skin looks dead, and often he has an expression on his face as though he were smelling a bad odor. (This expression could be clearly seen in Hitler's face.) He is orderly and obsessive. This aspect of the necrophilous person has been demonstrated to the world in the figure of Eichmann. Eichmann was fascinated by order and death. His supreme values were obedience and the proper functioning of the organization. He transported Jews as he would have transported coal. That they were human beings was hardly within the field of his vision; hence, even the problem of his having hated or not hated his victims is irrelevant. He was the perfect bureaucrat who had transformed all life into the administration of things. But examples of the necrophilous character are by no means to be found only among the inquisitors, the Hitlers and the Eichmanns. There are any number of individuals who do not have the opportunity and the power to kill, vet whose necrophilia expresses itself in other and (superficially seen) more harmless ways. An example is the mother who will always be interested in her child's sickness, in his failures, in dark prognoses for the future; at the same time she will not be impressed by a favorable change nor respond to her child's joy, nor will she notice anything new that is growing within him. We might find that her dreams deal with sickness, death, corpses, blood. She does not harm the child in any obvious way, yet she may slowly strangle the child's joy of life, his faith--in growth, and eventually infect him with her own necrophilous orientation. My description may have given the impression that all the features mentioned here are necessarily found in the necrophilous person. It is true that such divergent features as the wish to kill, the worship of force, the attraction to death and dirt, sadism, the wish to transform the organic into the inorganic through "order" are all part of the same basic orientation. Yet so far as individuals are concerned, there are considerable differences with respect to the strength of these respective trends. Any one of the features mentioned here may be more pronounced in one person than in another. Furthermore, the degree to which a person is necrophilous in comparison with his biophilous aspects and the degree to which a person is aware of necrophilous tendencies and rationalizes them vary considerably from person to person. Yet the concept of the necrophilous type is by no means an abstraction or summary of various disparate behavior trends. Necrophilia constitutes a fundamental orientation; it is the one answer to life that is in complete opposition to life; it is the most morbid and the most dangerous among the orientations to life of which man is capable. It is true perversion; while living, not life but death is loved--not growth, but destruction. The necrophilous person, if he dares to be aware of what he feels, expresses the motto of his life when he says: "Long live death!" The opposite of the necrophilous orientation is the biophilous one; its essence is love of life in contrast to love of death. Like necrophilia, biophilia is not constituted by a single trait but represents a total orientation, an entire way of being. It is manifested in a person's bodily processes, in his emotions, in his thoughts, in his gestures; the biophilous orientation expresses itself in the whole man. The person who fully loves life is attracted by the process of life in all spheres. He prefers to construct, rather than to retain. He is capable of wondering, and he prefers to see something new to the security of finding the old confirmed. He loves the adventure of living more than he does certainty. His approach to life is functional rather than mechanical. He sees the whole rather than only the parts, structures rather than summations. He wants to mold and to influence by love, by reason, by his example--not by force, by cutting things apart, by the bureaucratic manner of administering people as if they were things. He enjoys life and all its manifestations, rather than mere excitement. Biophilic ethics has its own principle of good and evil. Good is all that serves life; evil is all that serves death. Good is reverence for life (this is the main thesis of Albert Schweitzer, one of the great representatives of the love of life--both in his writings and in his person), and all that enhances life. Evil is all that stifles life, narrows it down, {24} cuts it into pieces. Thus it is from the standpoint of life-ethics that the Bible mentions as the central sin of the Hebrews: "Because thou didst not serve thy Lord with joy and gladness of heart in the abundance of all things." The conscience of the biophilous person is not one of forcing oneself to refrain from evil and to do good. It is not the superego described by .Freud, a strict taskmaster employing sadism against oneself for the sake of virtue. The biophilous conscience is motivated by its attraction to life and joy; the moral effort consists in strengthening the life loving side in oneself. For this reasons the biophile does not dwell in remorse and guilt, which are, after all, only aspects of self-loathing and sadness. He turns quickly to life and attempts to do good. Spinoza's Ethics is a striking example of biophilic morality. "Pleasure," he says, "in itself is not bad but good; contrariwise, pain in itself is bad." And in the same spirit: "A free man thinks of death least of all things; and his wisdom is a meditation not of death but of life." Love of life underlies the various versions of humanistic philosophy. In various conceptual forms these philosophies are in the same vein as Spinoza's; they express the principle that the same man loves life; that man's aim in life is to be attracted by all that is alive and to separate himself from all that is dead and mechanical. The dichotomy of biophilia-necrophilia is the same as Freud's life-and-death instinct. I believe, as Freud did, that this is the most fundamental polarity that exists. However, there is one important difference. Freud assumes that the striving toward death and toward life are two biologically given tendencies inherent in all living substance that their respective strengths are relatively constant, and that there is only one alternative within the operation of the death instinct--namely, that it can be directed against the outside world or against oneself. In contrast to these assumptions I believe that necrophilia is not a normal biological tendency, but a pathological phenomenon--in fact, the most malignant pathology that exists in mail. What are we, the people of the United States today, with respect to necrophilia and biophilia? Undoubtedly our spiritual tradition is one of love of life. And not only this. Was there ever a culture with more love of "fun" and excitement, or with greater opportunities for the majority to enjoy fun and excitement? But even if this is so, fun and excitement is not the same as joy and love of life; perhaps underneath there is indifference to life, or attraction to death? To answer this question we must consider the nature of our bureaucratized, industrial, mass civilization. Our approach to life becomes increasingly mechanical. The aim of social efforts is to produce things, and. in the process of idolatry of things we transform ourselves into commodities. The question here is not whether they are treated nicely and are well fed (things, too, can be treated nicely); the question is whether people are things or living beings. People love mechanical gadgets more than living beings. The approach to man is intellectualabstract. One is interested in people as objects, in their common properties, in the statistical rules of mass behavior, not in living individuals. All this goes together with the increasing role of bureaucratic methods. In giant centers of production, giant cities, giant countries, men are administered as if they were things; men and their administrators are transformed into things, and they obey the law of things. In a bureaucratically organized and centralized industrialism, men's tastes are manipulated so that they consume maximally and in predictable and profitable directions. Their intelligence and character become standardized by the ever-increasing use of tests, which select the mediocre and unadventurous over the original and daring. Indeed, the bureaucratic-industrial civilization that has been victorious in Europe and North America has created a new type of man. He has been described as the "organization man" and as homo consumens. He is in addition the homo mechanicus. By this I mean a "gadget man," deeply attracted to all that is mechanical and inclined against all that is alive. It is, of course, true that man's biological and physiological equipment provides him with such strong sexual impulses that even the homo mechanicus still has sexual desires and looks for women. But there is no doubt that the gadget man's interest in women is diminishing. A New Yorker cartoon pointed to this very amusingly: a sales girl trying to sell a certain brand of perfume to a young female customer recommends it by remarking, "It smells like a new sports car." Indeed, any observer of men's behavior today will confirm that this cartoon is more than a clever joke. There are apparently a great number of men who are more interested in sports-cars, television and radio sets, space travel, and any number of gadgets than they are in women, love, nature, food; who are more stimulated by the manipulation of non-organic, mechanical things than by life. Their attitude toward a woman is like that toward a car: you push the button and watch it race. It is not even too farfetched to assume that homo mechanicus has more pride in and is more fascinated by, devices that can kill millions of people across a distance of several thousands of miles within minutes than he is frightened and depressed by the possibility of such mass destruction. Homo mechanicus still likes sex {25} and drink. But all these pleasures are sought for in the frame of reference of the mechanical and the unalive. He expects that there must be a button which, if pushed, brings happiness, love, pleasure. (Many go to a psychoanalyst under the illusion that he can teach them to find the button.) The homo mechanicus becomes more and more interested in the manipulation of machines, rather than in the participation in and response to life. Hence he becomes indifferent to life, fascinated by the mechanical, and eventually attracted by death and total destruction. This affinity between the love of destruction and the love of the mechanical may well have been expressed for the first time in Marinetti's Futurist Manifesto (1909). "A roaring motor-car, which looks as though running on a shrapnel is more beautiful than the Victory of Samothrace. … We wish to glorify war--the only health-giver of the world-militarism, patriotism, the destructive arm of the Anarchist, the beautiful Ideas that kill the contempt for woman." Briefly then, intellectualization, quantification, abstractification, bureaucratization, and reification--the very characteristics of modern industrial society--when applied to people rather than to things are not the principles of life but those of mechanics. People living in such a system must necessarily become indifferent to life, even attracted to death. They are not aware of this. They take the thrills of excitement for the joys of life and live under the illusion that they are very much alive when they only have many things to own and to use. The lack of protest against nuclear war and the discussion of our "atomologists" of the balance sheet of total or half-total destruction show how far we have already gone into the "valley of the shadow of death."1 To speak of the necrophilous quality of our industrial civilization does not imply that industrial production as such is necessarily contrary to the principles of life. The question is whether the principles of social organization and of life are subordinated to those of mechanization, or whether the principles of life are the dominant ones. Obviously, the industrialized world has not found thus far an answer, to the question posed here: How is it possible to create a humanist industrialism as against the bureaucratic mass industrialism that rules our lives today? The danger of nuclear war is so grave that man may arrive at a new barbarism before he has even a chance to find the road to a humanist industrialism. Yet not all hope is lost; hence we might ask ourselves whether the hypothesis developed here could in any way contribute to finding peaceful solutions. I believe it might be useful in several ways. First of all, an awareness of our pathological situation, while not yet a cure, is nevertheless a first step. If more people became aware of the difference between love of life and love of death, if they became aware that they themselves are already far gone in the direction of indifference or of necrophilia, this shock alone could produce new and healthy reactions. Furthermore, the sensitivity toward those who recommend death might be increased. Many might see through the pious rationalizations of the death lovers and change their admiration for them to disgust. Beyond this, our hypothesis would suggest one thing to those concerned with peace and survival: that every effort must be made to weaken the attraction of death and to strengthen the attraction of life. Why not declare that there is only one truly dangerous subversion, the subversion of life? Why do not those who represent the traditions of religion and humanism speak up and say that there is no deadlier sin than love for death and contempt for life? Why not encourage our best brains--scientists, artists, educators--to make suggestions on how to arouse and stimulate love for life as opposed to love for gadgets? I know love for gadgets brings profits to the corporations, while love for life requires fewer things and hence is less profitable. Maybe it is too late. Maybe the neutron bomb, which leaves entire cities intact, but without life, is to be the symbol of our civilization. But again, those of us who love life will not cease the struggle against necrophilia.

## 3

#### Natural gas exports are unlikely as prices bounce back

Dlouhy, staff writer for the Houston Chronicle, 7/14/2012

(Jennifer, “Exporting natural gas a dilemma for U.S.,” <http://www.sfgate.com/business/article/Exporting-natural-gas-a-dilemma-for-U-S-3707334.php#ixzz23dQTdrev>)

The drilling boom that has led to a glut of natural gas and sent prices to 10-year lows is causing a quandary for the Obama administration, which is struggling to decide whether the United States should share the bounty with foreign countries.

Although the Energy Department recently approved Houston firm Cheniere Energy's plans to begin exporting liquefied natural gas from its terminal in southwest Louisiana, **the government has put off making decisions on similar applications from at least seven other companies**.

Administration officials say they'll make those decisions after they get the results of a study commissioned by the Energy Department on how allowing companies to sell U.S.-produced natural gas overseas would affect prices for American consumers. The study is due out this summer.

"We want analysis to drive decisions," White House energy adviser Heather Zichal said at a recent forum. The administration supports domestic natural gas and isn't opposed to exports, she said, but also is committed to "protecting American consumers and making sure we're sending the right signal to industry and the manufacturing sector."

The dilemma is politically treacherous in an election year and amidst a struggling economy. Although the United States already exports some natural gas - mostly by pipelines to Mexico and Canada - the flurry of proposals to liquefy natural gas for tanker shipment and sell it to foreign consumers would mean a big jump in exports.

**Plans may not fly**

Applications filed with the Energy Department could put the United States on track to export about 16 billion cubic feet of liquefied natural gas each day - almost a quarter of U.S. daily production in 2011.

**But few expect all of those proposals to win federal approval**, and it could be years before construction is finished on even those projects that win the green light. Experts say the realistic potential market for exports from the United States and Canada is 4 billion to 5 billion cubic feet per day by 2020.

An Energy Information Administration report released in January concluded that exporting natural gas would cause prices to climb in the United States. According to the agency, consumers' electricity bills would increase by 1 to 3 percent from 2015 to 2035 and industrial prices would climb 9 to 28 percent.

Unlike crude, which is a globally traded commodity, natural gas is traded on nonintegrated markets, resulting in huge price variations in different places. The prospect of selling natural gas in Asian and European markets at five times its price in the United States is enough to make most domestic producers giddy.

Energy companies and analysts have argued that current U.S. natural gas prices are unsustainable. It closed Friday at $2.874 per million BTUs in trading on the New York Mercantile Exchange.

The opposing argument is that exports could cause prices to spike, sending electricity bills upward and jeopardizing a resurgence in domestic manufacturing tied to abundant, cheap natural gas. Manufacturers that use natural gas to fuel their plants and as a building block to make other products were hit hard over the past two decades by volatile swings in prices, which last peaked over $15 in 2005.

Elected officials mum

Because any position risks alienating important constituencies - energy producers and manufacturers as well as rank-and-file voters - **few elected officials are pushing the issue**.

"It's a lot safer for politicians who don't want to be on the wrong side to defer it," said Kevin Book, an analyst with ClearView Energy Partners.

Even key stakeholders in the debate are keeping low profiles. Several major energy industry groups have kept mostly quiet, possibly for fear of advocating an export strategy linked to higher prices.

Many manufacturers, meanwhile, are wary of visibly opposing energy exports and being painted as free trade foes. Some companies also are torn because their foreign operations could benefit from an influx of cheaper U.S. natural gas.

President Obama and Republican challenger Mitt Romney also have avoided making big pronouncements.

Advances in drilling technology have allowed energy companies to extract natural gas from dense rock formations coast to coast and tap what analysts widely describe as a 100-year supply of the fossil fuel.

Time-out proposed

A few congressional critics are pushing for a time-out. Rep. Ed Markey, D-Mass., has introduced legislation that would halt new natural gas exports until 2025. Markey argues that the domestic natural gas explosion gives the United States a major global advantage that would be squandered by exports.

"This is our biggest game-changing moment in a generation," he said. "Low-priced natural gas is driving an American manufacturing renaissance."

Linking U.S. natural gas production with global markets would hamper moves to power more cars and produce more electricity with the gas, Markey said.

**Many analysts contend natural gas prices are destined to rise even without more exports** as companies scale back production.

#### Plan is more competitive – trades off

Ferguson 12

(Charles, President, Federation of American Scientists, is the author of Nuclear Energy: What Everyone Needs to Know, and has worked as a senior analyst for nuclear proliferation and arms control issues for the FAS nuclear security program, “Make Nuclear Power More Efficient and Cost Competitive with Natural Gas” February 27, 2012, http://burnanenergyjournal.com/the-burn-blog-post-fukushima-the-future-of-nuclear-power-in-the-united-states/)

Dale Klein’s thoughtful essay underscores the point that the highest economic hurdle for new nuclear power reactors is the competition against the low cost of abundant natural gas. While U.S. supplies of natural gas—especially shale gas accessed by hydraulic fracturing—appear plentiful, the price may take a sharp turn upwards and experience wide swings if the United States substantially increases its exports of this fossil fuel and if natural gas becomes a commodity that is as globally traded as oil is.So, can a case be made for investing in nuclear reactors in the United States? One major incentive that the United States could apply is to place a price on carbon emissions. This would favor nuclear plants, which do not emit greenhouse gases, such as carbon dioxide, and wouldn’t favor coal and natural gas plants, which do emit these gases. But the political will has been lacking to levy such a fee or to establish a cap-and-trade system. Instead, the federal government has offered financial subsidies to stimulate the construction of another handful of reactors. Rather than subsidies, a better strategy would be for nuclear power plants to compete with natural gas plants by becoming more efficient. Presently, commercial nuclear plants only convert about one-third of nuclear fission energy to electricity, whereas natural gas plants can convert about half the energy content of gas to electricity. More advanced nuclear reactors, called Generation IV, could achieve comparable energy efficiencies, but high construction costs and a history of technical problems with certain reactor types have dissuaded commercial investors. A continuing role for government in the nuclear industry is to fund research and development of these technologies to determine if they can cross into commercial viability.

#### Exports offset natural gas from Russia

Ratner, specialist in Energy Policy at Congressional Research Service, et al, 2012

(Michael Ratner –, Paul Belkin – Specialist in European Affairs, Jim Nichol – Specialist in Russian and Eurasian Affairs, Steven Woehrel – Specialist in European Affairs, March 13, 2012, Europe’s Energy Security: Options and Challenges to Natural Gas Supply Diversification, Congressional Research Service, p. 25)

Possible U.S. LNG Exports: Pricing Not Volumes May Be Key

Proposed U.S. LNG export projects, if all were constructed today, would make the United States the second largest LNG exporter behind Qatar. The proposed projects are at various stages in the regulatory approval process. Nevertheless, analysts have already begun speculating on what a significant increase in U.S. LNG exports would mean to natural gas markets, especially to European markets. Any volumes of LNG from the United States would benefit the market, including Europe, by offering a new supplier to consumers. For parts of Europe, especially the Baltic region and Central Europe, where the United States enjoys strong and friendly relations, any decision to export U.S. LNG to that region would be welcomed as a potential offset to their dependence on Russian gas.

However, the bigger effect of U.S. entry into global LNG sales may be on pricing rather than supplies. The United States is one of the few countries that does not link its natural gas price to the price of oil and therefore may add to the pressure to delink the two commodities. Most natural gas sold in the world, by pipeline or as LNG, is sold under long-term contracts and indexed to the price of oil. Historically, the two commodities competed more directly in markets than they do today.

#### That destroys the Russian economy

Solomon, executive director of the non-governmental policy organization Energy Probe, 9/8/2012

(Lawrence, “Israel and Russia join forces over gas,” National Post, Canada, Lexis)

After the collapse of the Soviet Union, the Russia's economy descended into a decade of privation and chaos that Russians still recall with national shame. **Now Russia is back**, thanks to its emergence as an energy superpower. **Russia boasts Europe's fastest-growing economy** and its most potent military, both **due to its stranglehold over Europe's energy needs**. Loathe to lose either influence or sales in Europe, Russia keeps competitors at bay, as it did last year when it stymied a Turkish bid to build a competing natural gas pipeline to Europe.

#### Nuclear war

Filger, author and blogger for the Huffington Post, 2009

(Sheldon, “Russian Economy Faces Disastrous Free Fall Contraction” <http://www.globaleconomiccrisis.com/blog/archives/356>)

**In Russia** historically, **economic health and political stability are intertwined to a degree that is rarely encountered in other major** industrialized **economies**. It was the economic stagnation of the former Soviet Union that led to its political downfall. Similarly, **Medvedev and Putin**, both intimately acquainted with their nation’s history, **are unquestionably alarmed at the prospect that Russia’s economic crisis will endanger the nation’s political stability**, achieved at great cost after years of chaos following the demise of the Soviet Union. Already, strikes and protests are occurring among rank and file workers facing unemployment or non-payment of their salaries. Recent polling demonstrates that the once supreme popularity ratings of Putin and Medvedev are eroding rapidly. Beyond the political elites are the financial oligarchs, who have been forced to deleverage, even unloading their yachts and executive jets in a desperate attempt to raise cash. **Should the Russian economy deteriorate** to the point where economic collapse is not out of the question, **the impact will go far beyond the obvious accelerant such an outcome would be for the Global Economic Crisis**. There is a geopolitical dimension that is even more relevant then the economic context. Despite its economic vulnerabilities and perceived decline from superpower status, **Russia remains one of only two nations on earth with a nuclear arsenal of sufficient scope and capability to destroy the world** as we know it. For that reason, it is not only President Medvedev and Prime Minister Putin who will be lying awake at nights over the prospect that **a national economic crisis can transform itself into a virulent and destabilizing social and political upheaval**. It just may be possible that U.S. President Barack Obama’s national security team has already briefed him about the consequences of a major economic meltdown in Russia for the peace of the world. After all, the most recent national intelligence estimates put out by the U.S. intelligence community have already concluded that the Global Economic Crisis represents the greatest national security threat to the United States, due to its facilitating political instability in the world. **During the years** Boris **Yeltsin ruled Russia, security forces** responsible for **guarding the nation’s nuclear arsenal went without pay** for months at a time, **leading to fears that desperate personnel would** illicitly **sell nuclear weapons to terrorist organizations. If the current economic crisis in Russia were to deteriorate much further, how secure would the Russian nuclear arsenal remain?** It may be that the financial impact of the Global Economic Crisis is its least dangerous consequence.

## 4

#### The United States federal government should approve an Integral Fast Reactor demonstration project in the United States.

States can effectively support energy R&D

Milford, 12

(Sr. Fellow-Brookings & President-Clean Energy Group, “Leveraging State Clean Energy Funds for Economic Development,”

http://www.brookings.edu/~/media/research/files/papers/2012/1/11%20states%20energy%20funds/0111\_states\_energy\_funds)

Without a doubt the impacts of state project finance are significant and have been vital for the growth of the clean energy industry in the United States. The price of renewable energy technologies like solar and wind has come down in part through the sheer volume of project activity. However, it is becoming clear to many states that to truly grow the clean energy enterprise they must do more than just help bring down the costs of clean energy technologies through project financing. This recognition has resulted in a new generation of state programs, spearheaded by several of the state clean energy funds, that go beyond project finance. All of which points to a new brand of fund activity. Along these lines, increasingly ambitious efforts in a number of states have featured engagement on at least three major fronts: (1) **cleantech innovation support through** research, development, and deployment (**RD&D) funding**; (2) financial support for early-stage cleantech companies and emerging technologies, including working capital for companies; and (3) industry development support through business incubator programs, regional cluster promotion, manufacturing and export promotion, supply chain analysis and enhancement, and workforce training programs. On the cleantech innovation front, a few funds such as California’s through its Public Interest Energy Research (PIER) program have supported cleantech RD&D efforts. PIER, for example, funds basic and applied research on topics ranging from work on electricity grid improvement and building and lighting technologies to industrial process improvement, energy storage, renewable technologies, and other areas. In like fashion, a few states have used their CEFs to make equity investments in solar, wind, and bioenergy companies and also provide working capital for expanding growth companies. The Massachusetts Clean Energy Center’s (MassCEC) Investments in the Advancement of Technology program, for example, makes venture capital equity investments in promising early-stage companies that are developing and commercializing new clean energy technologies. And for that matter, some state CEFs have been providing industry development support in a variety of ways, whether through the development of business incubator programs such as those run by the New York State Energy Research and Development Authority (NYSERDA); workforce training programs such as the California Clean Energy Workforce Training Program; or initiatives focused on clean energy industry supply chains such as those maintained by Ohio’s Advanced Energy Fund (AEF). All of which suggests that the next era of state clean energy fund leadership is coming into focus thanks to existing fund experimentation. What is needed now, then, is a new, creative period of expanded CEF focus on clean energy economic development and industry creation to complement and build upon project financing for the installation of clean energy technologies. Such work could not be timelier at this moment of federal gridlock and market uncertainty.

