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#### Energy production refers to the extraction, conversion, and distribution of energy – excludes R&D

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

3. SUBSIDIES THROUGH THE FUEL CYCLE

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

3.1 Preproduction

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

3.1.1 Research and Development

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

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

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

3.1.2 Resource Location

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

3.2 Production

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

3.2.1 Extraction of Energy Resources

General procedures for leasing access to energy minerals on public lands and more general subsidies for promoting energy extraction both are important areas to evaluate. Extraction-related subsidies are most common for oil and gas production, although they also support nuclear fission (due to uranium mining), geothermal, and coal.

3.2.1.1 Accessing Publicly Owned Energy Resources Terms of access for energy minerals on public lands can be a source of enormous subsidies. In countries where leases or concessions are granted through graft rather than competitive bidding, wealth transfers worth billions of dollars can occur. Although there are not good statistics on the losses, the problem appears to be large. Oxfam America finds that states most dependent on oil tend to have very low Human Development Index (HDI) rankings. The HDI, developed by the UN Development Program, ranks states according to a combined measure of income, health, and education. Transparency International finds strong linkages between large mining and petroleum sectors as well as elevated levels of bribery and corruption. Low-cost access to energy minerals also tends to remove the incentive for careful management because profits can be had even with inefficient operation. Lease operation can also generate subsidies such as when self-reported royalties are calculated improperly. The Project on Government Oversight has documented state and federal court awards in excess of $10 billion in response to litigation in the United States over oil and gas royalty underpayments.

3.2.1.2 Promoting Extraction Activities Policies to reduce the cost of extraction are widespread and often take the form of tax or loan subsidies or royalty concessions. They are found at both the national and state levels. Particular market niches may be targeted, from geographical (e.g., deep sea recovery of oil, timbering in a particular forest), to technological (e.g., tax breaks for more advanced oil drilling or coal gasification), to life cycle related (e.g., lower royalties on idle wells that are restarted). In some cases, baseline tax policy may be applied by firms in creative ways to generate large subsidies. U.S.-based multinationals receive a tax credit for foreign taxes paid to avoid double taxation of foreign income. Yet in many oil-producing regions with low or no corporate income taxes, foreign governments have reclassified royalty payments into corporate taxes, generating a tax write-off estimated by Koplow and Martin at between $0.5 billion and $1.1 billion annually.

However, many subsidies to extraction are not restricted to particular market niches. Percentage depletion allowances in the United States allow most firms mining oil, gas, uranium, or coal to deduct more costs from their taxable income than they have actually incurred. Accelerated write-offs of extraction-related investments are also common. For example, many multiyear costs in the U.S. oil and gas industry may be deducted immediately (ex-pensed) rather than