## 5

#### Nuclear production locks in productionism through obsession with finance, competitiveness and technological solutions

**Maciejewska and Marszalek ’11** (Malgorzata, institute of Sociology and Faculty of Social Sciences at Wroclaw University, and Marcin, Wroclaw University (Poland), “Lack of power or lack of democracy: the case of the projected nuclear power plant in Poland,” Economic and Environmental Studies Vol. 11, No.3 (19/2011), 235-248, Sept. 2011, AM)

The mainstream discourse on nuclear power rarely takes up the question of how the global energy industry is organized. In the modern economy the production of energy around the world, which is supposed to be a kind of public good and to guarantee sustainable development, is planned and arranged under free market conditions. As a part of the global chain of extraction, production and trading, it is subordinated to the neoliberal logic on terms of which the society and economy is governed as a business enterprise with the logic of maximum interest and minimum loss. This imposes on different actors (from the international corporations to individual households) the discipline of competitiveness and profitability, resulting in the growth of existing inequalities as ‘the invisible hand’ of the free market economy legitimizes those subjects which are already in power. The modern global economy is based on irrational production and social inequalities where one can observe the processes of work intensification and the cheapening of labor. The markets are dominated by the unproductive virtual economy (See Peterson, 2002) where the major players are the financial institutions which, by means of sophisticated financial tools, buy and sell virtual products (currencies, stocks, insurances, debts and its derivatives). In effect, the major actors in the capitalist economy are the international investors who have the capability of financial liquidity, and operate with those sophisticated financial tools on the global stock market. Even when they lose those capacities because of indebtedness, the states and international organizations seem often to be willing to repair the damage by transferring the taxes paid by citizens. (This is actually happening now, during the financial crisis, when southern and western European countries are subjected to shock therapy under which governments introduce austerity measures.) The praxis of nuclear power producers and the discourse which legitimizes it is therefore reduced to one goal – increasing financial revenues. The Polish plan to build the atomic power plant seems to be another element of the competitiveness strategy. In the authorities’ mind set it could put Poland into the position of more a competitive, more dynamic economy, as expected by the European Union and international organizations such as the International Monetary Fund or the World Bank. The welfare of Poland’s or Niger’s society does not fit into that picture. The nuclear establishment does not take into account the most important aspect of sustainable development: the overall reduction of energy consumption and therefore of energy production. Such a policy could bring a wide range of profits to the societies, the ecosystem, as well as the economy. On the contrary, the increase of power production and power use is one of the core concepts of pro-atomic discourse. This dogmatic belief draws the ideological line indicated at the beginning: the question of energy use and the ideas for solving this problem are seen only as a matter of technological challenges and the amount of financial and material means which have to be invested in them, but not as an effort to re-organize and restructure the modern economy.

#### The IDEOLOGICAL commitment to energy producivism key to consumption -causes tech positivism, ecoinjustice and neoliberal expansionism - EXTINCTION

Byrne et al 9

[http://bst.sagepub.com/content/29/2/81.full.pdf+html](http://bst.sagepub.com/content/29/2/81.full.pdf%2Bhtml)

“Living Well”: Growth Without End Since the industrial revolution, social progress has been measured by material affluence. In turn, assuring wealth and its increase has been the responsibility of a set of institutions capable of planning for and (hopefully) delivering a boundless frontier of expanding production and consumption. Indeed, living well in modern times means an existence assured of a free and constantly rising flow of goods and services delivered conveniently and, ideally, at low cost.3 Perpetual acts of buying and selling adorn daily life as moderns dedicate time and imagination to shopping at levels unknown in human history. This commitment to the search for and absorption of more represents a “cornucopian” predisposition embedded in the micro- to macro-scales of modern life—from the personality of the modern individual to the culture and political economy of modern society (Byrne & Yun, 1999). Making this feature of modern life work in real time is no easy task. It requires unending engineered change in products and production and in parallel, continual change in consumption preferences designed by advertising. Production and marketing techniques shape and serve, on a grand scale, an ethos of unconstrained producing, shopping, and buying. Planned obsolescence is a necessary practice, applied to all goods, from toys to automobiles to computers to buildings, and even to social relationships and personalities;4 all have designed shelf lives when they are to be discarded for new and improved versions. In this manner, market demand grows synergistically with the modern hum of progress. More than 50 years ago, a market analyst could readily describe the economic and technological logic underpinning modern success (Lebow, 1955). Our enormously productive economy demands that we make consumption a way of life, that we convert the buying and use of goods into rituals, that we seek our spiritual satisfaction, our ego satisfaction, in consumption. We need things consumed, burned up, replaced, and discarded at an ever-increasing rate. (p. 5) The lubricant for successful obsolescence is a finance system able to supply (and profit from) a wide range of credit facilities from installment buying to capitalized production. These facilities ensure that buying can keep up with producing, even if there is not enough money ready at hand.5 Growth without end is, in this way, institutionalized as a permanent goal of modern society. By the last quarter of the 20th century, the complex system of ceaseless growth had proved to be so successful that moderns could reason that the reality manufactured by human institutions is palpably superior to the one embodied in natural existence. From the thermostatically controlled air-conditioned, centrally heated and equably humidified colonial farmhouses in the city, we may bowl along limited access highways in our private air-conditioned maximum visibility bubbles at 60 miles per hour, accompanied by a full orchestra, and arrive in the parking decks of our multi-deck air conditioned, pedestrian/traffic segregated urban centers, for work, education, shopping or culture, without ever venturing into the open air! (Lewis, 1969, p. 311) A life involving less and less interaction with the natural world has quickly become a hallmark of living well as nearly 90% of the 24-hour day is now spent indoors (Fisk, 2000). Norms of “efficiency, rationality, optimizing and ‘time-saving’ behavior” justify the organization of human life beyond the confines of suboptimal nature (O’Hara & Stagl, 2001, p. 540). Separation from the natural world is facilitated and reinforced by technological advancements which collapse the boundaries of space and time enabling social transactions without natural limitation. In fact, the middle and upper classes of wealthy societies have little or no need to venture outside. The resulting social alienation from nature leaves mostly the poor to witness the environmental consequences of endless growth. Only their livelihoods are immediately and significantly threatened by the “normal pollution” of modernity (see Byrne, Glover, & Martinez, 2002). Until pictures, video, and text on environmental harm are found online, the middle class cannot experience it. And this is (partly) why middle class environmentalism seeks redress in technological positivism. The everyday of indoor life is protected and nourished by technology; so why shouldn’t this work for the outdoors as well? Energy Obesity The commodification of human life and nature are the foundations of the modern thrust. Together, these forces changed the direction of human and natural history, creating the distinct era in which life, in all forms, now transpires. But the modern era needed and continues to need a special ingredient—energy. This was recently confirmed by the chairman of the U.S. Federal Reserve Board (Bernanke, 2006). At the most basic level, oil and natural gas are just primary commodities, like tin, rubber, or iron ore. Yet energy commodities are special, in part because they are critical inputs to a very wide variety of production processes of modern economies. They provide the fuel that drives our transportation system, heats our homes and offices, and powers our factories. For modern life, energy is the one commodity always needed to make and use anything. In this respect, energy supply is what enables the pursuit of boundless growth; because of modern energy, we can aspire to produce and possess everything. The modern energy system epitomizes its age. Lovins and others roundly criticized its evolution on the ground that its scale and volume are poorly matched to the often much smaller scales and volumes of energy use. But the criticism misses a key point: the mismatch is, in fact, by design; it is essential for modern society to reproduce itself. After all, the potential for incessant growth can only be exploited if an ever-present capacity to fuel such growth exists. Having just enough energy presumes the nonsensical idea of just enough growth; there is never enough growth in the modern era. Lewis Mumford’s thoughtful, in-depth analysis (1934, 1961, and 1970) explains why energy is special in our time. Modern energy systems only come in extra large sizes because “quantitative production has become, for our mass-minded contemporaries, the only imperative goal: they value quantification without qualification” (Mumford, 1961, p. 57). Volume and scale of output are the standard bearers of serious energy options because these are the shared metrics of the alliance of science, capitalism, and carbon power. All three run on the principle that more is better; more knowledge, more power, and more commodities are signs of progress. As a Mumford contemporary has observed, excessive accumulation of energy sustains the modern “social metabolism” (Martinez-Alier, 2006): Energy is not a “sector” of the economy. On the contrary, the market economy as a whole is only one part of the human ecology that must be characterized in terms of the human influence on the flows of energy and materials and interference in the biogeochemical cycles (for instance, in the carbon cycle, with the enhanced greenhouse effect). (p. 37, 55) The wealth-energy association and its concomitant environmental needs has produced a feedback loop: the physical processes that produce material wealth are reliant on energy regimes which foster continued growth of output; increased growth in resource use and consumptive demand (through planned obsolescence and advertising) create and reinforce social norms and obligations to increase consumption; increased demand encourages expansion of the physical processes that produce material wealth; and so on. Perpetuation of this self-sealing logic is a defining characteristic of the modern energy regime, with little distinction between public and private operations. For example, critiques of the centralized energy monopolies and oligopolies from “big oil” to “giant” electric utilities (Pinchot & Ettinger, 1925; Yergin, 1991) were answered by public replicas of the large, complex, and hierarchically managed energy systems: the Tennessee Valley Authority, the Bonneville Power Administration, and the Rural Electrification Administration. These public programs reinforce, rather than oppose, the structures of energy obesity. Much like biophysical obesity, energy obesity is driven by the need to expand without regard to quality of life. Its motive is the commodification of human life and the environment so that growth without end can be served. Thus, living well rests, in the modern case, on the antihealth ideal of energy obesity, and climate change represents, in scale, its most extensive threat to life in all forms.5

#### Energy debates should focus on CRITIQUE of broad structures INSTEAD of producitivist fixes. Our ROLE OF THE BALLOT to reject the aff’s neoliberal ideology is best EVEN IF they win some truth claims – we must SHIFT THE FRAME

Zehner 12

Green illusions,

Ozzie Zehner is the author of Green Illusions and a visiting scholar at the University of California, Berkeley. His recent publications include public science pieces in Christian Science Monitor, The American Scholar, Bulletin of the Atomic Scientists, The Humanist, The Futurist, and Women’s Studies Quarterly. He has appeared on PBS, BBC, CNN, MSNBC, and regularly guest lectures at universities. Zehner’s research and projects have been covered by The Sunday Times, USA Today, WIRED, The Washington Post, Business Week and numerous other media outlets. He also serves on the editorial board of Critical Environmentalism. Zehner primarily researches the social, political and economic conditions influencing energy policy priorities and project outcomes. His work also incorporates symbolic roles that energy technologies play within political and environmental movements. His other research interests include consumerism, urban policy, environmental governance, international human rights, and forgeries. Zehner attended Kettering University (BS -Engineering) and The University of Amsterdam (MS/Drs – Science and Technology Studies). His research was awarded with honors at both institutions. He lives in San Francisco.

Since this book represents a critique of alternative energy, it may seem an unlikely manual for alternative-energy proponents. But it is. Building alternative-energy infrastructure atop America's present economic, social, and cultural landscape is akin to building a sandcastle in a rising tide. A taller sand castle won't help. The first steps in this book sketch a partial blueprint for making alternative-energy technologies relevant into the future. Technological development alone will do little to bring about a durable alternative-energy future. Reimagining the social conditions of energy use will. Ultimately, we have to ask ourselves if environmentalists should be involved in the business of energy production (of any sort) while so many more important issues remain vastly underserved. Over the next several decades, it's quite likely that our power production cocktail will look very much like the mix of today, save for a few adjustments in market share. Wind and biofuel generation will become more prevalent and the stage is set for nuclear power as well, despite recent catastrophes. Nevertheless, these changes will occur over time—they will seem slow. Every power production mechanism has side effects and limitations of its own, and a global shift to new forms of power production simply means that humanity will have to deal with new side effects and limitations in the future. This simple observation seems to have gotten lost in the cheerleading for alternative-energy technologies. The mainstream environmental movement should throw down the green energy pom-poms and pull out the bifocals. It is entirely reasonable for environmentalists to criticize fossil-fuel industries for the harms they instigate. It is, however, entirely unreasonable for environmentalists to become spokespeople for the next round of ecological disaster machines such as solar cells, ethanol, and battery-powered vehicles. Environmentalists pack the largest punch when they instead act as power production watchdogs (regardless of the production method); past environmentalist pressures have cleaned the air and made previously polluted waterways swimmable. This watchdog role will be vital in the future as biofuels, nuclear plants, alternative fossil fuels, solar cells, and other energy technologies import new harms and risks. Beyond a watchdog role, environmentalists yield the greatest progress when addressing our social fundamentals, whether by supporting human rights, cleaning up elections, imagining new economic structures, strengthening communities, revitalizing democracy, or imagining more prosperous modes of consumption. Unsustainable energy use is a symptom of suboptimal social conditions. Energy use will come down when we improve these conditions: consumption patterns that lead to debt and depression; commercials aimed at children; lonely seniors stuck in their homes because they can no longer drive; kids left to fend for themselves when it comes to mobility or sexuality; corporate influence trumping citizen representation; measurements of the nation's health in dollars rather than well-being; a media concerned with advertising over insight, and so on. These may not seem like environmental issues, and they certainly don't seem like energy policy issues, but in reality they are the most important energy and environmental issues of our day. Addressing them won't require sacrifice or social engineering. They are congruent with the interests of many Americans, which will make them easier to initiate and fulfill. They are entirely realistic (as many are already enjoyed by other societies on the planet). They are, in a sense, boring. In fact, the only thing shocking about them is the degree to which they have been underappreciated in contemporary environmental thought, sidelined in the media, and ignored by politicians. Even though these first steps don't represent a grand solution, they are necessary preconditions if we intend to democratically design and implement more comprehensive solutions in the future. Ultimately, clean energy is less energy. Alternative-energy alchemy has so greatly consumed the public imagination over recent decades that the most vital and durable environmental essentials remain overlooked and underfunded. Today energy executives hiss silver-tongued fairy tales about clean-coal technologies, safe nuclear reactors, and renewable sources such as solar, wind, and biofuels to quench growing energy demands, fostering the illusion that we can maintain our expanding patterns of energy consumption without consequence. At the same time, they claim that these technologies can be made environmentally, socially, and politically sound while ignoring a history that has repeatedly shown otherwise. If we give in to accepting their conceptual frames, such as those pitting production versus production, or if we parrot their terms such as clean coal, bridge fuels, peacetime atom, smart growth, and clean energy, then we have already lost. We forfeit our right to critical democratic engagement and instead allow the powers that be to regurgitate their own terms of debate into our open upstretched mouths. Alternative-energy technologies don't clean the air. They don't clean the water. They don't protect wildlife. They don't support human rights. They don't improve neighborhoods. They don't strengthen democracy. They don't regulate themselves. They don't lower atmospheric carbon dioxide. They don't reduce consumption. They produce power. That power can lead to durable benefits, but only given the appropriate context. Ultimately, it's not a question of whether American society possesses the technological prowess to construct an alternative-energy nation. The real question is the reverse. Do we have a society capable of being powered by alternative energy? The answer today is clearly no. But we can change that. Future environmentalists will drop solar, wind, biofuels, nuclear, hydrogen, and hybrids to focus instead on women's rights, consumer culture, walkable neighborhoods, military spending, zoning, health care, wealth disparities, citizen governance, economic reform, and democratic institutions. As environmentalists and global citizens, it's not enough to say that we would benefit by shifting our focus. Our very relevance depends on it.

## 6

#### Obama has the influence to prevail in fiscal cliff negotiations now---political capital is key

Sprung, 9/21

(Andrew Sprung is a political commentator & media consultant. He is the CEO of Sprung PR and hold a PhD from the University of Rochestor, “Ezra Klein's unconvincing theory that Obama misunderstands (or misrepresents) "change," http://xpostfactoid.blogspot.com/2012/09/ezra-kleins-unconvincing-theory-that.html)

In my view, Klein is viewing this question too narrowly. Obama is well aware of the limitations of the bully pulpit, and he's got to know better than any person on the planet that presidential advocacy polarizes, entrenching the opposing party in implacable opposition to whatever the president proposes. Yet, in presenting a revamped theory of how the presidency works, he's not just feeding us a line of BS. And if Obama wins reelection, I believe that we will look back five or ten or twenty years from now and recognize that yes, Obama did change the way Washington works. Or at the very least, he kept the US on a sane policy course in a time of extreme polarization and thus gave (will have given...) the system space to self-correct, as it has in the past. Let's start with Klein's objection to Obama's characterization of how healthcare reform got done: The health-care process, which I reported on extensively, was a firmly “inside game” strategy. There were backroom deals with most every major interest group and every swing legislator.... By the time the law passed, many more Americans viewed it unfavorably than viewed it favorably — exactly the opposite of what you’d expect if health care had passed through an “outside game” strategy in which, as Obama put it, “the American people … put pressure on Congress to move these things forward.” And yet, health care passed. The inside game worked. All true, laddie. And yet, in claiming that the impetus for healthcare reform came from the outside, I don't think Obama is attempting to whitewash this long and messy process -- or is even referring to it. He is alluding to the marshaling or channeling of popular will that got him elected. The essence of Obama's primary election argument against Hillary Clinton was that he was better equipped to marshal the popular will for fundamental change -- with healthcare reform as the centerpiece -- than she was. I well remember the moment when that argument first impressed itself on me. It was in a debate in the immediate aftermath of the Iowa caucuses, on Jan. 5, 2008: Look, I think it's easier to be cynical and just say, "You know what, it can't be done because Washington's designed to resist change." But in fact there have been periods of time in our history where a president inspired the American people to do better, and I think we're in one of those moments right now. I think the American people are hungry for something different and can be mobilized around big changes -- not incremental changes, not small changes. I actually give Bill Clinton enormous credit for having balanced those budgets during those years. It did take political courage for him to do that. But we never built the majority and coalesced the American people around being able to get the other stuff done. And, you know, so the truth is actually words do inspire. Words do help people get involved. Words do help members of Congress get into power so that they can be part of a coalition to deliver health care reform, to deliver a bold energy policy. Don't discount that power, because when the American people are determined that something is going to happen, then it happens. And if they are disaffected and cynical and fearful and told that it can't be done, then it doesn't. I'm running for president because I want to tell them, yes, we can. And that's why I think they're responding in such large numbers.

Cue the political science eye-roll. The American people were not "determined" that healthcare reform per se had to occur. You can't read the results of the 2008 wave election as a "mandate" for a specific policy. In the aftermath, the electoral tide went back out with a vengeance. But it's also true that in two years of campaigning Obama's words did inspire people, that the American people were hungry for change after Bush, that Obama made a broad and conceptually coherent case for moving the center of American politics back to the left with a renewed commitment to shared prosperity and investment in the common good, and that healthcare reform was at the center of that case. True too that the results of that election gave him enough of a majority to persist, even when relentless Republican misinformation and bad-faith negotiation and delay eroded public support. Obama also **used the bully pulpit at crucial point**s, if not to rally public opinion, at least **to re-commit wavering Democrats -**- and also to convince the public, as he enduringly has, that he was more of a **good faith negotiator**, more willing to compromise, than the Republicans. Those pressure points were the September 2009 speech he gave to a joint session of Congress, and the remarkable eight-hour symposium he staged with the leadership of both parties in late February 2010 to showcase the extent to which the ACA incorporated past Republican proposals and met goals allegedly shared by both parties, as well as his own bend-over-backwards willingness to incorporate any Republican ideas that could reasonably be cast as advancing those goals. In a series of posts about Ronald Reagan, Brendhan Nyhan has demonstrated that presidential rhetoric generally does not sway public opinion. Savvy politicians channel public opinion; transformative ones seize an opportunity when their basic narrative of where the country needs to go aligns with a shift in public opinion, usually in response to recent setbacks or turmoil. Obama, like Reagan, effected major change in his first two years because he caught such a wave -- he **amassed the political capital**, and he spent it, and we got what he paid for. The force from outside -- a wave election -- empowered Obama to work change from inside in a system that reached a new peak of dysfunctionality. Klein's also objects to Obama's pitch for how to effect change going forward. In 2011, he notes, Obama highlighted the substantial change won from the messy inside game of legislating, touting the long list of legislative accomplishments of the 111th Congress. In election season, he has reverted to a keynote of his 2008 campaign: change comes from you, the electorate; it happens when ”the American people … put pressure on Congress to move these things forward.” Klein regards this as election season hooey: But while this theory of change might play better, it’s the precise theory of change that the last few years have shattered. Whatever you want to say about the inside game, it worked. Legislation passed. But after the midterm elections, it stopped working. And so the White House moved towards an outside game strategy, where ”the American people … put pressure on Congress to move these things forward.” Perhaps the most public example was Obama’s July 2011 speech, in which he said: I’m asking you all to make your voice heard. If you want a balanced approach to reducing the deficit, let your member of Congress know. If you believe we can solve this problem through compromise, send that message. So many Americans responded that Congress’s Web site crashed. But Obama didn’t get his “balanced approach,” which meant a deal including taxes. Klein goes on to recount that throughout the past year of confrontation with the GOP, pushing a jobs package that had broad popular support, Obama won only one minor victory, extension of the payroll tax cut. He then reverts to two political science tenets: presidential advocacy entrenches the opposition, and it can't move popular opinion. But I think he misreads Obama's pitch, strategy and record on several counts. First, he **understates Obama's** (and the Democrats') **successes in the year of confrontation** that has followed the debt ceiling debacle. He writes off the payroll tax cut and unemployment benefit extension as small beer. But this was actually a near-total victory in two stages against entrenched opposition, and it won Obama some vital back-door stimulus for the second year running in the wake of the GOP House takeover. It was followed by a similar GOP cave-in on maintaining low student loan interest rates -- and then again, by the collapse of the House GOP effort to renege on the Budget Control Act and impose still more spending cuts. Presidential rhetoric may not change the public mind. But when it's in sync with voter's propensities, **it can deploy public opinion to bring pressure to bear on the opposition.** Second, it's true that under threat of GOP debt ceiling extortion, Obama successfully marshaled public opinion in favor of his "balanced" approach to deficit reduction but wasn't able to use that pressure to move the GOP off their no-new-taxes intransigence. **But that battle ain't over yet**, and popular support for Obama's position **is political capital that's still in the bank**. **In the upcoming fiscal cliff negotiations, Obama**, if he wins reelection, **will have the whip hand,** given the expiration of the Bush tax cuts and Republican teeth-gnashing over the defense cuts in the sequester. Speaking of which, Obama's refusal to intervene in the supercommittee negotiations as Republicans stonewalled once again over any tax hikes **banked him further capital in this upcoming fight**. Republicans are screaming much louder than Democrats about the sequester, disastrous though the cuts may be on the domestic side. Third, it's rational for Obama to recast his bid for change in election season, because of course he's seeking further "change" from the outside, i.e., more Democrats elected to Congress. He's not going to win a mandate as in 2008, or, most likely, majorities in both houses of Congress. But he has to make the pitch for being granted renewed tools to advance his agenda. Finally, a key part of Obama's "you are the change" pitch in his convention speech was a frank call to play defense -- to protect the changes wrought in his first term and fend off the further capture of the electoral process and the nation's resources by the oligarchy the GOP represents: If you turn away now – if you buy into the cynicism that the change we fought for isn’t possible … well, change will not happen. If you give up on the idea that your voice can make a difference, then other voices will fill the void: lobbyists and special interests; the people with the $10 million checks who are trying to buy this election and those who are making it harder for you to vote; Washington politicians who want to decide who you can marry, or control health-care choices that women should make for themselves.

#### Plan kills Obama

Petroleum Intelligence Weekly, 1/9/12, Obama Plays Safe on Energy Policy, Lexis

With less than a year to go **until he faces re-election**, US President Barack **Obama is trying to avoid controversial energy policy decisions**, postponing the finalization of restrictions on oil refinery and power plant emissions and delaying the approval of a major crude pipeline project. The president’s caution will prolong the status quo on issues where the industry both opposes and supports the administration’s plans, and also illustrates what's at stake for energy policy depending on whether or not Obama is given another four years in office. Most of Obama's original campaign **pledges on promoting alternatives to fossil fuels** and tackling climate change **have not passed muster with Congress**, most notably an ambitious plan for national carbon controls, a subsequent toned-down clean energy standard floated after the carbon legislation failed, and repeated efforts to repeal $30 billion-$40 billion worth of oil industry tax deductions over 10 years ( PIW May9'11 ). The one exception has been the passage of $90 billion in clean energy funding as part of an economic stimulus bill passed early in Obama's term, but **the White House has been unable to repeat** this **success in other energy policy areas** ( PIW Feb.23'09 ).

#### Presidential leadership is key to a compromise – the alternative is the collapse of hegemony, a double-dip recession, and war in the Middle East

Hutchison, U.S. Senator from the great state of Texas, 9/21/2012

(Kay Bailey, “A Looming Threat to National Security,” States News Service, Lexis)

Despite warnings of the **dire consequences**, **America is teetering at the edge of a fiscal cliff**, with January 1st, 2013 as the tipping point. On that date, **unless Congress and the White House can reach agreement** on how to cut the federal deficit, all taxpayers will be hit with higher taxes and deep cuts - called "sequestration" - will occur in almost all government spending, disrupting our already weak economy and putting our national security at risk.

According to the House Armed Services Committee, if sequestration goes into effect, it would put us on course for more than $1 trillion in defense cuts over the next 10 years. What would that mean? A huge hit to our military personnel and their families; devastating cuts in funding for critical military equipment and supplies for our soldiers; and **a** potentially **catastrophic blow to our** national defense and **security capabilities** in a time of increasing violence and danger.

All Americans feel a debt of gratitude to our men and women who serve in uniform. But Texas in particular has a culture that not only reveres the commitment and sacrifice they make to protect our freedom, we send a disproportionate number of our sons and daughters to serve.

The burden is not borne solely by those who continue to answer the call of duty, but by their families as well, as they endure separation and the anxiety of a loved one going off to war. These Americans have made tremendous sacrifices. They deserve better than to face threats to their financial security and increased risks to their loved ones in uniform, purely for political gamesmanship.

Sequestration would also place an additional burden on our economy. In the industries that support national defense, as many as 1 million skilled workers could be laid off. With 43 straight months of unemployment above 8 percent, it is beyond comprehension to add a virtual army to the 23 million Americans who are already out of work or under-employed. **Government and private economic forecasters warn that sequestration will push the country back into recession next year**.

The recent murder of our Ambassador to Libya and members of his staff, attacks on US embassies and consulates and continued riots across the Middle East and North Africa are stark reminders that great portions of the world remain volatile and hostile to the US. **We have the mantle of responsibility that being the world's lone super-power brings**. **In the absence of U.S. military leadership**, **upheaval in the Middle East would be worse**. **As any student of history can attest**, **instability does not confine itself to national borders**. **Strife that starts in one country can spread like wildfire across a region**.

Sequestration's cuts would reduce an additional 100,000 airmen, Marines, sailors and soldiers. That would leave us with the smallest ground force since 1940, the smallest naval fleet since 1915 and the smallest tactical fighter force in the Air Force's history. With the destabilization in the Middle East and other areas tenuous, we would be left with a crippled military, **a diminished stature internationally and a loss of technological** research, development and **advantage** - just as actors across the globe are increasing their capabilities.

Sequestration can still be avoided. **But that will require leadership from the President** that has thus far been missing. Congress and the White House must reach a long-term agreement to reduce $1 trillion annual budget deficits, without the harsh tax increases that could stall economic growth and punish working families.

#### Middle East goes nuclear

James A. **Russell,** Senior Lecturer, National Security Affairs, Naval Postgraduate School, ‘9 (Spring) “Strategic Stability Reconsidered: Prospects for Escalation and Nuclear War in the Middle East” IFRI, Proliferation Papers, #26, http://www.ifri.org/downloads/PP26\_Russell\_2009.pdf

Strategic stability in the region is thus undermined by various factors: (1) asymmetric interests in the bargaining framework that can introduce unpredictable behavior from actors; (2) the presence of non-state actors that introduce unpredictability into relationships between the antagonists; (3) incompatible assumptions about the structure of the deterrent relationship that makes the bargaining framework strategically unstable; (4) perceptions by Israel and the United States that its window of opportunity for military action is closing, which could prompt a preventive attack; (5) the prospect that Iran’s response to pre-emptive attacks could involve unconventional weapons, which could prompt escalation by Israel and/or the United States; (6) the lack of a communications framework to build trust and cooperation among framework participants. These systemic weaknesses in the coercive bargaining framework all suggest that escalation by any the parties could happen either on purpose or as a result of miscalculation or the pressures of wartime circumstance. Given these factors, it is disturbingly easy to imagine scenarios under which a conflict could quickly escalate in which the regional antagonists would consider the use of chemical, biological, or nuclear weapons. It would be a mistake to believe the nuclear taboo can somehow magically keep nuclear weapons from being used in the context of an unstable strategic framework. Systemic asymmetries between actors in fact suggest a certain increase in the probability of war – a war in which escalation could happen quickly and from a variety of participants. Once such a war starts, events would likely develop a momentum all their own and decision-making would consequently be shaped in unpredictable ways. The international community must take this possibility seriously, and muster every tool at its disposal to prevent such an outcome, which would be an unprecedented disaster for the peoples of the region, with substantial risk for the entire world.

## solvency

No spillover -- IFRs too costly and take too long

Makhijani 1

(Arjun, PhD in engineering and an electrical and nuclear engineer who is President of the Institute for Energy and Environmental Research. Makhijani has written many books and reports analyzing the safety, economics, and efficiency of various energy sources. He has testified before Congress and has served as an expert witness in Nuclear Regulatory Commission proceedings, “Letters to the Editor” Bulletin of Atomic Scientists, May 2001 vol. 57 no. 3 4-5)

As for IFRs, the 1996 National Academy of Sciences (NAS) study cited by Stanford concluded that there were several safety issues that remain to be resolved and that using advanced sodium-cooled reactors for transmutation “would require substantial development, testing, and large-scale demonstration under Nuclear Regulatory Commission safety review and licensing before one could proceed with confidence.”

Even if all the technical problems posed by IFRs were to be solved, the costs of using this technology would be prohibitive. In the United States alone, IFRs would have to fission roughly 80,000 metric tons of heavy metal (about 99 percent of which is uranium). To transmute this amount of heavy metal over 40 years would require the building of about 2,000 IFRs of 1,000-megawatts capacity each. To manage the worldwide stock of spent fuel (both current and projected) in this way would require roughly four times as many reactors.

**Even assuming that one IFR reactor was brought on line a week,** it would take 150 years to build them.

The NAS study also expressed skepticism that the reprocessing technology associated with the IFR could be made as economical as its proponents claim. The IFR requirement of collocating the reprocessing element with the reactor would result in even higher costs because of the small scale of collocated plants.

NAS's conclusion that there would be a 2 to 7 percent increase in electricity costs was based on low reactor costs and transmutation costs that were “likely to be no less than $50 billion and easily could be over $100 billion” for 600 metric tons of tran-suranics only. If the cost of reprocessing uranium is added, the total cost would increase to $300 billion—$900 billion for the United States alone. It is easy to see why no current transmutation scheme seriously proposes to transmute all the uranium in spent fuel.

Nuclear’s too expensive

Folbre, professor of economics – University of Massachusetts, Amherst, 3/26/’12

(Nancy, “The Nurture of Nuclear Power,” <http://economix.blogs.nytimes.com/2012/03/26/the-nurture-of-nuclear-power/>)

Remember the brouhaha about $563 million in Obama administration loan guarantees to Solyndra, the solar panel manufacturer that went belly up last fall? Neither President Obama nor Republicans in Congress have voiced opposition to an expected $8.3 billion Energy Department guarantee to help the Southern Company, a utility giant, build nuclear reactors in Georgia. Pressed to respond to the comparison, Representative Cliff Stearns, Republican of Florida and chairman of the Energy and Commerce subcommittee on oversight and investigations, explained that the loan guarantee for nuclear power plant construction was for a “proven industry that has been successful and has established a record.” The nuclear power industry has certainly established a record – for terrifying accidents. Most recently, the Fukushima Daiichi disaster in Japan led to the evacuation of 90,000 residents who have yet to return home and to the resignation of the prime minister. It prompted the German government to begin phasing out all nuclear generation of electricity by 2022. Yet the industry has proved remarkably successful at garnering public support in the United States, ranging from public insurance against accident liability to loan guarantees. An article last year in The Wall Street Journal observed that subsidies per kilowatt hour during its initial stages of development far exceeded those provided to solar and wind energy technologies. According to a detailed report published by the Union of Concerned Scientists, subsidies to the nuclear fuel cycle have often exceeded the value of the power produced. Buying power on the open market and giving it away for free would have been less costly. Heightened concerns about safety have driven recent cost estimates even higher, scaring off most private investors. Travis Hoium, an analyst who has written extensively about the industry on the investment Web site The Motley Fool, calls nuclear power a dying business. In an article, “Warren Buffett Wants a Subsidy From You,” he clearly explains recent efforts to shift risk from investors to ratepayers by allowing utilities to charge for construction in advance. Investor interest in nuclear-generated electricity has declined partly as a result of the boom in shale gas extraction. But energy sources that don’t increase carbon emissions are also playing a major role, with wind, hydropower and other renewables projected to provide about 30 percent of expected additions to power generation capacity in the United States between 2010 and 2035.

Multiple barriers prevent nuclear investment

Fahring, JD – U Texas School of Law, ‘11

(T.L., 41 Tex. Envtl. L.J. 279)

V. Potential Problems with the Combined Government Measures to Promote New Nuclear Construction In 2007, a developer filed with the NRC the first application for a new reactor in nearly thirty years. n263 To date, the NRC has received eighteen COL applications for twenty-eight reactors. n264 The NRC has granted four ESPs and four Standard Design Certifications. n265 Applicants have filed seventeen applications for a Standard Design Certification. n266 The DOE has another seven Standard Design Certifications under review. n267 This recent spate of licensing activity after so long a dry-spell arguably owes much to the measures the United States has taken as of late to promote new nuclear [\*303] development. To the extent that these applications have been filed, these measures have been a success. But this initial success does not necessarily ensure that new nuclear construction will take place: In announcing the new reactor license applications ... utilities have made clear that they are not committed to actually building the reactors, even if the licenses are approved. Large uncertainties about nuclear plant construction costs still remain ... All those problems helped cause the long cessation of U.S. reactor orders and will need to be addressed before financing for new multibillion-dollar nuclear power plants is likely to be obtained. n268 A number of obstacles, thus, still might stand in the way of new nuclear construction in the United States. A. Developers Have Not Followed the Ideal Sequence in the NRC's Streamlined Licensing Process First, developers have failed to follow the ideal steps of the NRC's streamlined licensing process. n269 NRC Commissioner Gregory Jaczko explains: The idea was that utilities could get a plant design completed and certified and a site reviewed first ... They could then submit an application that simply references an already certified design and an approved early site permit. But almost no one is following that ideal process. Instead, we are once again doing everything in parallel ... n270 Developers also are delaying review of their applications. n271 They have put four of the seventeen COL applications filed with the NRC on hold. n272 They also have yet to complete the seventeen applications for designs filed with the NRC and are continuing to revise the four designs under review. n273 A possible explanation for the problems with the streamlined licensing process is that much of 2005 EPACT provides incentives only for the first few developers to proceed with new nuclear construction. In particular, the production tax credits, as construed by the IRS, were available only for the first 6,000 megawatts of additional nameplate capacity filed through COL applications with the NRC. n274 All COL applications that the NRC has received were filed after IRS Notice 2006-40, which provided this guidance. n275 "The deadline for automatic eligibility for the tax credit appears to [have provided] a strong incentive for nuclear plant applicants to file with the NRC by [\*304] the end of 2008 ..." n276 Given this incentive, developers might have filed quickly and with incomplete information, in the process failing to follow the NRC's ideal streamlined licensing sequence. n277 These problems with the licensing process could be detrimental to continued nuclear development. Defects in the licensing process led to cost overruns in the 1970s and 1980s, which dissuaded developers from undertaking any new nuclear construction for nearly thirty years. n278 Continued problems would constitute an input cost uncertainty to developers who have not yet filed applications, which might cause them to further delay new construction. B. The Reduction in Reactor Licensing Hearing Formality Might Cause a Public Backlash Second, insofar as the NRC's reduction in nuclear licensing hearing formality limits public participation in the licensing process, it could lead to a public backlash. "Public involvement has two basic functions: it permits the raising of issues that will improve the safety of nuclear power plants, and it enhances the transparency and level of confidence and trust that the public can have in nuclear regulation and decision-making." n279 Measures that limit public participation in the nuclear licensing process undermine both of these functions. n280 As noted in the overview of the history of U.S. nuclear construction above, nuclear construction has always been extremely sensitive to changes in public opinion. In 2009, a majority of the American public favored nuclear power. n281 However, only a minority of the public favored new nuclear construction in the area in which they live. n282 After the nuclear crisis at the Fukushima Daiichi plant in Japan, U.S. public support for nuclear power fell sharply, with polls showing that many feared a major nuclear accident in this country. n283 Limiting public participation in the licensing process could decrease public support by undermining any trust that the public has in the regulatory system. This defect could lead to more litigation and a repeat of U.S. nuclear construction's nightmarish cost overruns of the 1970s and 1980s, thus increasing input cost uncertainty to developers. n284 [\*305] C. Costs for Nuclear Construction Still Might Rise Over Time Third, much of 2005 EPACT is animated by the belief that costs will be highest for the first few reactors to be built: as developers build subsequent units, costs will go down. n285 The history of U.S. nuclear development shows this assumption not necessarily to be the case. n286 Historically, costs of nuclear construction rose over time. Nothing indicates that the costs of nuclear construction will do otherwise now. n287 D. The Production Tax Credit Might Not Be Sufficient to Reduce Costs of Construction in a Reactor Series Fourth, even if conditions are such that costs will decrease over time, the production tax credits in 2005 EPACT might not be sufficient to reduce costs in a reactor series. n288 The credits go to those first reactors up to 6,000 megawatts in nameplate capacity filed with the NRC. n289 However, at the time of this note, the NRC has approved four standard design certifications. n290 Because each COL has a reactor with a nameplate capacity between 1,200-1,500 megawatts, at most only four to five reactors would be covered. n291 Therefore, only one or two reactors from each design certification would be built that would qualify for the credit. n292 Thus, this tax credit might not be enough to reduce costs through series production so that subsequent units would be economically viable without a tax credit. n293 Moreover, the production tax credit does not have any adjustment for inflation, which could decrease its benefits to the first new plant to come online. n294 Because the benefit of the production tax credit is uncertain, developers have less incentive to go through with new construction.

## warming

No nuclear exports—bureaucracy and foreign government competition

NEI, Nuclear Energy Institute, Winter ‘12

(“U.S. Nuclear Export Rules Hurt Global Competitiveness,” <http://www.nei.org/resourcesandstats/publicationsandmedia/insight/insightwinter2012/us-nuclear-export-rules-hurt-global-competitiveness/>)

Today, U.S. dominance of the global nuclear power market has eroded as suppliers from other countries **compete aggressively against American exporters.** U.S. suppliers confront competitors that benefit from various forms of state promotion and also must contend with a U.S. government that has not adapted to new commercial realities. The potential is tremendous—$500 billion to $740 billion in international orders over the next decade, representing tens of thousands of potential American jobs, according to the U.S. Department of Commerce.

With America suffering a large trade deficit, nuclear goods and services represent a market worth aggressive action.

However, antiquated U.S. government approaches to nuclear exports are challenging U.S. competitiveness in the nuclear energy market. New federal support is needed if the United States wants to reclaim dominance in commercial nuclear goods and services—and create the jobs that go with them.

“The U.S. used to be a monopoly supplier of nuclear materials and technology back in the ’50s and ’60s,” said Fred McGoldrick, former director of the Office of Nonproliferation and Export Policy at the State Department. “That position has eroded to the point where we’re a minor player compared to other countries.”

America continues to lead the world in technology innovation and know-how. So what are the issues? And where is the trade?

Effective coordination among the many government agencies involved in nuclear exports would provide a boost to U.S. suppliers.

 “Multiple U.S. agencies are engaged with countries abroad that are developing nuclear power, from early assistance to export controls to trade finance and more,” said Ted Jones, director for supplier international relations at NEI. The challenge is to create a framework that allows commercial nuclear trade to grow while ensuring against the proliferation of nuclear materials.

 “To compete in such a situation, an ongoing dialogue between U.S. suppliers and government needs to be conducted and U.S. trade promotion **must be coordinated at the highest levels**,” Jones said.

Licensing U.S. Exports

Jurisdiction for commercial nuclear export controls is divided among the Departments of Energy and Commerce and the Nuclear Regulatory Commission and has not been comprehensively updated to coordinate among the agencies or to reflect economic and technological changes over the decades. The State Department also is involved in international nuclear commerce. It negotiates and implements so-called “123 agreements” that allow for nuclear goods and services to be traded with a foreign country.

The federal agencies often have different, conflicting priorities, leading to a lack of clarity for exporters and longer processing times for export licenses.

“The U.S. nuclear export regime is the **most complex and restrictive in the world** and the least efficient,” said Jones. “Furthermore, it is poorly focused on items and technologies that pose little or no proliferation concern. By trying to protect too much, we risk diminishing the focus on sensitive technologies and handicapping U.S. exports.”

A case in point is the Energy Department’s Part 810 regulations. While 123 agreements open trade between the United States and other countries, Part 810 regulates what the United States can trade with another country. For certain countries, **it can take more than a year to obtain “specific authorizations”** to export nuclear items. Because other supplier countries authorize exports to the same countries with fewer requirements and delays, the Part 810 rules translate into a significant competitive disadvantage for U.S. suppliers.

Today, 76 countries require a specific authorization, but DOE has proposed almost doubling that number—to include for the first time countries that have never demonstrated a special proliferation concern, that are already part of the global nuclear supply chain, and that plan new nuclear infrastructure.

The proposed Part 810 rule would do nothing to reduce lengthy license processing times, said Jones. Other nuclear supplier countries impose strict guidelines on their licensing agencies for timely processing of applications. Equivalent licenses must be processed in fewer than nine months in France, fewer than 90 days in Japan and 15 days in South Korea.

One possible solution, said McGoldrick, would be to set similar deadlines for issuance of licenses. U.S. agencies “could have deadlines set forth in the new [Part 810] regulations, which would give the relevant government agencies specified times in which to act on a license. Time could be exceeded only under certain circumstances,” said McGoldrick.

Instituting Same Rules for Everyone

At stake is not just the nation’s manufacturing base, but thousands of jobs. In 2008, all exports supported more than 10 million jobs, according to “The Report to the President on the National Export Initiative.” One of the report’s recommendations was to expand opportunities for U.S. commercial nuclear exports.

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.

Resource scarcity leads to cooperation, not war – empirically proven

Dalby 6 (Simon, Dept. Of Geography, Carleton University, "Security and environment linkages revisited" in Globalisation and Environmental Challenges: Reconceptualising Security in the 21st Century, www.ntu.edu.sg/idss/publications/SSIS/SSIS001.pdf)

In parallel with the focus on human security as a necessity in the face of both natural and artificial forms of vulnerability, recent literature has emphasised the opportunities that environmental management presents for political cooperation between states and other political actors, on both largescale infrastructure projects as well as more traditional matters of wildlife and new concerns with biodiversity preservation (Matthew/Halle/Switzer 2002). Simultaneously, the discussion on water wars, and in particular the key finding the shared resources frequently stimulate cooperation rather than conflict, shifted focus from conflict to the possibilities of environmental action as a mode of peacemaking. Both at the international level in terms of environmental diplomacy and institution building, there is considerable evidence of cooperative action on the part of many states (Conca/Dabelko 2002). Case studies from many parts of the world suggest that cooperation and diplomatic arrangements can facilitate peaceful responses to the environmental difficulties in contrast to the pessimism of the 1990’s where the focus was on the potential for conflicts. One recent example of the attempts to resolve difficulties in the case of Lake Victoria suggests a dramatic alternative to the resource war scenarios. The need to curtail over-fishing in the lake and the importance of remediation has encouraged cooperation; scarcities leading to conflict arguments have not been common in the region, and they have not influenced policy prescriptions (Canter/Ndegwa 2002). Many conflicts over the allocations of water use rights continue around the world but most of them are within states and international disputes simply do not have a history of leading to wars.

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.

Warming locked in—current construction and no international deal means it will be runaway

Harvey, environment reporter – the Guardian, 11/9/’11

(Fiona, <http://www.guardian.co.uk/environment/2011/nov/09/fossil-fuel-infrastructure-climate-change>)

The world is likely to build so many fossil-fuelled power stations, energy-guzzling factories and inefficient buildings in the next five years that it will become impossible to hold global warming to safe levels, and the last chance of combating dangerous climate change will be "lost for ever", according to the most thorough analysis yet of world energy infrastructure.

Anything built from now on that produces carbon will do so for decades, and this "lock-in" effect will be the single factor most likely to produce irreversible climate change, the world's foremost authority on energy economics has found. If this is not rapidly changed within the next five years, the results are likely to be disastrous.

"The door is closing," Fatih Birol, chief economist at the International Energy Agency, said. "I am very worried – if we don't change direction now on how we use energy, we will end up beyond what scientists tell us is the minimum [for safety]. The door will be closed forever."

If the world is to stay below 2C of warming, which scientists regard as the limit of safety, then emissions must be held to no more than 450 parts per million (ppm) of carbon dioxide in the atmosphere; the level is currently around 390ppm. But the world's existing infrastructure is already producing 80% of that "carbon budget", according to the IEA's analysis, published on Wednesday. This gives an ever-narrowing gap in which to reform the global economy on to a low-carbon footing.

If current trends continue, and we go on building high-carbon energy generation, then by 2015 at least 90% of the available "carbon budget" will be swallowed up by our energy and industrial infrastructure. By 2017, there will be no room for manoeuvre at all – the whole of the carbon budget will be spoken for, according to the IEA's calculations.

Birol's warning comes at a crucial moment in international negotiations on climate change, as governments gear up for the next fortnight of talks in Durban, South Africa, from late November. "If we do not have an international agreement, whose effect is put in place by 2017, then the door to [holding temperatures to 2C of warming] will be closed forever," said Birol.

But world governments are preparing to postpone a speedy conclusion to the negotiations again. Originally, the aim was to agree a successor to the 1997 Kyoto protocol, the only binding international agreement on emissions, after its current provisions expire in 2012. But after years of setbacks, an increasing number of countries – including the UK, Japan and Russia – now favour postponing the talks for several years.

Both Russia and Japan have spoken in recent weeks of aiming for an agreement in 2018 or 2020, and the UK has supported this move. Greg Barker, the UK's climate change minister, told a meeting: "We need China, the US especially, the rest of the Basic countries [Brazil, South Africa, India and China] to agree. If we can get this by 2015 we could have an agreement ready to click in by 2020." Birol said this would clearly be too late. "I think it's very important to have a sense of urgency – our analysis shows [what happens] if you do not change investment patterns, which can only happen as a result of an international agreement."

Nor is this a problem of the developing world, as some commentators have sought to frame it. In the UK, Europe and the US, there are multiple plans for new fossil-fuelled power stations that would contribute significantly to global emissions over the coming decades.

The Guardian revealed in May an IEA analysis that found emissions had risen by a record amount in 2010, despite the worst recession for 80 years. Last year, a record 30.6 gigatonnes (Gt) of carbon dioxide poured into the atmosphere from burning fossil fuels, a rise of 1.6Gt on the previous year. At the time, Birol told the Guardian that constraining global warming to moderate levels would be "only a nice utopia" unless drastic action was taken.

The new research adds to that finding, by showing in detail how current choices on building new energy and industrial infrastructure are likely to commit the world to much higher emissions for the next few decades, blowing apart hopes of containing the problem to manageable levels. The IEA's data is regarded as the gold standard in emissions and energy, and is widely regarded as one of the most conservative in outlook – making the warning all the more stark. The central problem is that most industrial infrastructure currently in existence – the fossil-fuelled power stations, the emissions-spewing factories, the inefficient transport and buildings – is already contributing to the high level of emissions, and will do so for decades. Carbon dioxide, once released, stays in the atmosphere and continues to have a warming effect for about a century, and industrial infrastructure is built to have a useful life of several decades.

Yet, despite intensifying warnings from scientists over the past two decades, the new infrastructure even now being built is constructed along the same lines as the old, which means that there is a "lock-in" effect – high-carbon infrastructure built today or in the next five years will contribute as much to the stock of emissions in the atmosphere as previous generations.

The "lock-in" effect is the single most important factor increasing the danger of runaway climate change, according to the IEA in its annual World Energy Outlook, published on Wednesday.

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.

## prolif

#### No widespread proliferation

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.

#### Their authors exaggerate

**Farley 11**, assistant professor at the Patterson School of Diplomacy and International Commerce at the University of Kentucky, (Robert, "Over the Horizon: Iran and the Nuclear Paradox," 11-16, [www.worldpoliticsreview.com/articles/10679/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.

#### No domino theory—nonproliferation has zero utility

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

Hymans is keenly aware of the deficiency of past proliferation projections, which he attributes in large part to the “tendency to use the growth of nuclear capabilities, stances toward the non-proliferation regime, and a general ‘roguishness’ of the state as proxies for nuclear weapons intentions” (p. 217). Such intentions, he believes, cannot be discerned without reference to leadership national identity conceptions, a focus that appears to have been absent to date in intelligence analyses devoted to forecasting proliferation.49

Hymans is equally critical of the popular notion that “the ‘domino theory’ of the twenty-first century may well be nuclear.”50 As he points out, **the new domino theory, like its discredited Cold War predecessor, assumes an oversimplified view about why and how decisions to acquire nuclear weapons are taken**.51 **Leaders’ nuclear preferences**, he maintains, “**are not** highly **contingent on what other states decide**,” and, therefore, “**proliferation tomorrow will** probably **remain as rare as proliferation today, with no single instance of proliferation causing a cascade of nuclear weapons states**” (p. 225). In addition, he argues, the domino thesis embraces “an exceedingly dark picture of world trends by lumping the truly dangerous leaders together with the merely self assertive ones,” and equating interest in nuclear technology with weapons intent (pp. 208209). Dire proliferation forecasts, both past and present, Hymans believes, flow from four myths regarding nuclear decisonmaking: (1) states want the bomb as a deterrent; (2) states seek the bomb as a “ticket to international status”; (3) states go for the bomb because of the interests of domestic groups; and (4) the international regime protects the world from a flood of new nuclear weapons states (pp. 208216). Each of these assumptions is faulty, Hymans contends, because of its fundamental neglect of the decisive role played by individual leaders in nuclear matters.

As discussed earlier, Hymans argues that the need for a nuclear deterrent is entirely in the eye of the beholder—a leader with an oppositional nationalist NIC. By the same token, just because some leaders seek to achieve interna tional prestige through acquisition of the bomb, it does not mean that other leaders “necessarily view the bomb as the right ticket to punch”: witness the case of several decades of Argentine leaders, as well as the Indian Nehruvians (pp. 211212). The case of Egypt under Anwar al-Sadat, though not discussed by Hymans, also seems to at this category.

Hymans’s focus on the individual level of analysis leads him to discount bu reaucratic political explanations for nuclear postures, as well. Central to his argument is the assumption that decisions to acquire nuclear weapons are taken “without the considerable vetting that political scientists typically assume precedes most important states choices” (p. 13). As such, although he is prepared to credit nuclear energy bureaucracies as playing a supporting role in the ef forts by Australia, France, and India to go nuclear, he does not observe their influence to be a determining factor in root nuclear decisions by national lead ers. Moreover, contrary to a central premise of Solingen’s model of domestic political survival, Hymans ands little evidence in his case studies of leaders pursuing nuclear weapons to advance their political interests (p. 213). For ex ample, he argues, the 1998 nuclear tests in India were as risky domestically for Vajpayee as they were internationally (p. 214).

Most provocatively, Hymans invokes an individual-centric mode of **analysis** to **challenge** **the necessity and utility of a strong international nonproliferation regime**. As discussed in a preceding section, **he finds no evidence that the NPT regime prevented any** of the **leaders who desired nuclear weapons from pursuing them**.

#### US won’t exert nonproliferation leadership

Cleary 12

Richard Cleary, American Enterprise Institute Research Assistant, 8/13/12, Richard Cleary: Persuading Countries to Forgo Nuclear Fuel-Making, npolicy.org/article.php?aid=1192&tid=30

The cases above offer a common lesson: The U.S., though constrained or empowered by circumstance, can exert considerable sway in nonproliferation matters, **but** often **elects not to apply the most powerful tools at its disposal for fear of jeopardizing other objectives**. The persistent dilemma of how much to emphasize nonproliferation goals, and at what cost, has contributed to cases of **nonproliferation failure**. The inconsistent or incomplete application of U.S. power in nonproliferation cases is most harmful when it gives the impression to a nation that either sharing sensitive technology or developing it is, or will become, acceptable to Washington. **U.S. reticence** historically, with some exceptions, **to prioritize nonproliferation**—and in so doing reduce the chance of success in these cases—**does not leave room for** great **optimism about future U.S. efforts at persuading countries to forgo nuclear fuel-making**.

#### Competitiveness not key to heg

Brooks and Wohlforth, 8

[Stephen G. Brooks is Assistant Professor and William C. Wohlforth is Professor in the Department of Government at Dartmouth College, “World out of Balance, International Relations and the Challenge of American Primacy,” p. 32-35]

 American primacy is also rooted in the county's position as the world's leading technological power. The United States remains dominant globally in overall R&D investments, high-technology production, commercial innovation, and higher education (table 2.3). Despite the weight of this evidence, elite perceptions of U.S. power had shifted toward pessimism by the middle of the first decade of this century. As we noted in chapter 1, this was partly the result of an Iraq-induced doubt about the utility of material predominance, a doubt redolent of the post-Vietnam mood. In retrospect, many assessments of U.S. economic and technological prowess from the 1990s were overly optimistic; by the next decade important potential vulnerabilities were evident. In particular, chronically imbalanced domestic finances and accelerating public debt convinced some analysts that the United States once again confronted a competitiveness crisis.23 If concerns continue to mount, this will count as the fourth such crisis since 1945; the first three occurred during the 1950s (Sputnik), the 1970s (Vietnam and stagflation), and the 1980s (the Soviet threat and Japan's challenge). None of these crises, however, shifted the international system's structure: multipolarity did not return in the 1960s, 1970s, or early 1990s, and each scare over competitiveness ended with the American position of primacy retained or strengthened.24

Our review of the evidence of U.S. predominance is not meant to suggest that the United States lacks vulnerabilities or causes for concern. In fact, it confronts a number of significant vulnerabilities; of course, this is also true of the other major powers.25 The point is that adverse trends for the United States will not cause a polarity shift in the near future. If we take a long view of U.S. competitiveness and the prospects for relative declines in economic and technological dominance, one takeaway stands out: relative power shifts slowly. The United States has accounted for a quarter to a third of global output for over a century. No other economy will match its combination of wealth, size, technological capacity, and productivity in the foreseeable future (tables 2.2 and 2.3).

The depth, scale, and projected longevity of the U.S. lead in each critical dimension of power are noteworthy. But what truly distinguishes the current distribution of capabilities is American dominance in all of them simultaneously. The chief lesson of Kennedy's 500-year survey of leading powers is that nothing remotely similar ever occurred in the historical experience that informs modern international relations theory. The implication is both simple and underappreciated: the counterbalancing constraint is inoperative and will remain so until the distribution of capabilities changes fundamentally. The next section explains why.

## 2NC

## ov

Ingersoll 8

, a senior program manager in Oak Ridge National Laboratory's Reactors and Nuclear Systems Division

<http://wiki.ornl.gov/sites/gnstd/gssec/meeting1/Shared%20Documents/2_4_Nuclear%20Reactors%20and%20Proliferation%20Risk.pdf>

 Reactors Come In Many Flavors

• Research Reactors

– To provide neutrons for basic and applied research

• Test Reactors

– To develop specific reactor technologies or explore operational characteristics

• Prototype or Demonstration Reactors

– To validate the overall performance of new reactor types

• Production Reactors

– To produce special nuclear materials for weapons

• Power Reactors

– To produce electricity

## at: reasonability

#### Reasonability is impossible – it’s arbitrary and undermines research and preparation

Resnick, assistant professor of political science – Yeshiva University, ‘1

(Evan, “Defining Engagement,” Journal of International Affairs, Vol. 54, Iss. 2)

In matters of national security, establishing a clear definition of terms is a precondition for effective policymaking. Decisionmakers who invoke critical terms in an erratic, ad hoc fashion risk alienating their constituencies. They also risk exacerbating misperceptions and hostility among those the policies target. Scholars who commit the same error undercut their ability to conduct valuable empirical research. Hence, if scholars and policymakers fail rigorously to define "engagement," they undermine the ability to build an effective foreign policy.

## Solvency

## 2nc too expensive

#### Their ev bad

Green, national nuclear campaigner with Friends of the Earth, Australia, 5/13/’12

(<http://www.indymedia.org.au/2012/03/31/prof-barry-brook-brave-new-climate>)

One of the loudest nuclear advocates in Australia is Professor Barry Brook, a climate change scientist at the University of Adelaide who runs the Brave New Climate website.

The Brook mantra is this: "it’s nuclear power or it’s climate change".

However numerous studies exist that map out the options to sharply reduce emissions without recourse to nuclear power. One of the most practical Australian studies was produced by a group of scientists for the Clean Energy Future Group (CEFG). It is practical in that it makes virtually no allowance for technical innovation, restricting itself to existing commercial technologies. The CEFG proposes an electricity supply plan that would reduce greenhouse emissions from the electricity sector by 78 per cent by 2040 compared to 2001 levels.

The CEFG study can be thought of as a baseline or a "worst case" study, because it makes no allowance for developments in important areas like solar-with-storage or geothermal power. University of NSW academic Mark Diesendorf, who contributed to the CEFG study, has proposed a more ambitious scenario that replaces all coal and gas with renewables.

Brook has shown himself willing to trivialise the repeatedly demonstrated connection between nuclear power and weapons. He has slipped up on this, claiming for example that North Korea never signed the Nuclear Non-Proliferation Treaty although Pyongyang’s accession to — then withdrawal from — the NPT is central to the unfolding story of North Korea’s nuclear program.

Brook claims to be concerned about nuclear weapons proliferation but the evidence suggests otherwise. Here is an example of his indifference: asked at a public forum what needs to be done to fix the safeguards system and what role he sees for scientists such as himself to help address the problems, Brook responded: "That’s a political and legal question and I have no further comment."

To get a handle on the proliferation risks of the nuclear "renaissance", if it eventuates, here are some figures:

• Of the 65-odd countries with a nuclear program of any significance (involving power and/or research reactors), over one-third have used their ‘peaceful’ programs to advance weapons ambitions.

• Of the 10 countries to have built nuclear weapons, six did so with support and political cover from their "peaceful" programs (India, North Korea, South Africa, Pakistan, France and Israel).

• About 45 countries have the capacity to produce significant quantities of fissile material (more or less depending on where you draw the line with small-medium research reactors), and a vast majority of those countries acquired their fissile material production capacity through peaceful nuclear research or power programs.

As former US Vice President Al Gore has argued, a major horizontal expansion of nuclear power will "run the proliferation risk off the reasonability scale".

Brook claims that the integral fast reactors (IFRs) he champions "cannot be used to generate weapons-grade material." The claim isn’t true. To quote George Stanford, who worked on an IFR research program in the US: "If not properly safeguarded, they could do [with IFRs] what they could do with any other reactor — operate it on a special cycle to produce good quality weapons material."

The misconceptions pile up. Brook states: "Prior to the Fukushima Daiichi accident, caused when a 14 metre tsunami crashed into a 40-year old power station in Japan, no member of the public had ever been killed by nuclear power in an OECD country."

However the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) has estimated the collective effective dose to the world population over a 50-year period of operation of nuclear power reactors and associated nuclear facilities to be two million person-Sieverts (it does not provide OECD figures separately). Applying a standard risk estimate (0.05 fatal cancers per Sievert of exposure to low-dose radiation) gives an estimated 100,000 fatalities. Whatever the uncertainties with the dose and risk estimates, and whatever the OECD/non-OECD breakdown, Brook’s statement clearly doesn’t hold up.

Brook states that the linear no-threshold (LNT) theory of radiation exposure and cancer causation is "discredited" and has "no relevance to the real world". However, the 2005 report of the Committee on the Biological Effects of Ionising Radiation of the US National Academy of Sciences states that "the risk of cancer proceeds in a linear fashion at lower doses without a threshold and … the smallest dose has the potential to cause a small increase in risk to humans." And one further example of many, a study published in the Proceedings of the US National Academy of Sciences in 2003 concluded that: "Given that it is supported by experimentally grounded, quantifiable, biophysical arguments, a linear extrapolation of cancer risks from intermediate to very low doses currently appears to be the most appropriate methodology."

Brook gets it wrong on Chernobyl, too. He states: "The credible literature (WHO, IAEA) puts the total Chernobyl death toll at less than 60." However the studies he is referring to do not estimate a death toll of less than 60. He is referring to reports by the UN Chernobyl Forum and the World Health Organisation in 2005-06 which estimate up to 4000 eventual deaths among the higher-exposed Chernobyl populations and an additional 5000 deaths among populations exposed to lower doses in Belarus, the Russian Federation and Ukraine. (The Chernobyl Forum includes UN agencies such as the IAEA, UNSCEAR, and WHO.)

Still Brook is adamant that "nuclear power is the safest energy option". Safer than wind and solar? He could only arrive at that conclusion by using the nuclear industry’s methodology: only consider accidents at nuclear power plants rather than accidents across the energy chain; understate the death toll from accidents by several orders of magnitude; only consider accidents rather than routine emissions; and ignore the greatest hazard associated with nuclear power — its repeatedly demonstrated connection to WMD proliferation (most recently with North Korea’s use of an "experimental power reactor" to produce plutonium for weapons).

As the Fukushima nuclear disaster unfolded in March 2011, Brook maintained a running commentary in the media and on his website insisting that the situation was under control and that there was no reason for concern.

There was no correction until Brook had been publicly held to account for spreading misinformation. Andrew Bolt from the Herald Sun was urging people to read the "marvellously sane and cool explanation" from "our friend Professor Barry Brook". Both Bolt and Brook subscribe to conspiracy theories about environmentalists with a hidden, authoritarian "political manifesto" to return to a pre-industrial society.

Even so Brook wrote an ABC opinion piece in December 2011 which states that "no-one was killed by radioactivity from the event" and is silent on the problem of long-term cancer deaths from exposure to radioactive fallout (variously estimated to be "~100s cases" or "around 1000").

Many people concerned about climate and energy are wrestling with some enormous dilemmas about how to move to a less emissions intensive energy economy.

Some people live in a parallel universe where global warming is a myth, or clean coal technology is just around the corner.

Some people live in a parallel universe where the global transition to renewables is simple, cheap, and potentially quick.

Barry Brook lives in a parallel universe where nuclear power is benign, the WMD problem is trivial, nuclear waste is a multi-trillion-dollar asset, nuclear power is as safe as wind and solar power, ionising radiation is harmless, Chernobyl killed less than 60 people, and problems such as inadequate safeguards will magically fix themselves.

#### Developing a viable demonstration reactor is the barrier—not NRC restrictions—NRC is waiting for applications

U.S. NRC, August 2012, Report to Congress: Advanced Licensing, http://pbadupws.nrc.gov/docs/ML1215/ML12153A014.pdf

Predicting the commercial potential of alternative nuclear technologies beyond 20 years involves

a high level of uncertainty and complexity. As previously noted, the likelihood of commercial licensing applications depends on many factors beyond the NRC’s statutory and regulatory authority. As NRC considers the potential receipt and review of advanced reactor design and license applications, it is feasible that any, or none, of the technologies and designs currently identified and undergoing preliminary or advanced development by national or international private entities, public-private consortia, non-U. S. Government agencies, or other entities may result in future commercial applications.

Prefer our ev—recent trends show nuclear is crashing, but their authors always think that the Renaissance is around the corner

Maize, staff writer – POWER Magazine, 8/6/’12

(Kennedy, “A Bumpy Road for Nukes,” POWERnews)

Washington, D.C., 6 August 2012 — It’s been a rough road for nuclear advocates in the U.S. of late, although nothing seems to dent the Pollyanna armor of the nuclear crowd, always appearing to believe a revival is just over the horizon and headed into view. Here are a few fraught developments for the nuclear business that suggest the positive vision just might be a mirage. \* GE CEO Jeff Immelt in a recent interview with the Financial Times revealed a surprising and somewhat uncharacteristic realism with regard to the company’s nuclear future and that of its partner in radioactivity, Hitachi. In London for the Summer Olympics, Immelt told a reporter for the FT, “It’s really a gas and wind world today. When I talk to the guys who run the oil companies, they say look, they’re finding more gas all the time. It’s just hard to justify nuclear, really hard. Gas is so cheap, and at some point, really, economics rule.” For the nuclear industry, economics has always been the fundamental enemy – not the green-tinged, hairy anti-nuke activists, but the folks with the green eye shades, sharp pencils and, today, even sharper spreadsheets. The nuclear execs long have pursued governments as their bulwark against markets, and that has often worked. Today, as Immelt notes, gas has made the market forces so overwhelming, at least in those places such as the U.S. where gas is astonishingly abundant, that even government likely can’t come to the rescue of nuclear power. Could that have something to do with the abject failure of the 2005 Energy Policy Act’s loan guarantee provisions, which have not worked for renewables any better than they have worked for nukes? Indeed, the threat of gas is at least as potentially toxic for many wind and solar projects as it is for nuclear and coal new build. \* In Georgia, the Southern Company is facing what looks like growing problems with its Vogtle project, which aims for two new nuclear units using the unproven but promising Westinghouse AP1000 reactor design. With its federal loan in jeopardy (Southern says it can go ahead without taxpayer funds) and the project running behind schedule and over budget, the Atlanta-based utility now faces lawsuits brought by the reactor vendor and the construction contractor Shaw Group. The amount in dispute, some $29 million, is tiny compared to the multi-billion-dollar price tag for the project. But it may be revealing of ruptures in the deal. Robert Marritz, an energy lawyer and veteran industry observer, publisher of ElectricityPolicy.com, commented that “the very filing of a lawsuit at this stage of the first nuclear plant construction in decades is stunning, reflecting stresses in a relationship that should, one would think, be contained and resolved rather than boiling over into public view.” Indeed, the parties are also engaged in a larger, perhaps nastier, dispute involving $800 million that has not gotten much public exposure. And that’s real money. \* Moving to California, the long-running saga of Edison International’s San Onofre Nuclear Generating Station (SONGS, how’s that for an inept acronym?) continues, with little clarity in sight. The plant has been out of service since January as a result of unexpected and still unexplained tube wear in the plant’s steam generators. According to Bloomberg New Energy Finance, the outage is costing the utility about $1.5 million a day just in lost revenue. The cost to the state in jeopardized reliability hasn’t been calculated, although Edison has started up mothballed gas capacity to fill the supply gap. There is no firm date for restart at the nuclear plant. In the meantime, the California Public Utilities Commission is planning a formal investigation of the outage and Edison’s response, but recently decided to delay that until the utility files a legally-required report with the CPUC November 1. CPUC President Mike Peevey is a former executive with the Los Angeles-based utility.

Natural gas will wreck the industry

WSJ, 3/15/’12

(“Cheap Natural Gas Unplugs U.S. Nuclear-Power Revival”)

What killed the revival wasn't last year's nuclear accident in Japan, nor was it a soft economy that dented demand for electricity. Rather, a shale-gas boom flooded the U.S. market with cheap natural gas, offering utilities a cheaper, less risky alternative to nuclear technology.

"It's killed off new coal and now it's killing off new nuclear," says David Crane, chief executive of NRG Energy Inc., NRG +3.58% a power-generation company based in Princeton, N.J. "Gas has come along at just the right time to upset everything."

Across the country, utilities are turning to natural gas to generate electricity, with 258 plants expected to be built from 2011 through 2015, federal statistics indicate. Not only are gas-fired plants faster to build than reactors, they are much less expensive. The U.S. Energy Information Administration says it costs about $978 per kilowatt of capacity to build and fuel a big gas-fired power plant, compared with $5,339 per kilowatt for a nuclear plant.

Already, the inexpensive natural gas is putting downward pressure on electricity costs for consumers and businesses.

The EIA has forecast that the nation will add 222 gigawatts of generating capacity between 2010 and 2035—equivalent to one-fifth of the current U.S. capacity. The biggest chunk of that addition—58%—will be fired by natural gas, it said, followed by renewable sources, including hydropower, at 31%, then coal at 8% and nuclear power at 4%.

"What utility doesn't want cheap fuel?" says Steve Piper, associate director of energy fundamentals at SNL Financial, a research company. He predicts natural gas will remain the "default fuel" for as long as gas production remains high and prices stay low.

## 2nc alt causes

Incentives are insufficient

Maize, contributing editor – POWER Magazine, 7/1/’12

(Kennedy, “Fukushima Disaster Continues to Cloud Nuclear Outlook,” POWERnews)

J. Frank Russell, senior vice president at Concentric Energy Advisors, described the ambiguous status of nuclear power today from a U.S. perspective. By many counts, he said, “this should be a year of celebration for ‘new nuclear’ in the U.S.” because Southern Co. is building Vogtle Units 3 and 4, and Scana Corp. has a green light from the Nuclear Regulatory Commission (NRC) for the two new units at its V.C. Summer station. In contrast to what could be justified optimism, “the reality is different,” Russell said. “The pipeline is empty, with other proposed units stalled or delayed by the sponsors.” The promise of “up to a dozen” new units that was common in the industry a few years ago “has mostly gone away,” and the industry has awakened to a less-friendly environment. Many reasons account for faded nuclear dreams in the U.S., Russell said. The 2008 recession lowered demand for power and reduced financial markets’ appetite for risk. The collapse of natural gas prices as a result of the shale gas revolution undercut the economics. So did the federal government’s failure to put a price on carbon emissions. Fukushima also played a role. But the key factor dogging the U.S. nuclear sector has been the high and growing cost of nuclear power plants. “While many of these issues may be considered temporary,” said Russell, “the sheer total cost of large-scale new nuclear units is just too large for many companies to bear.” Few companies have the capitalization and appetite for risk to take on a project that could cost $10 billion, the current estimate for a new nuclear unit in the U.S. For a merchant generator, finding the equity capital for such an undertaking is problematic. “Even with a loan guarantee,” he said, “the equity may be impossible to raise.”What will it take for a real U.S. nuclear turnaround? Russell offered a list, with each item necessary to achieving rebirth but none sufficient in itself. He said that demand growth will have to return and that the current generating capacity surplus must decline. Natural gas prices will have to double to at least $4/million cubic feet. A carbon price also must be put in place. The Vogtle and Summer units must come in on schedule and must meet budget targets (an outcome already put in doubt by cost increases recently announced at Vogtle). And policy makers and the public must be positive and supportive.

## 1nc at: demo

Plan’s demonstration wont spillover – too many uncertainties

Fahring 11

(T.L. Fahring is a 2011 graduate from the University of Texas School of Law. He is currently a law clerk at the Texas Eleventh Court of Appeals. He is interested in energy law, environmental law, and tax law, “Nuclear Uncertainty: A Look at the Uncertainties of a U.S. Nuclear Renaissance” 41 Tex. Envtl. L.J. 279)

But this **initial success does not** necessarily **ensure that new nuclear construction will take place:**

In announcing the new reactor license applications ... **utilities have** made clear **that they are not committed to actually building the reactors, even if the licenses are approved**. Large uncertainties about nuclear plant construction costs still remain ... All those problems helped cause the long cessation of U.S. reactor orders and will need to be addressed before financing for new multibillion-dollar nuclear power plants is likely to be obtained. n268

## 2nc no solvency

International consensus proves theyre not competitive and power generation will be small

PR Newswire 10

(“Report: Unsuccessful 'Fast Breeder' Is No Solution for Long-Term Reactor Waste Disposal Issues” February 17, 2010, PR Newswire, International Panel on Fissile Materials)

Hopes that the "fast breeder"- a plutonium-fueled nuclear reactor designed to produce more fuel than it consumed -- might serve as a major part of the long-term nuclear waste disposal solution are not merited by the dismal track record to date of such sodium-cooled reactors in France, India, Japan, the Soviet Union/Russia, the United Kingdom and the United States, according to a major new study from the International Panel on Fissile Materials (IPFM).

Titled "Fast Breeder Reactor Programs: History and Status," the IPFM report concludes: "The problems (with fast breeder reactors) ... make it hard to dispute Admiral Hyman Rickover's summation in 1956, based on his experience with a sodium-cooled reactor developed to power an early U.S. nuclear submarine, that such reactors are 'expensive to build, complex to operate, susceptible to prolonged shutdown as a result of even minor malfunctions, and difficult and time-consuming to repair.'"

Plagued by high costs, often multi-year downtime for repairs (including a 15-year reactor restart delay in Japan), multiple safety problems (among them often catastrophic sodium fires triggered simply by contact with oxygen), and unresolved proliferation risks, "fast breeder" reactors already have been the focus of more than $50 billion in development spending, including more than $10 billion each by the U.S., Japan and Russia. As the IPFM report notes: "**Yet none of these efforts has produced a reactor that is anywhere near economically competitive with light-water reactors** ... After six decades and the expenditure of the equivalent of tens of billions of dollars, the promise of breeder reactors remains largely unfulfilled and efforts to commercialize them have been steadily cut back in most countries."

The new IPFM report is a timely and important addition to the understanding about reactor technology. Today, with increased attention being paid both to so-called "Generation IV" reactors, some of which are based on the fast reactor technology, and a new Obama Administration panel focusing on reprocessing and other waste issues, interest in some quarters has shifted back to fast reactors as a possible means by which to bypass concerns about the long-term storage of nuclear waste.

Frank von Hippel, Ph.D., co-chair of the International Panel on Fissile Materials, and professor of Public and International Affairs, Woodrow Wilson School, Princeton University, said: "The breeder reactor dream is not dead but it has receded far into the future. In the 1970s, breeder advocates were predicting that the world would have thousands of breeder reactors operating by now. Today, they are predicting **commercialization by approximately 2050**. In the meantime, the world has to deal with the legacy of the dream; approximately 250 tons of separated weapon-usable plutonium and ongoing - although, in most cases struggling - reprocessing programs in France, India, Japan, Russia and the United Kingdom."

Mycle Schneider, Paris, international consultant on energy and nuclear policy, said: "France built with Superphenix, the only commercial-size plutonium fueled breeder reactor in nuclear history. After an endless series of very costly technical, legal and safety problems it was shut down in 1998 **with one of the worst operating records in nuclear history.**"

Thomas B. Cochran, nuclear physicist and senior scientist in the Nuclear Program at the Natural Resources Defense Council, said: "Fast reactor development programs failed in the: 1) United States; 2) France; 3) United Kingdom; 4) Germany; 5) Japan; 6) Italy; 7) Soviet Union/Russia 8) U.S. Navy and 9) the Soviet Navy. The program in India is showing no signs of success and the program in China is only at a very early stage of development. Despite the fact that fast breeder development began in 1944, now some 65 year later, of the 438 operational nuclear power reactors worldwide, only one of these, the BN-600 in Russia, is a commercial-size fast reactor and it hardly qualifies as a successful breeder. The Soviet Union/Russia never closed the fuel cycle and has yet to fuel BN-600 with plutonium."

M.V. Ramana, Ph.D., visiting research scholar, Woodrow Wilson School and the Program in Science, Technology, and Environmental Policy, Princeton University, said: "Along with Russia, India is one of only two countries that are currently constructing commercial scale breeder reactors. **Both the history of the program and the economic and safety features of the reactor suggest**, however, that the program will not fulfill the promises with which it was begun and is being pursued. Breeder reactors have always underpinned the DAE's claims about generating large quantities of cheap electricity necessary for development. Today, more than five decades after those plans were announced, that promise is yet to be fulfilled. As elsewhere, breeder reactors are likely to be unsafe and costly, and their contribution to overall electricity generation will be modest at best."

Governments have to abandon their programs - at best, they solve in 2050

Cochran et al 10

Thomas B. Cochran, senior scientist in the nuclear program and holds the Wade Greene Chair for Nuclear Policy at the Natural Resources Defense Council (NRDC). He served as director of the nuclear program until 2007. He is a member of the Department of Energy’s Nuclear Energy Advisory Committee. Cochran is the author of The Liquid Metal Fast Breeder Reactor: An Environmental and Economic Critique (Washington, D.C.: Resources for the Future, 1974). Cochran received his Ph.D. in physics from Vanderbilt University in 1967, Harold A. Feiveson, Senior Research Scientist and Lecturer in Princeton University’s Woodrow Wilson School. He has a PhD in public affairs from Princeton University (1972). Feiveson is the editor of Science & Global Security. Along with Professor von Hippel, he was the co-founder and co-director of the Program on Science and Global Security until July 2006, Walt Patterson, Associate Fellow in the Energy, Environment and Development Programme at Chatham House in London, UK, and a Visiting Fellow at the University of Sussex. A postgraduate nuclear physicist, he has been actively involved in energy and environmental issues since the late 1960s. Keeping The Lights On: Towards Sustainable Electricity (Chatham House/Earthscan 2007, paperback 2009) is his thirteenth book. He has also published hundreds of papers, articles and reviews, on topics including nuclear power, coal technology, renewable energy systems, energy policy and electricity, Gennadi Pshakin, head of the Analytical Center for Nonproliferation at the Institute for Physics and Power Engineering (IPPE), Obninsk, and teaches at Obninsk Nuclear Technology University. Between 1985 and 1993, he worked as an IAEA safeguards inspector, and in 2003 was part of the IAEA team in Iraq. In the 1990s, he participated in negotiations on the trilateral initiative (USA – Russia – IAEA). Since 2001 he has been part of the INPRO project on developing a Proliferation Resistance Assessment Methodology and his recent research covers material protection, control, and accounting activities in Russia. His PhD (1980) was in nuclear engineering, M.V. Ramana, currently a Visiting Scholar with the Program in Science, Technology and Environmental Policy and the Program on Science and Global Security at the Woodrow Wilson School of Public and International Affairs, Princeton University. He has a PhD in physics (1994) and has held research positions at the University of Toronto, Massachusetts Institute of Technology, and Princeton University. He has taught at Boston University, Princeton University, and Yale University, Mycle Schneider, an independent nuclear and energy consultant. He founded the Energy Information Agency WISE-Paris in 1983 and directed it until 2003. Since 1997 he has provided information and consulting services to the Belgian Energy Minister, the French and German Environment Ministries, the International Atomic Energy Agency, Greenpeace, the International Physicians for the Prevention of Nuclear War, the Worldwide Fund for Nature, the European Commission, the European Parliament‘s Scientific and Technological Option Assessment Panel and its General Directorate for Research, the Oxford Research Group, the French National Scientific Research Council, and the French Institute for Radiation Protection and Nuclear Safety. Since 2004 he has been in charge of the Environment and Energy Strategies lecture series for the International MSc in Project Management for Environmental and Energy Engineering Program at the French Ecole des Mines in Nantes, Tatsujiro Suzuki, an Associate Vice President of the Central Research Institute of Electric Power Industry, as well as a Senior Research Fellow at the Institute of Energy Economics of Japan. He is also a Visiting Professor at the Graduate School of Public Policy, University of Tokyo. He has a PhD in nuclear engineering from Tokyo University (1988). He was Associate Director of MIT’s International Program on Enhanced Nuclear Power Safety from 1988–1993 and a Research Associate at MIT’s Center for International Studies (1993–95) where he co-authored a report on Japan‘s plutonium program. For the past 20 years, he has been deeply involved in providing technical and policy assessments of the international implications of Japan’s plutonium fuel-cycle policies and in examining the feasibility of interim spent-fuel storage as an alternative, Frank von Hippel, Professor of Public and International Affairs at Princeton University’s Woodrow Wilson of Public and International Affairs. He has a PhD in nuclear physics (1962) from Oxford University. He is a co-founder of Princeton’s Program on Science and Global Security. In the 1980s, as chairman of the Federation of American Scientists, he partnered with Evgenyi Velikhov in advising Mikhail Gorbachev on the technical basis for steps to end the nuclear arms race. In 1994–95, he served as Assistant Director for National Security in the White House Office of Science and Technology Policy, International Panel on Fissile Materials, February 2010, "Fast Breeder Reactor Programs: History and Status", http://fissilematerials.org/library/rr08.pdf

Prospects for breeder reactors After six decades and the expenditure of the equivalent of tens of billions of dollars, the promise of breeder reactors remains largely unfulfilled and efforts to commercialize them have been steadily cut back in most countries. Germany, the United Kingdom and the United States have abandoned their breeder reactor development programs. Despite the arguments by France’s nuclear conglomerate Areva, that fast-neutron reactors will ultimately fission all the plutonium building up in France’s light-water reactor spent fuel, 18 France’s only operating fast-neutron reactor, Phénix, was disconnected from the grid in March 2009 and scheduled for permanent shutdown by the end of that year. 19 The Superphénix, the world’s first commercial-sized breeder reactor, was abandoned in 1998 and is being decommissioned. There is no follow-on breeder reactor planned in France for at least a decade. Japan’s Monju reactor operated for only a year before it was shut down by an accident in 1995 and it had not resumed operation as of the end of 2009. There are plans for a new demonstration reactor by 2025 and commercialization of breeder reactors by 2050 but there is reason to doubt these projections. Japan’s Government is not willing to kill its breeder program entirely, because, as in France, the breeder is still the ultimate justification for Japan’s spent fuel reprocessing program. For decades, however, the Japanese Government has been reducing funding for its breeder program and shifting commercialization further and further into the future (see chapter 4). Russia and India are building demonstration breeder reactors. In both cases, however, their breeder (and spent fuel reprocessing) programs leave much to be desired regarding the availability of data on reliability, safety and economics. In the case of India, there is also the potential for use of breeder reactors to produce plutonium for weapons. The high costs of commercial breeder reactors and an international Fissile Material Cutoff Treaty that bans production of fissile materials for weapons will force some of these issues into the open and foster new debates about the value of these breeder programs. In the United States, during the G.W. Bush Administration, fast reactors returned to the agenda as “burner” reactors. In an initiative started in 2006 labeled “The Global Nuclear Energy Partnership (GNEP),” the U.S. Department of Energy proposed that sodium-cooled fast-neutron reactors be used to make the radioactive waste in spent reactor fuel more manageable. With the removal of the uranium blankets around their cores, fast-neutron reactors would, like light-water reactors, breed less fissile material than they burned. The high-energy neutron spectrum of the sodium-cooled reactors would be more effective, however, in fissioning the non-chain-reacting isotopes of plutonium and minor transuranic elements. Already in 1996, however, a National Academy of Sciences assessment commissioned by the U.S. Department of Energy, had concluded that such an effort would have very high costs and marginal benefits and would take hundreds of years of recycling to reduce the global inventory of transuranic isotopes by 99 percent. 20 The Obama Administration and the U.S. Congress share this skepticism and propose a new research and development program to investigate alternative strategies for managing U.S. spent fuel. 21 The breeder reactor dream is not dead but it has receded far into the future. In the 1970s, breeder advocates were predicting that the world would have thousands of breeder reactors operating by now. Today, they are predicting commercialization by approximately 2050. In the meantime, the world has to deal with the legacy of the dream; approximately 250 tons of separated weapon-usable plutonium and ongoing — although, in some cases struggling — reprocessing programs in France, India, Japan, Russia and the United Kingdom.

## Prolif

## No Nonpro Leadership—Short Extn

#### Prolif leadership fails---a few distinctions at the top:

1—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**.

2---if the US tried to constrain nuclear tech at all, countries wouldn’t buy our IFRs—supply side restrictions fail because of other suppliers

Cleary 12

Richard Cleary, American Enterprise Institute Research Assistant, 8/13/12, Richard Cleary: Persuading Countries to Forgo Nuclear Fuel-Making, npolicy.org/article.php?aid=1192&tid=30

The examples above show the limitations of both demand and supply side efforts. Supply side diplomatic interventions, made before the transfer of technology, have been at times effective, particularly in precluding nuclear fuel-making in the short term and buying time for more lasting solutions. However, as the Pakistan and Brazil cases illustrated, supply side interventions are no substitute for demand side solutions: **Countries face political choices regarding nuclear fuel-making**. **A nation set upon an independent fuel-making capacity**, such as Pakistan or Brazil, **is unlikely to give up efforts because of supply side controls**. Multilateral fuel-making arrangements, as proposed repeatedly by the United States, have not materialized and therefore seem to have had little tangible influence.

#### They can easily find other countries to provide them with nuclear tech

Hibbs 12

Mark Hibbs, Carnegie Nuclear Policy Program Senior Associate, 8/7/12, Negotiating Nuclear Cooperation Agreements, carnegieendowment.org/2012/08/07/negotiating-nuclear-cooperation-agreements/d98z

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**.

#### Prefer our evidence—countries will support proliferators

Ford 12

Chris Ford, Hudson Institute, served until September 2008 as United States Special Representative for Nuclear Nonproliferation, and prior to that as Principal Deputy Assistant Secretary of State responsible for arms control, nonproliferation, and disarmament verification and compliance policy, 6/28/12, Perilous Precedents: Proliferation as Policy in Alternative Nuclear Futures, www.hudson.org/index.cfm?fuseaction=publication\_details&id=9026

I sometimes wonder, however, whether the seeming irresistibility of the case for nonproliferation may sometimes get in the way of our analytical acuity as we look at the geopolitical environment. It is not uncommon in our diplomatic relations, for instance, to hear it declared with great assurance that "Country Such-and-Such shares our interest in preventing nuclear weapons proliferation" – and to have it be assumed, in effect, that if we just *remind* its leaders of this shared interest, they will see the light and come around to our point of view. If there is a problem in obtaining someone's cooperation on nonproliferation matters, we tend to see this as being merely due to disagreements over "tactics," or perhaps just some lack of *capacity* to do be helpful despite genuinely good intentions.

At worst, we suspect merely that others are holding out in order to bargain for as high a price as possible in return for giving us the cooperation they really *do*, in their hearts, agree is important anyway. **This may be unwise** on their part – or perhaps on ours for commoditizing such cooperation by trying to purchase it through concessionary inducements – but we assume that such bargaining doesn't *really* bespeak a significant difference of opinion about the value of nonproliferation. Only the would-be proliferator regimes themselves, we might think, actually *want* nuclear weapons to spread – and even then one usually doesn't have to look far to find some analyst who feels their pursuit of such devices is an unfortunate but understandable choice, taken only grudgingly in the face of real or perceived foreign threats. Almost no one, we sometimes seem to assume, *really* supports proliferation.

But perhaps we should take a step back from the obviousness of such conclusions, and consider the possibility that, "proliferation as policy" is not always felt to be an inherently irrational strategy. It is a strategy that it remains powerfully in our interest to prevent others from adopting, of course. We probably miss something important, however, if we see proliferation as no more than some kind of aberrance or confusion.

"Proliferation-as-policy" is actually something that seems to have appealed to a number of real-world decision-makers in the past. Many of you doubtless knows these stories at least as well as I do, but let me offer some examples:

* The Soviets gave Beijing a great deal of help in its weapons development, though by all accounts Khrushchev balked just before fulfilling the final clauses of his 1957 cooperation agreement with the Chinese, and stopped before providing Mao Zedong with an actual weapon prototype.
* French scientists provided a great deal of sensitive dual-use technology to Israel, including the reactor at Dimona and a plutonium-separation capability that many observers believe to form the core of Israel's weapons program even today.
* China helped Pakistan develop its nuclear weapons program, to the point – it has been reported – that Beijing provided actual weapons designs.
* Even in the midst of the ongoing nuclear crisis over Iran's previously-secret nuclear program, Russia provided Tehran with the nuclear reactor at Bushehr. Russian entities apparently also designed the plutonium-production reactor that Iran is constructing at Arak.
* China is reported to have provided uranium hexafluoride (UF6) feedstock to Iran's secret enrichment program in the early 1990s, and to have provided the blueprints for Iran's uranium conversion facility.
* North Korea is reported to have provided Libya with UF6, and – more infamously – to have constructed a plutonium-production reactor for Bashar al-Assad in Syria, though the Israelis bombed it in 2007.
* The official story about Abdul Qadeer Khan's notorious nuclear smuggling ring is that it was some kind of a rogue operation, without official support or encouragement, but few analysts today seem really to believe this. It is widely believed that the Pakistani government, or a significant portion of it, was indeed complicit in Khan's operations.
* Finally, Saudi Arabia has long been rumored to have helped finance Pakistan's nuclear weapons program.

The evidence thus suggests that proliferation isn't just about those who want to acquire nuclear weapons: at one point or another, a number of **countries** have apparently **concluded that *supporting* proliferation is in their interest**.

## No Prolif—Extn

Their evidence falls prey to orientalist tropes that guarantee nuclear racism and apartheid

Hugh **Gusterson**, Massachusetts Institute of Technology, 19**99**, Nuclear Weapons and the Other in the Western Imagination, Cultural Anthropology 14(1):111-143. American Anthropological Association.

According to the literature on risk in anthropology, shared fears often reveal as much about the identities and solidarities of the fearful as about the actual dangers that are feared (Douglas and Wildavsky 1982; Lindenbaum 1974). The immoderate reactions in the West to the nuclear tests conducted by India and Pakistan, and to Iraq's nuclear weapons program earlier, are examples of an entrenched discourse on nuclear proliferation that has played an important role in structuring the Third World, and our relation to it, in the Western imagination. This discourse, dividing the world into nations that can be trusted with nuclear weapons and those that cannot, dates back, at least, to the Non-Proliferation Treaty of 1970. The Non-Proliferation Treaty embodied a bargain between the five coun- tries that had nuclear weapons in 1970 and those countries that did not. Accord- ing to the bargain, the five official nuclear states (the United States, the Soviet 3 Union, the United Kingdom, France, and China) promised to assist other signatories to the treaty in acquiring nuclear energy technology as long as they did not use that technology to produce nuclear weapons, submitting to international in- spections when necessary to prove their compliance. Further, in Article 6 of the treaty, the five nuclear powers agreed to "pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament" (Blacker and Duffy 1976:395). One hundred eighty-seven countries have signed the treaty, but Israel, India, and Pakistan have refused, saying it enshrines a system of global "nuclear apartheid." Although the Non-Proliferation Treaty divided the countries of the world into nuclear and nonnuclear by means of a purely temporal metric —designating only those who had tested nuclear weapons by 1970 as nuclear powers—the treaty has become the legal anchor for a global nuclear regime that is increasingly legitimated in Western public discourse in racialized terms. In view of recent developments in global politics—the collapse of the Soviet threat and the recent war against Iraq, a nuclear-threshold nation in the Third World—the importance of this discourse in organizing Western geopolitical understandings is only growing. It has become an increasingly important way of legitimating U.S. military programs in the post-Cold War world since the early 1990s, when U.S. military leaders introduced the term rogue states into the American lexicon of fear, identifying a new source of danger just as the Soviet threat was declining (Klare 1995).

Thus in Western discourse nuclear weapons are represented so that "theirs" are a problem whereas "ours" are not. During the Cold War the Western discourse on the dangers of "nuclear proliferation" defined the term in such a way as to sever the two senses of the word proliferation. This usage split off the "vertical" proliferation of the superpower arsenals (the development of new and improved weapons designs and the numerical expansion of the stockpiles) from the "horizontal" proliferation of nuclear weapons to other countries, presenting only the latter as the "proliferation problem." Following the end of the Cold War, the American and Russian arsenals are being cut to a few thousand weapons on each side. However, the United States and Russia have turned back appeals from various nonaligned nations, especially India, for the nuclear powers to open discussions on a global convention abolishing nuclear weapons. Article 6 of the Non-Proliferation Treaty notwithstanding, the Clinton administration has declared that nuclear weapons will play a role in the defense of the United States for the indefinite future. Meanwhile, in a controversial move, the Clinton administration has broken with the policy of previous administrations in basi- cally formalizing a policy of using nuclear weapons against nonnuclear states to deter chemical and biological weapons (Panofsky 1998; Sloyan 1998). The dominant discourse that stabilizes this system of nuclear apartheid in Western ideology is a specialized variant within a broader system of colonial and postcolonial discourse that takes as its essentialist premise a profound Otherness separating Third World from Western countries. This inscription of Third World (especially Asian and Middle Eastern) nations as ineradicably different from our own has, in a different context, been labeled "Orientalism" by Edward Said (1978). Said argues that orientalist discourse constructs the world in terms of a series of binary oppositions that produce the Orient as the mirror image of the West: where "we" are rational and disciplined, "they" are impul- sive and emotional; where "we" are modern and flexible, "they" are slaves to ancient passions and routines; where "we" are honest and compassionate, "they" are treacherous and uncultivated. While the blatantly racist orientalism of the high colonial period has softened, more subtle orientalist ideologies endure in contemporary politics. They can be found, as Akhil Gupta (1998) has argued, in discourses of economic development that represent Third World nations as child nations lagging behind Western nations in a uniform cycle of development or, as Lutz and Collins (1993) suggest, in the imagery of popular magazines, such as National Geographic. I want to suggest here that another variant of contemporary orientalist ideology is also to be found in U.S. national security discourse.

Following Anthony Giddens (1979), I define ideology as a way of con- structing political ideas, institutions, and behavior which (1) makes the political structures and institutions created by dominant social groups, classes, and na- tions appear to be naturally given and inescapable rather than socially con- structed; (2) presents the interests of elites as if they were universally shared; (3) obscures the connections between different social and political antagonisms so as to inhibit massive, binary confrontations (i.e., revolutionary situations); and (4) legitimates domination. The Western discourse on nuclear proliferation is ideological in all four of these senses: (1) it makes the simultaneous ownership of nuclear weapons by the major powers and the absence of nuclear weapons in Third World countries seem natural and reasonable while problematizing at- tempts by such countries as India, Pakistan, and Iraq to acquire these weapons; (2) it presents the security needs of the established nuclear powers as if they were everybody's; (3) it effaces the continuity between Third World countries' nuclear deprivation and other systematic patterns of deprivation in the underde- veloped world in order to inhibit a massive north-south confrontation; and (4) it legitimates the nuclear monopoly of the recognized nuclear powers.

The ontological and geographical underpinnings of nuclearity make extinction inevitable

Gabrielle **Hecht**, professor of history at the University of Michigan, September 20**06**, "Nuclear Ontologies" Volume 13, Issue 3, pages 320–331,

We cannot understand the geography of nuclearity without taking into account another kind of geopolitical rupture-talk from the Cold War period: the discourse of decolonization. Less than three months after the US bombed Hiroshima, the United Nations charter became the first document of international law to refer to “the principle of equal rights and self-determination of peoples.” In principle (though certainly not in practice), a new world order had emerged built upon a foundation of equality for all. Independence would free Africans and Asians from the shackles of white rule. Formerly colonized people could choose their leaders, pursue economic prosperity, educate their children, and join the global community as peers. New nation-states would serve the interests of their people, who for the first time would be citizens rather than subjects. Like those of nuclearity, these ruptures too were matters of morality: the 1948 Universal Declaration of Human Rights was construed as a moral leap forward for humankind.

Political leaders blended nuclear and postcolonial discourses about rupture and morality in a variety of ways. Postwar French and British leaders not only hoped that the atom bomb would substitute for colonialism as an instrument of global power; they also saw in it a means of preventing their own colonization by the superpowers. Consider this remark by Churchill's chief scientific advisor, Lord Cherwell, in 1951: “If we have to rely entirely on the United States army for this vital weapon, we shall sink to the rank of a second-class nation, only permitted to supply auxiliary troops, like the native levies who were allowed small arms but no artillery.” Or French parliamentary deputy Félix Gaillard that same year: “those nations which [do] not follow a clear path of atomic development [will] be, 25 years hence, as backward relative to the nuclear nations of that time as the primitive peoples of Africa [are] to the industrialized nations of today.” Nuclear = colonizer. Non-nuclear = colonized. Africa remained the eternal site of, and metonym for, backwardness.6

For Europeans this act of technopolitical mapping had deep roots, extending the assumptions and practices of the “new imperialism” to the nuclear state and to the state of being nuclear. Colonial warfare rested on the assumption that different moral structures underlay the rules of war for battles between “civilized” nations and conflicts with “savages.” Aerial bombing followed machine guns as tools of extermination. Its first victims lived in oases outside Tripoli (1911) and villages in Morocco (1913). Even as ecstatic prophets in Europe and America proclaimed the airplane's ability to ensure world peace, the RAF experimented with strategic bombing in Baghdad (1923) and the French bombarded Damascus (1925). For prescient science fiction writers, it was only a matter of time before atomic energy would follow suit. And in a Pacific war with virulent racial overtones, it did. Several hundred thousand Japanese became the first victims of the “white race's superweapon.”7 As the Atomic Bomb Casualty Commission industriously erected colonial scientific structures to study the explosions' aftermath,8 the US and Britain had already begun to scour African colonies in a desperate bid to monopolize the magic new stuff of geopolitical power: uranium.

## 1nc competitiveness

#### Competitiveness makes environmental and economic collapse and resource wars inevitable

Bristow ’10(School of City & Regional Planning, Cardiff University) (Gillian, Resilient regions: re-‘place’ing regional competitiveness, Cambridge Journal of Regions, Economy and Society 2010, 3, 153–167)

In recent years, regional development strategies have been subjugated to the hegemonic discourse of competitiveness, such that the ultimate objective for all regional development policy-makers and practitioners has become the creation of economic advantage through superior productivity performance, or the attraction of new ﬁrms and labour (Bristow, 2005). A major consequence is the developing ‘ubiquitiﬁcation’ of regional development strategies (Bristow, 2005; Maskell and Malmberg, 1999). This reﬂects the status of competitiveness as a key discursive construct (Jessop, 2008) that has acquired hugely signiﬁcant rhetorical power for certain interests intent on reinforcing capitalist relations (Bristow, 2005; Fougner, 2006). Indeed, the competitiveness hegemony is such that many policies previously considered only indirectly relevant to unfettered economic growth tend to be hijacked in support of competitiveness agendas (for example Raco, 2008; also Dannestam, 2008). This paper will argue, however, that a particularly narrow discourse of ‘competitiveness’ has been constructed that has a number of negative connotations for the ‘resilience’ of regions. Resilience is deﬁned as the region’s ability to experience positive economic success that is socially inclusive, works within environmental limits and which can ride global economic punches (Ashby et al., 2009). As such, resilience clearly resonates with literatures on sustainability, localisation and diversiﬁcation, and the developing understanding of regions as intrinsically diverse entities with evolutionary and context-speciﬁc development trajectories (Hayter, 2004). In contrast, the dominant discourse of competitiveness is ‘placeless’ and increasingly associated with globalised, growth-ﬁrst and environmentally malign agendas (Hudson, 2005). However, this paper will argue that the relationships between competitiveness and resilience are more complex than might at ﬁrst appear. Using insights from the Cultural Political Economy (CPE) approach, which focuses on understanding the construction, development and spread of hegemonic policy discourses, the paper will argue that the dominant discourse of competitiveness used in regional development policy is narrowly constructed and is thus insensitive to contingencies of place and the more nuanced role of competition within economies. This leads to problems of resilience that can be partly overcome with the development of a more contextualised approach to competitiveness. The paper is now structured as follows. It begins by examining the developing understanding of resilience in the theorising and policy discourse around regional development. It then describes the CPE approach and utilises its framework to explain both how a narrow conception of competitiveness has come to dominate regional development policy and how resilience inter-plays in subtle and complex ways with competitiveness and its emerging critique. The paper then proceeds to illustrate what resilience means for regional development ﬁrstly, with reference to the Transition Towns concept, and then by developing a typology of regional strategies to show the different characteristics of policy approaches based on competitiveness and resilience. Regional resilience Resilience is rapidly emerging as an idea whose time has come in policy discourses around localities and regions, where it is developing widespread appeal owing to the peculiarly powerful combination of transformative pressures from below, and various catalytic, crisis-induced imperatives for change from above. It features strongly in policy discourses around environmental management and sustainable development (see Hudson, 2008a), but has also more recently emerged in relation to emergency and disaster planning with, for example ‘Regional Resilience Teams’ established in the English regions to support and co-ordinate civil protection activities around various emergency situations such as the threat of a swine ﬂu pandemic. The discourse of resilience is also taking hold in discussions around desirable local and regional development activities and strategies. The recent global ‘credit crunch’ and the accompanying in-crease in livelihood insecurity has highlighted the advantages of those local and regional economies that have greater ‘resilience’ by virtue of being less dependent upon globally footloose activities, hav-ing greater economic diversity, and/or having a de-termination to prioritise and effect more signiﬁcant structural change (Ashby et al, 2009; Larkin and Cooper, 2009). Indeed, resilience features particular strongly in the ‘grey’ literature spawned by thinktanks, consul-tancies and environmental interest groups around the consequences of the global recession, catastrophic climate change and the arrival of the era of peak oil for localities and regions with all its implications for the longevity of carbon-fuelled economies, cheap, long-distance transport and global trade. This popularly labelled ‘triple crunch’ (New Economics Foundation, 2008) has power-fully illuminated the potentially disastrous material consequences of the voracious growth imperative at the heart of neoliberalism and competitiveness, both in the form of resource constraints (especially food security) and in the inability of the current system to manage global ﬁnancial and ecological sustainability. In so doing, it appears to be galvinising previously disparate, fractured debates about the merits of the current system, and challenging public and political opinion to develop a new, global concern with frugality, egalitarianism and localism (see, for example Jackson, 2009; New Economics Foundation, 2008).

#### Causes trade wars and protectionism—turns their offense

Krugman ‘94,PhD (Paul, Nobel Prize winning Economist, Professor of Economics and International Affairs at the Woodrow Wilson School of Public and International Affairs at Princeton University, Centenary Professor at the London School of Economics, and an op-ed columnist for The New York Times) March/April Foreign Affairs “Competitiveness: A Dangerous Obsession” l/n

A much more serious risk is that the obsession with competitiveness will lead to trade conflict, perhaps even to a world trade war. Most of those who have preached the doctrine of competitiveness have not been old-fashioned protectionists. They want their countries to win the global trade game, not drop out. But what if, despite its best efforts, a country does not seem to be winning, or lacks confidence that it can? Then the competitive diagnosis inevitably suggests that to close the borders is better than to risk having foreigners take away high-wage jobs and high-value sectors. At the very least, the focus on the supposedly competitive nature of international economic relations greases the rails for those who want confrontational if not frankly protectionist policies. We can already see this process at work, in both the United States and Europe. In the United States, it was remarkable how quickly the sophisticated interventionist arguments advanced by Laura Tyson in her published work gave way to the simple-minded claim by U.S. Trade Representative Mickey Kantor that Japan's bilateral trade surplus was costing the United States millions of jobs. And the trade rhetoric of President Clinton, who stresses the supposed creation of high-wage jobs rather than the gains from specialization, left his administration in a weak position when it tried to argue with the claims of NAFTA foes that competition from cheap Mexican labor will destroy the U.S. manufacturing base.

## Warming

## 2nc warming inevitable

That means 6 degree warming’s 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.

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.

Gas and developing countries offset US emissions reductions

Marshall, climate reporter – New Scientist, 8/20/’12

(Michael, <http://www.newscientist.com/article/dn22196-lowest-us-carbon-emissions-wont-slow-climate-change.html>)

It looks like good news, but it's not. The US has recorded a sharp fall in its greenhouse gas emissions from energy use. Thanks to a rise in the use of natural gas, emissions are at their lowest since 1992. The fall will boost the natural gas industry, but in reality the emissions have simply been exported.

According to the US Energy Information Administration (EIA), energy-related CO2 emissions in the first quarter of 2012 were the lowest in two decades. Emissions are normally high between January and March because people use more heating in the winter, but last winter was mild in the US.

The EIA says that an increase in gas-fired power generation, and a corresponding decline in coal-fired, contributed to the fall in emissions. Burning natural gas produces fewer emissions than burning coal, and natural gas is currently unusually cheap in the US thanks to a glut of shale gas extracted by hydraulic fracturing or "fracking".

If gas companies continue to expand their shale gas operations, the US could generate even more electricity from gas, and its emissions could fall for several years, says Kevin Anderson of the University of Manchester, UK.

However, this will not slow down climate change. US coal consumption has fallen, but production is holding steady and the surplus is being sold to Asia. As a result, the US is effectively exporting the coal-related emissions.

"Gas is less bad than burning the coal, but only if you keep the coal in the ground," Anderson says.

Proponents of natural gas argue that it is a "transition fuel" that we can burn for a few years while we install low-carbon infrastructure such as wind farms and nuclear power stations.

That viewpoint looks increasingly untenable. "If we want even an outside chance of [limiting global warming to] 2 °C, there is no emission space for gas," Anderson says. In order to hit the 2 °C target, global emissions need to peak by 2020 before dropping again, which means making a rapid transition to low-carbon energy.

## 2nc boomerang\*

#### Alt energy fails – it only encourages increased productionism

**Zehner 12**

Green illusions,

Ozzie Zehner is the author of Green Illusions and a visiting scholar at the University of California, Berkeley. His recent publications include public science pieces in Christian Science Monitor, The American Scholar, Bulletin of the Atomic Scientists, The Humanist, The Futurist, and Women’s Studies Quarterly. He has appeared on PBS, BBC, CNN, MSNBC, and regularly guest lectures at universities. Zehner’s research and projects have been covered by The Sunday Times, USA Today, WIRED, The Washington Post, Business Week and numerous other media outlets. He also serves on the editorial board of Critical Environmentalism.

Zehner primarily researches the social, political and economic conditions influencing energy policy priorities and project outcomes. His work also incorporates symbolic roles that energy technologies play within political and environmental movements. His other research interests include consumerism, urban policy, environmental governance, international human rights, and forgeries.

Zehner attended Kettering University (BS -Engineering) and The University of Amsterdam (MS/Drs – Science and Technology Studies). His research was awarded with honors at both institutions. He lives in San Francisco.

If we were gunslingers, we'd be in trouble. Several sinister energy challenges are staring us down, but the productivists are asking us to choose our weapon from a rack of **toy guns**. The alternative-energy project's fundamental weakness lies in its failure to engage with obvious cultural factors such as **consumerism, corporatism, and middle-class desires.** Instead, we allow pundits to frame energy challenges as technological problems requiring a **technological fix.** Every day, media troupes relay news snippets touting the latest bio-eco-green energy sources—all designed to jury-rig a mode of life that is not optimal, desirable, or even affordable for most of the world's communities. The "energy crisis" is more cultural than technological in nature and the failure to recognize this has led to policies that have brought us no closer to an alternative-energy future today than we were in the 1960s when the notion was first envisaged.1 In fact, since the 1960s , humanity has become quite adept at intensifying large-scale risks through a variety of productivist pursuits. We've built neighborhoods deep in forests that are bound to catch on fire, we've built our cities right up to the banks of constricted rivers prone to flooding, we've erected tall buildings atop triggered faults, and so it's really no surprise that we've constructed an energy system pressed right up against the very limits of power production.2 Attempting to push these limits back by creating more power through alternative means is a **futile** endeavor, at least in the current sociopolitical environment of the United States. A growing population insisting on greater affluence will quickly fill any vacancy such maneuvers might pry open. This would not only expand overall energy risks but also increase the number of souls in danger when energy supplies inevitably waver again. This is what I call **the boomerang effect.** Energy Boomerang Effect A central project of this book is to interrogate the assumption that alternative energy is a viable path to prosperity. I have not only outlined the many side effects, drawbacks, risks, and limitations of alternative technologies but have also indicated that we cannot assume that shifting to them will lower our fossil-fuel use. Alternative-energy production expands energy supplies, placing downward pressure on prices, which spurs demand, entrenches energy-intensive modes of living, and finally brings us right back to where we started: high demand and so-called insufficient supply.3 In short, we create an **energy boomerang**—the harder we throw, the harder it will come back to hit us on the head. More efficient solar cells, taller wind turbines, and advanced biofuels are all just ways of throwing harder. Humans have been subject to the flight pattern of this boomerang for quite some time and there is no reason to suppose we have escaped its whirling trajectory today. In the existing American context, increasing alternative-energy production will not displace fossil-fuel side effects but will instead simply add more side effects to the mix (and as we have seen, there are plenty of alternative-energy side effects to be wary of). So instead of a world with just the dreadful side effects of fossil fuels, we will enter into a future world with the dreadful side effects of fossil fuel plus the dreadful side effects of alternative-energy technologies—hardly a durable formula for community or environmental prosperity. If we had different political, legal, and economic structures and backstops to assure that alternative-energy production would directly offset fossil-fuel use, these technologies might make more sense. But it will take years to institute such vital changes. Focusing our efforts on **alternative-energy production** now only serves to distract us from the **real job** that needs to be done. Worse yet, if fundamental economic, social, and cultural upgrades are not instituted, the project of alternative energy is bound to **fail,** which would likely lead to crippling levels of public cynicism toward future efforts to produce cleaner forms of power. As it stands now, even if alternative-energy schemes were **free,** they might still be too **expensive** given their extreme social costs and striking inability to displace fossil-fuel use. But as it turns out, they aren't free at all—they're enormously expensive.

**Jevon’s paradox ensures demands matches supply – empirics are overwhelming**

**Zehner 12**

Green illusions,

Ozzie Zehner is the author of Green Illusions and a visiting scholar at the University of California, Berkeley. His recent publications include public science pieces in Christian Science Monitor, The American Scholar, Bulletin of the Atomic Scientists, The Humanist, The Futurist, and Women’s Studies Quarterly. He has appeared on PBS, BBC, CNN, MSNBC, and regularly guest lectures at universities. Zehner’s research and projects have been covered by The Sunday Times, USA Today, WIRED, The Washington Post, Business Week and numerous other media outlets. He also serves on the editorial board of Critical Environmentalism.

Zehner primarily researches the social, political and economic conditions influencing energy policy priorities and project outcomes. His work also incorporates symbolic roles that energy technologies play within political and environmental movements. His other research interests include consumerism, urban policy, environmental governance, international human rights, and forgeries.

Zehner attended Kettering University (BS -Engineering) and The University of Amsterdam (MS/Drs – Science and Technology Studies). His research was awarded with honors at both institutions. He lives in San Francisco.

The Rebound Effect Phantom The nineteenth century brought us a collection of ghoulish and chilling immortals—the headless horseman of Sleepy Hollow, Bram Stoker's Dracula, and even Abraham Lincoln's phantom train, which has been heard leaving Washington DC late at night on a circuitous funeral route toward Springfield, Illinois, where it never arrives. It was during this era, in 1865, that a man named William Stanley Jevons wrote a book about a similar sort of phantom. His book, entitled The Coal Question, started out innocently enough. Jevons documented how James Watt's introduction of the steam engine greatly improved efficiency. Seems nice. But this increase in efficiency in turn made steam engines more popular and ultimately drove coal use ever higher.4 This rebound effect, also termed the "Jevons paradox," arises again and again in various incarnations **throughout the history of energy use**: Increases in energy efficiency make energy services relatively cheaper, encouraging greater **consumption.** Energy efficiency can actually lead to negative environmental impacts unless regions institute taxes, caps, or regulations to prevent growing consumption patterns from smothering efficiency gains. As long as energy-efficiency strategies come with checks to prevent the rebound effect, efficiency proponents argue that they are highly effective. For instance, new refrigerators use just a fraction of the energy of models sold decades ago, yet because there is a limit to the amount of refrigeration space one can fit in a kitchen, the benefits of efficiency are usually not usurped by the rebound effect. Similarly, there's no indication that drivers of small cars, who achieve twice the gasoline efficiency of those driving large vehicles, tend to drive twice as much as a result. And based on numerous case studies of businesses, Rocky Mountain Institute researchers claim, "We have not seen evidence that radically more efficient commercial buildings cause people to leave the lights on all night and set their office thermostats five degrees lower. In fact, energy savings in everything from office towers to schools have often been higher than projected. People do not seem to change their behaviors simply because they have a more efficient building."5 That's nice, too. But it's not the whole story. There's another problem. Even though energy consumers might not spend their efficiency savings to buy more energy, they may choose to spend these savings on other products or endeavors that still lead to energy consumption. In this case, energy-efficiency measures can unintentionally inspire other types of consumption, leaving overall energy footprints unchanged or even larger. This occurs at the macroeconomic level as well. In short, energy-efficiency savings frequently lead to larger profits, which spur more growth and thus higher energy consumption. For instance, another Rocky Mountain Institute study shows that reducing drafts, increasing natural light, and otherwise making workplaces more efficient, can increase worker productivity by as much as 16 percent.6 This higher productivity allows firms to grow, and the resulting labor cost savings can be spent on new machinery, buildings, or expansion. These rebound effects often dwarf the original energy-efficiency effects, leading to **far greater** overall **energy consumption.**7 In fact, the authors of a central report on the rebound effect conclude, "While the promotion of energy efficiency has an important role to play in achieving a sustainable economy, it is unlikely to be sufficient while rich countries continue to pursue high levels of economic growth."8 Thus, efficiency efforts will only prove effective as long as we institute contemporaneous reforms to move from a **consumption-based economy** to one grounded in sufficiency.

## at: IFRs solve warming

IFRs too costly and too long term to solve warming – also trades off with short-term renewable tech that solves better

Cochran 9

(Thomas, Senior Scientist, Nuclear Program, Natural Resources Defense Council, “Senate Energy and Natural Resources Committee Hearing; To receive testimony on nuclear energy development; Testimony by Thomas Cochran, Senior Scientist, Nuclear Program, Natural Resources Defense Council” March 18, 2009, Congressional Documents and Publications)

B. Spent Fuel Reprocessing. **The federal government should not** encourage or **support commercial spent fuel reprocessing.** Putting aside for the moment the serious proliferation and security concerns involved in any future global shift toward reprocessing, it's clear that combating climate change is an urgent task that requires near term investments yielding huge decarbonization dividends on a 5 to 20 year timescale. For thermal reactors, the closed fuel cycle (spent fuel reprocessing and recycling plutonium) is unlikely ever to be less costly than the once-through fuel cycle, **even assuming significant carbon controls**. But setting aside such near-term cost barriers, commercial viability for a closed fuel cycle employing fast reactors is an even longer-term proposition. So even fervent advocates of nuclear power need to put the reprocessing agenda aside for a few decades, and focus on swiftly deploying and improving the low-carbon energy solutions.

Think about it. In pursuit of closing the fuel cycle, the U.S. government could easily spend on the order of $ 150 billion over 15 years just to get to the starting line of large-scale commercialization. But **all that spending** will not yield one additional megawatt of low-carbon electricity **beyond what could be obtained by sticking with the current once-through cycle,** much less by investing that $150 billion in renewable and efficient energy technologies. Spent-fuel reprocessing, plutonium recycle, and fast reactor waste transmutation are currently uneconomical, higher-risk, 100-year answers to an urgent climate question that now requires low-risk 5 to 20 year solutions. For now, Congress and the new Administration should terminate funding for the Global Nuclear Energy Partnership (GNEP) and its associated efforts to close the nuclear fuel cycle and introduce fast burner reactors in the United States.

At any point along the way, Mr. Chairman, we can revisit this issue to assess whether there may be truly disruptive innovations in nuclear technology that would alter this negative assessment, and induce us to view closing the fuel cycle as a more costeffective pathway to decarbonization than the host of cheaper alternatives we have available to us today.

## 2nc no extinction

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."

#### Their appeals to scientific consensus shut down democratic deliberation and reinforce technocracy—proven by someone like Hansen who is a hack scientist but is in NASA so we trust him

McKitrick, professor of economics – University of Guelph, 11/22/‘11

(Ross, “Fix it or fold it,” Financial Post, <http://opinion.financialpost.com/2011/11/22/fix-it-or-fold-it/>)

For many years, attempts to encourage debate on global warming science or policy have run into the obstacle that the UN Intergovernmental Panel on Climate Change (IPCC) has issued definitive statements, and therefore—the reasoning goes—the era of debate is over. The IPCC is made up of thousands of the world’s top scientists, it has one of the most rigorous and exhaustive review processes in the history of science, and the oversight by 195 member governments ensures balance, transparency and accountability. Or so we are told.

These claims about the IPCC are not true, but until relatively recently few were willing to question what they were told. Things began to change in 2009 with the leak of the Climategate emails, which prompted some observers to begin questioning their assumptions about the IPCC. Then this fall, Canadian investigative journalist Donna Laframboise released her book The Delinquent Teenager Who Was Mistaken for the World’s Top Climate Expert, a superb exposé of the IPCC that shows convincingly that the IPCC has evolved into an activist organization bearing little resemblance to the picture of scientific probity painted by its promoters and activist allies.

On Monday, news emerged of another release of thousands of new Climategate emails, with early indications that some of them add to concerns about the IPCC that arose from the 2009 disclosures.

I am pleased to announce the publication of a report I have written that provides systematic detail on the procedures of the IPCC and makes the case for reforming them. My study, called What is Wrong With the IPCC? A Proposal for Radical Reform, was published by the Global Warming Policy Foundation in the U.K., and includes a foreword by the Hon. John Howard, former prime minister of Australia.

The first thing to note about this report is that it is not about science. It is about the policies, procedures and administrative structures in the IPCC. A third of the report consists simply of explanations of how the IPCC works. The more people learn such details, the more they will see that the IPCC does not come close to living up to the hype.

Most people would not consider themselves sufficiently well-trained to adjudicate conflicting claims on the science of global warming. But you don’t have to be a scientist to be capable of understanding when an investigative procedure is biased. The IPCC assessment process has material defects, which are sufficiently serious and numerous to put into question the soundness of some of its most heavily promoted claims.

What are some of the flaws? IPCC report-writing teams are cherry-picked in an opaque process by a secretive bureau in Geneva, with no effective requirements to ensure representation of diverse viewpoints. Environmentalist campaign groups are heavily overrepresented in the resulting author lists. Conflicts of interest abound throughout the report-writing process, whereby select authors are asked to review their own work and that of their critics, inevitably concluding in their own favour. The expert review process has become little more than elegant stagecraft, creating an illusion of adversarial cross-examination while concealing the reality of unchecked author bias. Unlike in regular academic peer review procedures, IPCC authors are allowed to overrule reviewers, and even to rewrite the text after the close of the peer review process.

In my report I provide case studies that trace key sections of past IPCC reports through the drafting, review and publication stages, showing how evidence was manipulated or changed after the close of peer review. Some of these incidents had already been documented, but some of them can only now be fully explained because of the disclosure of email traffic among IPCC authors in both the Climategate archives and in files obtained under recent U.K. freedom of information rulings.

I also look at the review of IPCC procedures undertaken last year by the Inter-Academy Council (IAC). The IAC report picked up on some of the major problems I also identify, but the task of devising and implementing reforms fell to the IPCC plenary panel, an unwieldy and passive assembly of delegates from 195 member states, whose manifest indifference allowed the IPCC leadership to gut the reforms before they were ever implemented.

My report presents a set of reform proposals that are based on the simple notion that the IPCC assessment process should be made as rigorous as an ordinary academic journal. The surprise for many readers will be how radical the required changes would be.

In a surprise, and fast-breaking development, Monday morning saw the release of more than 5,000 fresh emails of climate scientists connected with the U.K. Climate Research Unit. They will be examined over the next few days with intense interest. Having read several hundred so far, most are simply the usual traffic among active scholars. But the ones that pertain to the IPCC process fully support the contentions in my report.

For instance, I discuss the problem that IPCC chapter authors are able to recruit contributing authors (CAs) in an opaque process that does not ensure a diversity of views. The resulting uniformity is obvious simply from looking at the list of authors, but we can now see the confirmatory evidence in the email traffic. In a pair of emails (nos. 0714 and 3205), ­IPCC lead author Phil Jones goes through lists of possible CAs with his IPCC coauthor Kevin Trenberth, declaring “Getting people we know and trust is vital.” He then categorizes his recommendations based, not on whether the person is the most qualified but on whether the person is “on the right side” (namely agrees with him), or whether he “trusts” him or not. At one point he dismisses a particular expert who “has done a lot but I don’t trust him.” This kind of cronyism is shown by the emails to be rampant in the IPCC.

Previous temperature spikes disprove the impact

Singer, PhD physics – Princeton University and professor of environmental science – UVA, consultant – NASA, GAO, DOE, NASA, Carter, PhD paleontology – University of Cambridge, adjunct research professor – Marine Geophysical Laboratory @ James Cook University, and Idso, PhD Geography – ASU, ‘11

(S. Fred, Robert M. and Craig, “Climate Change Reconsidered,” 2011 Interim Report of the Nongovernmental Panel on Climate Change)

Research from locations around the world reveal a significant period of elevated air temperatures that immediately preceded the Little Ice Age, during a time that has come to be known as the Little Medieval Warm Period. A discussion of this topic was not included in the 2009 NIPCC report, but we include it here to demonstrate the existence of another set of real-world data that do not support the IPCC‘s claim that temperatures of the past couple of decades have been the warmest of the past one to two millennia. In one of the more intriguing aspects of his study of global climate change over the past three millennia, Loehle (2004) presented a graph of the Sargasso Sea and South African temperature records of Keigwin (1996) and Holmgren et al. (1999, 2001) that reveals the existence of a major spike in surface air temperature that began sometime in the early 1400s. This abrupt and anomalous warming pushed the air temperatures of these two records considerably above their representations of the peak warmth of the twentieth century, after which they fell back to pre-spike levels in the mid-1500s, in harmony with the work of McIntyre and McKitrick (2003), who found a similar period of higher-than-current temperatures in their reanalysis of the data employed by Mann et al. (1998, 1999).

## 1NR

## k

## 2nc link wall

#### That proves their epistemology is bankrupt

**Maciejewska and Marszalek ’11** (Malgorzata, institute of Sociology and Faculty of Social Sciences at Wroclaw University, and Marcin, Wroclaw University (Poland), “Lack of power or lack of democracy: the case of the projected nuclear power plant in Poland,” Economic and Environmental Studies Vol. 11, No.3 (19/2011), 235-248, Sept. 2011, AM)

Significantly, the voices of resistance towards nuclear energy (defined as 'the enemy') are consistently constructed as ‘irrational’ and ‘emotional’ (2010:20). “The campaign’s target should be therefore composed of pro-ecological groups excluding its radical wing – the radical fanatics for whom the resistance itself is an essential justification” (2010:10). According to the document, the opponents, especially from the ecological movements, are named ‘radical fanatics’ who cannot be reached by means of rational arguments, therefore are not the campaign’s target: Thus, the document neglects the whole spectrum of the opponents’ argumentation. The groups suitable for the campaign’s efforts are not the ones that: “have the orthodox approach, but the ones which emphasize the cleanness of atomic energy production” (2010:9). On top of this, the opinions which disagree with the safety of nuclear power plants are neglected and depicted simply as a misjudgment. The Concept’ segregates its targets: excluding the ‘ideological opponents’ (the ecologists), it is meant to make its strongest influence on the groups potentially reluctant to the idea: women, young people, uneducated, peasants and small local communities.Once defined as incompetent, superstitious and susceptible to manipulation, their voice is meant to be kept down in the debate, by giving them information and education. Explicitly, the document describes those groups as “societies easily manipulated by the charismatic leaders and nuclear power antagonist and theirs demagogic thesis” and anti-nuclear standpoints are described as “psychosis that is a mixture of fear, panic and horror” (2010:23). What is kept out of view is that the groups which have limited access to information should constitute the main subject of nuclear propaganda (assuming that access to knowledge is also access to power: they are seen as disempowered and subordinated). The lack of objectivity and neutrality of the public institutions involved in the nuclear campaign is also visible in granting procedures. Compared to other scientific institutions, the National Atomic Energy Agency has been one of the largest recipients of state support. In 2010 and 2011, it received 100 million PLN (about 25 million EUR) from the public budget. Simultaneously, the state subsidies for research projects in natural and social science amounted to 150 million PLN (about 38 million EUR) (Ministry of Finance 2011a, 2011b). The deficit of democracy which emerges from the pro-nuclear discourse also manifests itself in the lack of recognition for historical movements of resistance against atomic power, which are dismissed as an aberration. The arguments of nuclear power plant’s safety, efficiency and profitability are the core legitimization for this exclusion. The importance of the ecological movements existing in the 1980s and social mobilization against nuclear energy at that time is neglected and devalued within the current pro-atomic discourse. During the Round Table debates in 1989, one of major postulates posed by the Solidarity movement concerned the need for social deliberation on the development of nuclear technology in Poland, which was constantly ignored by the government (at that time, as it is now, the issue of atomic power production evoked a lot of social objection) (Guła and Popczyk, 2010). The case of the recent explosions in the Fukushima Dai-Ichi power plant have recalled the same mechanism of negation. The independent media brought back the issue of ecological protests in Japan during the construction process of the first atomic power plant, but the Polish mass-media remained silent about it. As one of the Japanese anti-nuclear activist Yoko Akimoto said recently: Members [of anti-nuclear movements] struggled against the construction of nuclear power plants, identifying the danger of nuclear power plants in this earthquake-prone country. At that time, the government expropriated fishing rights from the fishery cooperative or local community to build the nuclear power plants. The government forcibly destroyed people’s life on fishing grounds to build those plants, saying with confidence that the nuclear power plant was safe (Akimoto, 2010). The ecological movement, past and present, is deprived of the power to represent the civil society and defined as a public enemy that produces extra (and unnecessary) economic and political costs. On the day of the first explosion in the Fukushima power plant, the polish Prime Minister, Donald Tusk, said: The Japanese example shows how safe the nuclear power plants are, having the ability to weather even such terrible natural catastrophe. We are now facing one of the greatest earthquakes in history; just imagine what would have happen with a traditional power plant, how it would have polluted the environment during such a catastrophe (Tusk, 2011). This strategy of ‘damage control’ shows how even the unquestionable facts can be intercepted and used to support the arguments of pro-atomic discourse. The lack of acknowledgment for the history of nuclear industry and the history of resistance against the consequences of such technology, coupled with rear reflection on the future of nuclear power production is significant for the dominant discourse on nuclear energy. The possibility of running out of the uranium supplies and the question of the safety of shutting down the reactors as well as storing the radioactive waste, is now named by the ecologists as the problem of future generations – but still it is invisible for the present authorities.

#### That FUTURIST orientation – the predictive frame justifies BAD SCIENCE and BAD IDEOLOGY that culminates in extinction

Mian 4

Mian, ZiaView Profile. Development, suppl. The Violence of Development47. 1 (Mar 2004): 50-57.

Turn on hit highlighting for speaking browsers

Zia Mian directs the Project on Peace and Security in South Asia, at the Program on Science and Global Security. His research and teaching focuses on nuclear weapons and nuclear energy policy, especially in Pakistan and India, and on issues of nuclear disarmament and peace. Previously, he has taught at Yale University and Quaid-i-Azam University, Islamabad, and worked at the Union of Concerned Scientists, Cambridge (Mass.), and the Sustainable Development Policy Institute, Islamabad. He is Co-Editor of Science & Global Security, an international journal of technical analysis for arms control, disarmament and nonproliferation policy. He is a member of the International Panel on Fissile Materials (IPFM). He has a Ph.D. in physics from the University of Newcastle upon Tyne.

The peaceful atom The nuclear age was more than just growing arsenals and the ever-present threat of nuclear war. Within weeks of the atomic bombing of Hiroshima and Nagasaki, drawing on earlier ideas of the power of the atom, American newspapers and magazines were offering visions of a domesticated, peaceful atom at the heart of a technological, industrial and consumer utopia. There were excited reports of the possibility of 'fantastically cheap power', 'atomic-powered rockets, airplanes, ships and automobiles', in short 'a world of unlimited power, unlimited abundance - a world limited only by man's capacity to imagine new wants and needs' (Boyer, 1985: 111-3). It is a small step from such visions of possible utopias to the dream of development that was offered by the United States, and others, to the elites in the states that came into being with the end of colonial empires, and to the poor everywhere. For the developed world, the future was a nuclear-powered society of 'unlimited abundance' while for the 'developing' world the future was to be like the 'developed'. Both meant looking forward. These futures of the developed and developing worlds were linked together explicitly in a December 1953 speech made by President Eisenhower to the United Nations, in which he laid out a vision of Atoms for Peace. He held out a promise of nuclear science and technology in the service of development: "Experts would be mobilized to apply atomic energy to the needs of agriculture, medicine, and other peaceful activities. Its special purpose would be to provide abundant electrical energy in the power-starved areas of the world (Williams and Cantelon, 1984: 110-1)." The promise was grand. Lewis Strauss, head of the United States Atomic Energy Commission, declared in 1954 that nuclear power meant 'our children will enjoy in their homes electrical energy too cheap to meter' (Makhijani and Saleska, 1999: xix). Nuclear power has fallen far short of what was promised. The economics has never proved itself, even in the limited forms of accounting that ignore the enormous externalities associated with the nuclear fuel cycle from the mining of uranium to the disposal of radioactive spent fuel. The hundreds of near-misses at reactors around the world, the 1979 near-disaster at the Three Mile Island reactor in Pennsylvania and the catastrophic accident at Chernobyl in the Ukraine in 1986 have served to make nuclear energy synonymous with risk in the public imagination. 6 Nuclear energy has in fact become the primary example of 'high-risk technologies' with 'catastrophic potential' for which, it is argued, 'no matter how effective conventional safety devices are, there is a form of accident that is inevitable' (Perrow, 1984: 3-4). With accidents being a 'normal' consequence of such systems, there is no escape from failure. Despite this, nuclear power, as throughout its history, is still presented for judgement by its proponents in the 'future tense', that is 'in terms of what it will bring rather than what it has already wrought or what it requires from society to maintain operation' (Byrne and Hoffman, 1996: 12). The nuclear future, like religion it seems, requires faith to bear and overcome the challenges and sacrifices and dangers of the present. The case of Pakistan Unlike fall-out, nuclear ideas, values and technologies did not diffuse around the world; they were hand-carried, traded and pushed. The process of exporting nuclear dreams, nuclear knowledge and institutions made it much easier for some states to develop their nuclear weapons capabilities. The evidence is clearest in the case of Pakistan. The nuclear age was brought to Pakistan in 1954 and found eager disciples among Pakistan's scientists, economic development planners and its soldiers. The consequent Americanization of Pakistan's scientific, bureaucratic and military institutions was to have an impact perhaps comparable only with the arrival of European ideas and institutions during the colonial period. In January 1954, Pakistan's nascent scientific community found its voice in Raziuddin Siddiqui, a prominent scientist and Vice Chancellor of Peshawar University, in his Presidential address to the Sixth Pakistan Science Conference. Echoing a common equation of science and technology with development, Siddiqui claimed science and education were a 'defence against ignorance and the consequent poverty and disease' (Dawn, 1954a). But with the Manhattan Project barely a decade old, the Cold War arms race raging, and independence having come only six years earlier, Siddiqui proposed a more important reason to support the growth of modern science in Pakistan: "It cannot be denied that in this age of power politics not only the security but even the free existence of the eastern countries is at stake, because of their backwardness in scientific and technical knowledge... Hence we must have a vast army of those trained in all the fundamental and important scientific and technical subjects (Dawn, 1954a)." The scientists found fellow-travellers in Pakistan's Economic Planning Commission. In February 1954, the Ford Foundation agreed to fund a programme whereby Harvard University would provide experts to assist the Planning Commission in, among other things, designing and drafting a multi-year economic and social development plan (Ford, 1965: 2). The vision of an atomic age seems to have figured large in their thinking. The opening page of Pakistan's First Five-Year Plan proclaims: "... planning in the present stage of our society means the formulation of programmes and policies designed to lead it by a consciously directed and accelerated movement from a largely technologically backward and feudalistic stage into the modern era of advanced technology now on the threshold of atomic age (NPB, 1957: 1-2)." Pakistan's military was quick on the uptake too. General M.A. Latif Khan became the first Pakistani Commandant of the military Command and Staff College in 1954. On taking charge he decided: "The time had come for us to start making a serious study of fighting the next war which would, whether we liked it or not, be fought with nuclear weapons (Khan, 1982: 139-40)." On 19 October 1954, Pakistan announced the creation of an Atomic Energy Research Organization (Dawn, 1954b). But Pakistan lacked the scientific, technical and economic resources to support its atomic dreams. Under Atoms for Peace, Pakistani scientists were sent to the United States to study nuclear science and engineering. 7 Young Pakistani economists were sent to Harvard and other US universities. Pakistan's soldiers received their share of the American experience and 'along with American equipment and training came American military doctrines, American approaches to problem-solving, and ... American pop culture' (Cohen, 1998: 163). This included visits by American experts on nuclear war fighting that 'proved most useful and resulted in modification and revision of the old syllabus' at the military staff college (Cohen, 1998: 165). Success came in May 1998 when Pakistan tested its nuclear weapons. Nuclear weapons scientists became national heroes, models of nuclear missiles and the nuclear test site were put up in public places as national monuments and nuclear nationalism was the order of the day (Mian, 1999). But the pursuit of a place in the nuclear age had taken a profound toll. The nuclear tests came at the end of decade when, as Akmal Hussain, a leading Pakistani economist, describes it 'the government faced financial bankruptcy, the real economy was in deep recession, there was an unprecedented increase in poverty, and the institutions of governance had eroded to a point where the structure of the state was threatened' (Hussain, 2003: xv). 8 An endless nuclear age It is a remarkable fact that while the most widely used justification for nuclear weapons for the past 50 years disappeared with the collapse of the Soviet Union in 1991, there has been no significant effort to eliminate nuclear weapons. There is a sharpening sense of gloom among advocates of nuclear arms control and disarmament. Jonathan Schell, the author of the classic warning about the dangers of nuclear weapons, The Fate of the Earth, observed that, 'ten years after the collapse of the Soviet Union, the startling fact is that nuclear arms control is faring worse in the first days of the twenty-first century than it did in the last days of the Cold War' (Schell, 2000: 27). This concern is all the more significant given that the 1970 Nuclear Non-proliferation Treaty (NPT), signed by the United States, Russia, Britain, France and China, commits the nuclear weapons states to 'pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament'. But the fate of the Treaty in the past decade shows a determination on the part of some states to acquire nuclear weapons and for others to hold on to their nuclear arsenals. The efforts of a handful of states that had signed the Treaty as non-nuclear weapons states to develop nuclear weapons - most notably Iran, Iraq and North Korea - are now well known. Their nuclear ambitions have been the cause of prolonged international negotiations, devastating sanctions, and in the case of Iraq they been used to justify (falsely) a war. What is less well known is the effort by the nuclear weapons states to keep their weapons. This became evident in 1995 at the conference of NPT parties to negotiate the review and possible extension of the Treaty (which had come with a 25-year lifetime). The President of the Review and Extension Conference, Jayantha Dhanapala from Sri Lanka, observed that for most states the demand was for 'further commitments towards nuclear disarmament in terms of concrete action' by the nuclear weapons states (Walsh, 1995). The United States, the other nuclear powers, and most US allies worked for and achieved an indefinite extension of the NPT without conditions or commitments on disarmament. The nuclear weapons states prevailed. In a series of interviews, diplomats described how this decision was reached: according to Indonesia's ambassador, the 1995 decision was arrived at 'simply by the use of pressure tactics against smaller countries... many countries complained to us about pressure with conditionalities and other types of pressure'. The Venezuelan ambassador explained 'there had been too much pressure... applied in all directions', adding 'Most of the developing countries are going through difficult times, including my own'. Iran's ambassador noted that 'a lot of pressures... promises and sometimes threats were put on non-aligned countries... by certain nuclear weapons states, in particular the United States, as well as certain western countries' (Walsh, 1995). Mexico's ambassador to the United Nations Conference on Disarmament observed that the final decision, indefinitely extending the NPT, 'was what the five permanent members of the Security Council wanted and secured in order to continue being the nuclear haves in a world of overwhelmingly nuclear have-nots' (Marin-Bosch, 1999). Now US nuclear weapons designers and military planners are pushing for new weapons designs and missions. Stephen Younger, Director of the Defense Threat Reduction Agency and former Associate Laboratory Director for Nuclear Weapons at Los Alamos National Laboratory, has argued that the US needs new kinds of low-yield nuclear weapons because its continued 'reliance on high-yield strategic [nuclear] weapons could lead to self-deterrence, a limitation of strategic options' (Younger, 2000). In short, the US should have nuclear weapons it can use without conjuring up images of Hiroshima. Paul Robinson, the Director of Sandia National Laboratory and chairman of the Policy Subcommittee of the Strategic Advisory Group for the Commanders-in-Chief of the US Strategic Command (which has responsibility for nuclear weapons) proposes developing a special low-yield 'To Whom It May Concern' nuclear arsenal, specifically directed at Third World countries (Robinson, 2001). 9 The United States is renewing and extending its nuclear arsenal in the post-Cold War world, knowing that this more deeply embeds nuclear weapons in national and international structures of political and military thinking and action. Jonathan Schell has argued that the perversity of this policy shows that the United States pursues these weapons not out of a profound fear of attack but for 'deep-seated, unarticulated reasons growing out of its own, freely chosen conceptions of national security' (Schell, 2001: 47). But the deep-seated reasons may lie in the bomb itself, once we see it as more than just a thing. E.P. Thompson may have been right in describing these weapons as 'political agents' that needed to be understood as constituting a configuration 'whose institutional base is the weapons system, and the entire economic, scientific, political and ideological support system to that weapons system - the social system which researches it, "chooses" it, produces it, policies it, justifies it and maintains it in being' (Thompson, 1982: 20-1). It is this configuration, dubbed 'exterminism' by Thompson (to mirror its similarities with militarism and imperialism), that works its way into society, and in Arundhati Roy's phrase buries itself 'like meathooks deep in the base of our brain', showing no sign of change (Roy, 2001: 11). Until this exterminist configuration is changed it will keep us trapped in the nuclear age, denying the possibility of a peaceful and just future.

## 2nc role of ballot

#### Fighting for government change is suicidal in the energy system – our position as academics must prioritize SOCIAL ANALYSIS above PRAGMATISM

Byrne and Toly 6

<http://seedconsortium.pbworks.com/w/file/fetch/45925604/Byrne_etal.pdf>

Center for Energy and Environmental Policy Established in 1980 at the University of Delaware, the Center is a leading institution for interdisciplinary graduate education, research, and advocacy in energy and environmental policy. CEEP is led by Dr. John Byrne, Distinguished Professor of Energy & Climate Policy at the University. For his contributions to Working Group III of the Intergovernmental Panel on Climate Change (IPCC) since 1992, he shares the 2007 Nobel Peace Prize with the Panel's authors and review editors.

Democratic Authoritarian Impulses and Uncritical Capitalist Assumptions 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 selfdeception 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).

## at: engage state good—warming

#### Bottom up framing key to climate solvency

Byrne et al 8

Byrne, et al., 2008.

In Peter Droege eds. Urban Energy Transition: From Fossil Fuels to Renewable Power.

Oxford, UK: Elsevier Pps.27-53.

The chapter then examines political strategy in the face of US national governmental intransigence. Through an inventory of American civil society initiatives, a case is built for understanding the grassroots revolt under way in the US to challenge its national political posture. An alliance with this locality-focused revolt is recommended strategically as a means to undermine the American national government's support for climate inaction. But it is further recommended on the ground that eventually the politics of climate action must extend beyond the rhetorical level, where nations establish and enforce GHG reduction targets, to the level of practice, wherein social transformation is actually undertaken. An era of sustainability and equity in practice is ultimately the province of civil society and, specifically, its urban industrial communities in this instance because of their dominant role in GHG emissions. Urban action and innovation is essential if climate sustainability and carbon equity (defined below) are to be realized.3

#### Their exercise of hegemony is not benign – neoliberal hegemony uses exceptionalism to render its violent side effects invisible, ensuring environmental destruction and global conflict- be suspicious of all their answers because their means of structuring the social field erases vast sectors of the global population from view

Nixon ’11 (Rob, Rachel Carson Professor of English, University of Wisconsin-Madison, Slow Violence and the Environmentalism of the Poor, pgs. 33-36)

There are signs that the environmental humanities are beginning to make some tentative headway toward incorporating the impact of U.S. imperialism on the poor in the global South-Vitalis's book America's Kingdom: Mythmaking on the Saudi Oil Frontier (2008) is an outstanding instance, as are powerful recent essays by Elizabeth DeLoughrey on the literatures associated with American nuclear colonialism in the Pacific, Susie O'Brien on Native food security, colonialism, and environmental heritage along the U.S-Mexican border, and Pablo Mukherjee's groundbreaking materialist work on Indian environmental literatures,'? Yet despite such vitally important initiatives, the environmental humanities in the United States remain skewed toward nation-bound scholarship that is at best tangentially international and, even then, seldom engages the environmental fallout of U.S. foreign policy head on. What's at stake is not just disciplinary parochialism but, more broadly, what one might call superpower parochialism, that is, a combination of American insularity and America's power as the preeminent empire of the neoliberal age to rupture the lives and ecosystems of non- Americans, especially the poor, who may live at a geographical remove but who remain intimately vulnerable to the force fields of U.S. foreign policy. To be sure, the U.S. empire has historically been a variable force, one that is not monolithic but subject to ever-changing internal fracture. The U.S., moreover, has long been-and is increasingly-globalized itself with all the attendant insecurities and inequities that result. However, to argue that the United States is subject to globalization-through, for example, blowback from climate change-does not belie the disproportionate impact that U.S. global ambitions and policies have exerted over socioenvironmental landscapes internationally. Ecocritics-and literary scholars more broadly-faced with the challenges of thinking through vast differences in spatial and temporal scale commonly frame their analyses in terms of interpenetrating global and local forces. In such analyses cosmopolitanism-as a mode of being linked to particular aesthetic strategies-does much of the bridgework between extremes of scale. What critics have subjected to far less scrutiny is the role of the national-imperial as a mediating force with vast repercussions, above all, for those billions whom Mike Davis calls "the global residuum.'?" Davis's image is a suggestive one, summoning to mind the remaindered humans, the compacted leavings on whom neoliberalism's inequities bear down most heavily. Yet those leavings, despite their aggregated dehumanization in the corporate media, remain animate and often resistant in unexpected ways; indeed, it is from such leavings that grassroots antiglobalization and the environmentalism of the poor have drawn nourishment. As American writers, scholars, and environmentalists how can we attend more imaginatively how can we attend more imaginatively to the outsourced conflicts inflamed by our unsustainable consumerism, by our military adventurism and unsurpassed arms industry, and by the global environmental fallout over the past three decades of American-led neoliberal economic policies? (The immense environmental toll of militarism is particularly burdensome: in 2009, U.S. military expenditure was 46.5 percent of the global total and exceeded by 10 percent the expenditure of the next fourteen highest-ranked countries combined.)" How, moreover, can we engage the impact of our outsized consumerism and militarism on the life prospects of people who are elsewhere not just geographically but elsewhere in time, as slow violence seeps long term into ecologies-rural and urban-on which the global poor must depend for generations to come? How, in other words, can we rethink the standard formulation of neoliberalism as internationalizing profits and externalizing risks not just in spatial but in temporal terms as well, so that we recognize the full force with which the externalized risks are out sourced to the unborn? It is a pervasive condition of empires that they affect great swathes of the planet without the empire's populace being aware of that impact-indeed, without being aware that many of the affected places even exist. How many Americans are aware of the continuing socioenvironrnental fallout from U.S. militarism and foreign policy decisions made three or four decades ago in, say, Angola or Laos? How many could even place those nation-states on a map? The imperial gap between foreign policy power and on-the-street awareness calls to mind George Lamming's shock, on arriving in Britain in the early 1950s, that most Londoners he met had never heard of his native Barbados and lumped together all Caribbean immigrants as Jamaicans.'?' What I call superpower parochialism has been shaped by the myth of American exceptionalism and by a long-standing indifference-in the U.S. educational system and national media-to the foreign, especially foreign history, even when it is deeply enmeshed with U.S. interests. Thus, when considering the representational challenges posed by transnational slow violence, we need to ask what role American indifference to foreign history has played in camouflaging lasting environmental damage inflicted elsewhere. If all empires create acute disparities between global power and global knowledge, how has America's perception of itself as a young, forward-thrusting nation that claims to flourish by looking ahead rather than behind exacerbated the difficulty of socioenvironmental answerability for ongoing slow violence?" Profiting from the asymmetrical relations between a domestically regulated environment and unregulated environments abroad is of course not unique to America, But since World War II, the United States has wielded an unequalled power to bend the global regulatory climate in its favor. As William Finnegan notes regarding the Washington Consensus, "while we make the world safe for multinational corporations, it is by no means clear that they intend to return the favor."? The unreturned favor weighs especially heavily on impoverished communities in the global South who must stake their claims to environmental justice in the face of the Bretton Woods institutions (the World Bank, the IMF), the World Trade Organization, and the G8 (now G20) over which the United States has exercised disproportionate influence. That influence has been exercised, as well, through muscular conservation NGOs (the Nature Conservancy, the World Wild- life Fund, and Conservation International prominent among them) that have a long history of disregarding local human relations to the environment in order to implement American- and European-style conservation agendas. Clearly, the beneficiaries of such power asymmetries are not just American but transnational corporations, NGOs, and governments from across the North's rich nations, often working hand-in-fist with authoritarian regimes.

## tech

#### That also reveals the tensions at the heart of producitionism—market signals are pointing away from the aff, but the obsession with consumption hides the rational choice to consume less—we link turn their offense.

Foster and McChesney 12

<http://monthlyreview.org/2012/05/01/the-endless-crisis>

John Bellamy Foster (born August 19, 1953) is a professor of sociology at the University of Oregon and also editor of Monthly Review. His writings focus on the political economy of capitalism and economic crisis, ecology and ecological crisis, and Marxist theory. He has published over one hundred articles, written and edited over a dozen books, given over one hundred conference papers and invited lectures all around the world, and received numerous awards and honors. His work is published in at least twenty-five languages. Since the Great Financial Crisis hit in 2008, Foster has been sought out by academics, activists, the media, and the general public as a result of his earlier prescient writings on the coming crisis. He has given numerous interviews, talks, and invited lectures, as well as written invited commentary, articles, and books on the subject.[1]

Robert Waterman McChesney is an American professor at the University of Illinois at Urbana-Champaign. He is the Gutgsell Endowed Professor in the Department of Communication. His work concentrates on the history and political economy of communication, emphasizing the role media play in democratic and capitalist societies. McChesney has a particular interest in the state of journalism, and the relationship of media systems and structures to effective self-governance. He is the co-founder of Free Press, a national media reform organization. McChesney also hosts the “Media Matters” weekly radio program every Sunday afternoon on WILL-AM radio; it is the top-rated program in its time slot in the Champaign-Urbana area.[citation needed]

Since these theories of monopolistic competition challenged the notion of a freely competitive system, threatening the whole structure of orthodox economics, they were shunted aside—in an early version of the economics of innocent fraud—into a marginal realm within economics. A set of exceptions to perfect competition was recognized, but this was treated as outside the general model of the economy, which remained a world of perfect and pure competition. At the same time, economists introduced intermediary notions such as “workable competition” (a vague notion that in practice effective competition somehow continued) together with the idea of a new competition geared less to price competition than to innovation, i.e., the perennial gale of Schumpeterian “creative destruction.” Imperfect competition theory itself was reshaped to conform to the needs of economic orthodoxy. Hence, the notion of “monopolistic competition” was redefined simply to relate to conditions where numerous small firms were able to exploit favorable locations or product differentiation, while excluding oligopoly (the typical case) from the concept. Chamberlin himself was driven to object that oligopoly had been the starting point for monopolistic competition theory and its exclusion from the theory of monopolistic competition was absurd. “Monopolistic competition,” he complained, was “converted from an almost universal phenomenon, which it surely is…to the relatively unimportant one of differentiated products in the restricted case of ‘large numbers.’”59 Competition was therefore redefined in public discourse to mean “workable competition” as a vague analogue to perfect competition, while economists in their basic models continued to hold onto the abstract notion of perfect and/or pure competition. Instances of oligopolistic rivalry—i.e., the intense battles between quasi-monopolistic firms over markets, product differentiation, and low cost position (but seldom encompassing price cutting in final consumption markets)—were often erroneously treated as if they exemplified Smithian competition. Orthodox figures such as Milton Friedman meanwhile continued to argue that oligopolistic rivalry was the very antithesis of competition. It is this confused situation that gives rise to the ambiguity of competition.60 As Munkirs stated in The Transformation of American Capitalism: “Within the business community and the economics profession, [John Maurice] Clark’s concept of ‘workable competition’ and Schumpeter’s ‘gales of creative destruction’ were christened ‘the new competition.’ Simply by assigning a new meaning to the term competition, the ill effects of monopolistically competitive market structures were defined out of existence. Yet the real world does exist.”61 In contrast, radical and Marxian thinkers were dedicated to a realistic historical outlook, and, as they had no reason to hold on to the notion of free competition where it contradicted such reality, continued to analyze the growing role of monopoly in the modern economic system. For economist Rudolf Hilferding in Austria and Germany, such monopolization was characterized as the growth of “finance capital.”62 Lenin, following Hilferding, wrote of what he called “the monopoly stage of capitalism”—seeing this as the basis of modern imperialism.63 The iconoclastic U.S. economist Thorstein Veblen developed an early theory of monopoly capitalism as part of his critique of “absentee ownership.”64 Within the terrain of critical economics from the 1930s to ‘70s, Kalecki and Josef Steindl developed theories of the widening degree of monopoly and its relation to maturity and stagnation.65 The purpose of Baran and Sweezy’s Monopoly Capital, which drew much of its inspiration from Kalecki and Steindl, was “to begin the process of systematically analyzing monopoly capitalism on the basis of the experience of the most developed monopoly capitalist society”—the United States.66 Likewise such works as Harry Magdoff’s Age of Imperialism (1969), James O’Connor’s The Fiscal Crisis of the State (1973), and Harry Braverman’s Labor and Monopoly Capital (1974) relied on the concept of monopoly capital.67 Our own line of inquiry in this book builds on such analyses, attempting to understand the current phase of monopoly-finance capital, in which stagnation and financialization have emerged as interrelated trends on a global scale. Here the paradox of an economy where financialization rather than capital accumulation has now become the motor of the system is explored.

#### Neoliberalism stifles innovation for public goods - otherwise people would’ve actually invested in IFR’s after Argonne demonstration

Palecek ‘9 (Mike, author, editor, “Capitalism Versus Science,” http://www.marxist.com/capitalism-versus-science.htm, AM)

We are constantly bombarded with the myth that capitalism drives innovation, technology, and scientific advancement. We are told that competition, combined with the profit motive, pushes science to new frontiers and gives big corporations incentive to invent new medicines, drugs, and treatments. The free market, we are told, is the greatest motivator for human advance. But in fact, the precise opposite is true. Patents, profits, and private ownership of the means of production are actually the greatest fetters science has known in recent history. Capitalism is holding back every aspect of human development, and science and technology is no exception. The most recent and blatant example of private ownership serving as a barrier to advancement can be found in the Ida fossil. Darwinius masillae is a 47 million year old lemur that was recently “discovered”. Anyone and everyone interested in evolution cheered at the unveiling of a transitional species, linking upper primates and lower mammals. Ida has forward-facing eyes, short limbs, and even opposable thumbs. What is even more remarkable is the stunning condition she was preserved in. This fossil is 95% complete. The outline of her fur is clearly visible and scientists have even been able to examine the contents of her stomach, determining that her last meal consisted of fruits, seeds, and leaves. Enthusiasts are flocking to New York’s Museum of Natural History to get a glimpse of the landmark fossil. So what does Ida have to do with capitalism? Well, she was actually unearthed in 1983 and has been held by a private collector ever since. The collector didn’t realize the significance of the fossil (not surprising since he is not a paleontologist) and so it just collected dust for 25 years. There is a large international market for fossils. Capitalism has reduced these treasures, which rightly belong to all of humanity, to mere commodities. Privately held fossils are regularly leased to museums so that they may be studied or displayed. Private fossil collections tour the world, where they can make money for their owners, instead of undergoing serious study. And countless rare specimens sit in the warehouses of investment companies, or the living rooms of collectors serving as nothing more than a conversation piece. It is impossible to know how many important fossils are sitting, waiting to be discovered in some millionaire’s office. The pharmaceutical industry is well known for price gouging and refusing to distribute medicines to those who can’t afford it. The lack of drugs to combat the AIDS pandemic, particularly in Africa, is enough to prove capitalism’s inability to distribute medicine to those in need. But what role does the profit motive play in developing new drugs? The big pharmaceuticals have an equally damning record in the research and development side of their industry. AIDS patients can pay tens of thousands of dollars per year for the medication they need to keep them alive. In 2003, when a new drug called Fuzeon was introduced, there was an outcry over the cost, which would hit patients with a bill of over $20,000 per year. Roche's chairman and chief executive, Franz Humer tried to justify the price tag, “We need to make a decent rate of return on our innovations. This is a major breakthrough therapy… I can't imagine a society that doesn't want that innovation to continue.” But the innovation that Mr. Humer speaks of is only half-hearted. Drug companies are not motivated by compassion; they are motivated by cash. To a drug company, a person with AIDS is not a patient, but a customer. The pharmaceutical industry has a financial incentive to make sure that these people are repeat-customers, consequently there is very little research being done to find a cure. Most research done by the private sector is centered on finding new anti-retroviral drugs - drugs that patients will have to continue taking for a lifetime. There has been a push to fund research for an AIDS vaccine and, more recently, an effective microbicide. However, the vast majority of this funding comes from government and non-profit groups. The pharmaceutical industry simply isn’t funding the research to tackle this pandemic. And why would they? No company on earth would fund research that is specifically designed to put them out of business. Similar problems arise in other areas of medical research. In the cancer field an extremely promising drug was discovered in early 2007. Researchers at the University of Alberta discovered that a simple molecule DCA can reactivate mitochondria in cancer cells, allowing them to die like normal cells. DCA was found to be extremely effective against many forms of cancer in the laboratory and shows promise for being an actual cure for cancer. DCA has been used for decades to treat people with mitochondria disorders. Its effects on the human body are therefore well known, making the development process much simpler. But clinical trials of DCA have been slowed by funding issues. DCA is not patented or patentable. Drug companies will not have the ability to make massive profits off the production of this drug, so they are not interested. Researchers have been forced to raise money themselves to fund their important work. Initial trials, on a small scale, are now under way and the preliminary results are very encouraging. But it has been two years since this breakthrough was made and serious study is only just getting underway. The U of A’s faculty of medicine has been forced to beg for money from government and non-profit organizations. To date, they have not received a single cent from a for-profit medical organization. The lack of research into potential non-patentable cures does not stop at DCA. There is an entire industry built up around so-called alternative natural remedies. Many people, this author included, are skeptical about the claims made by those that support alternative medicines. Richard Dawkins is quick to point out that “If a healing technique is demonstrated to have curative properties in properly controlled double-blind trials, it ceases to be alternative. It simply...becomes medicine.” But this black and white view does not take into account the limitations placed on science by capitalism. The refusal to fund the testing needed to verify non-patentable alternative medicines has two damaging effects. First, we are kept in the dark about potentially effective medications. And second, the modern-day snake oil salesmen that peddle false cures are given credibility by the few alternative treatments that do work. Technology and Industry The manufacturing industry in particular is supposed to be where capitalist innovation is in its element. We are told that competition between companies will lead to better products, lower prices, new technology and new innovation. But again, upon closer inspection we see private interests serving as more of a barrier than an enabler. Patents and trade secrets prevent new technologies from being developed. The oil industry in particular has a long history of purchasing patents, simply to prevent the products from ever coming to market. Competition can serve as a motivator for the development of new products. But as we have already seen above, it can also serve as a motivator to prevent new products from ever seeing the light of day. Companies will not only refuse to fund research for the development of a product that might hurt their industry, but in some cases they will go to extraordinary lengths to prevent anyone else from doing the same research. The 2006 documentary "Who Killed the Electric Car" goes into great detail about the role of big oil companies, auto manufacturers, and the US Federal Government in preventing an alternative vehicle from hitting the road. The filmmaker claims that auto companies would lose out if an electric vehicle was ever produced because of the simplicity of their maintenance. The replacement parts side of the auto industry would be decimated. Oil companies would see a dramatic reduction in the demand for their products as the world switched to electric vehicles. It is claimed that hydrogen fuel cells, which have very little chance of being developed into a useful technology, are used as a distraction from real alternatives. The film maker blasts the American government for directing research away from electric vehicles and towards hydrogen fuel cells. But the most damning accusations are against major oil companies and auto manufacturers. The film suggests that auto companies have sabotaged their own research into electric cars. What’s worse, is that oil companies have purchased the patents for NiMH batteries to prevent them from being used in electric vehicles. These are the same batteries that are used in laptop computers and large batteries of this type would make the electric vehicle possible. But Chevron maintains veto power over any licensing or use of NiMH battery technology. They continue to refuse to sell these batteries for research purposes. Some hybrid vehicles are now using NiMH batteries, but hybrid vehicles, while improving mileage, still rely on fossil fuels. While the purchasing of patents is an effective way of shelving new innovations, there are certainly other ways the capitalist system holds back research and development. The very nature of a system based on competition makes collaborative research impossible. Whether it be the pharmaceutical industry, the auto industry or any other, capitalism divides the best engineers and scientists among competing corporations. Anyone involved in research or product development is forced to sign a confidentiality agreement as a condition of employment. Not only are these people prevented from working together, they are not even allowed to compare their notes! Peer review is supposed to be an important piece of the scientific method. Often, major advancements are made, not by an individual group researchers, but by many groups of researchers. One team develops one piece of the puzzle, someone else discovers another and still another team of scientists puts all of the pieces together. How can a system based on competition foster such collaborative efforts? Simply stated, it can’t. The governments of the world clearly recognize this as a problem; every time they are met with a serious crisis, they throw their free-market ideals out the window and turn to the public sector. It has been argued many times that World War Two was won by nationalization and planning. Capitalism in Britain was essentially put on hold, so that the war effort could be effectively organized. In the United States, such large scale nationalization did not take place, but when it came to research and development, the private sector was not trusted to handle it on their own. Fearing that the Nazis were developing the atomic bomb, the US government initiated a massive public program to ensure they were the first to wield a weapon of mass destruction. The Manhattan project succeeded where private industry could not. At one point, over 130,000 people were working on the project. The world’s best and brightest were brought together into a massive collaborative undertaking. They discovered more about nuclear fission in the span of a few years, than they had in the decades since the first atom was split in 1919. Regardless of what one thinks of the atom bomb, this was doubtlessly one of the greatest scientific advancements of the 20th century. Science, technology and economic planning Sputnik 1 was the first Earth-orbiting artificial satellite. It was launched by the Soviet Union on 4 October 1957. Work by Gregory R Todd. The ultimate proof of capitalism’s hindrance of science and technology comes not from capitalism, but from the alternative. While the Soviet Union under Stalin was far from the ideal socialist society (something which we have explained extensively elsewhere), its history gives us valuable insight into the potential of a nationalized planned economy. In 1917 the Bolsheviks took control of a backwards, semi-feudal, third world country that had been ruined by the First World War. In a matter of decades, it was transformed into a leading super-power. The USSR would go on to be the first to put a satellite into orbit, the first to put a man in space, and the first to build a permanently manned outpost in space. Soviet scientists pushed the frontiers of knowledge, particularly in the areas of Mathematics, Astronomy, Nuclear Physics, Space Exploration and Chemistry. Many Soviet era scientists have been awarded Nobel prizes in various fields. These successes are particularly stunning, when one considers the state the country was in when capitalism was overthrown. How were such advancements possible? How did the Soviet Union go from having a population that was 90% illiterate, to having more scientists, doctors and engineers per capita than any other country on Earth in just a few decades? The superiority of the nationalized planned economy and the break from the madness of capitalism is the only explanation. The first step in this process was simply the recognition that science was a priority. Under capitalism, the ability of private companies to develop science and technology is limited by a narrow view of what is profitable. Companies do not plan to advance technology, they plan to build a marketable product and will only do what is necessary to bring that product to market. The Soviets immediately recognized the importance of the overall development of science and technology and linked it to the development of the country as a whole. This broad view allowed them to put substantial resources into all areas of study. Another vital component of their success was the massive expansion of education. By abolishing private schools and providing free education at all levels, individuals in the population were able to meet their potential. A citizen could continue their studies as long as they were capable. By contrast, even many advanced capitalist countries have been unable to eliminate illiteracy today, let alone open up university education to all who are able. Under capitalism, massive financial barriers are placed in front of students, which prevent large portions of the population from reaching their potential. When half of the world’s population is forced to live on less than two dollars a day, we can only conclude that massive reserves of human talent are being wasted. The soviet government immediately tore down all the barriers on science that strangle innovation within the capitalist system. Patents, trade secrets, and private industry were eliminated. This allowed for more collaborative research across fields and a free flow of information between institutions. Religious prejudices that had long held back rational study were pushed aside. One only has to look at the ban on stem-cell research under the Bush regime to see the negative effects religious bigotry can have on science. But it wasn’t all good news under Stalinism. Just as the bureaucracy hindered the development of the economy, it also hindered certain areas of study. While the many barriers of capitalism were broken down, in some cases new ones were erected as the direction of scientific study was subjugated to the needs and desires of the bureaucracy. In the most extreme cases, certain fields of study were outlawed entirely and leading scientists were arrested and sent to labour camps in Siberia. One of the most outrageous cases was Stalin’s contempt for chromosomal genetics. The study of genetics was banned and several prominent geneticists, including Agol, Levit and Nadson were executed. Nikolai Vavilov, one of the Soviet Union’s great geneticists was sent to a labour camp, where he died in 1943. This ban wasn’t overturned until the mid 1960s. These crimes were not crimes of socialism, but of Stalinism. Under a democratically planned economy, there would be no reason for such atrocities. Today, it is the task of those interested in science and socialism to learn the lessons of history. Science is being held back by private interests and industry. A lack of resources for education and research keep doors closed to young aspiring minds. Religious interference locks science in a cage and declares important fields of study off-limits. The chains of the free-market prevent meaningful research from being done. Private companies refuse to let new technologies out of their back rooms. Private collectors hold unique and important specimens for their own personal amusement. Potential cures for deadly diseases are tossed aside to clear the way for research into the latest drug to cure erectile dysfunction. This is madness. Capitalism does not drive innovation, but hinders it at every step. Humanity today is being held back by an economic system designed to enslave the majority for the benefit of a minority. Every aspect of human development is hindered by the erroneously-named free-market. With the development of computers, the internet and new technologies, humanity stands at the doorstep of a bright future of scientific advancement and prosperity. We are learning more and more about every aspect of our existence. What was once impossible, is now tangible. What was once a mystery, is now understood. What was once veiled, is now in plain sight. The advancement of scientific knowledge will one day put even the farthest reaches of the universe at our fingertips. The only thing that stands in our way is capitalism.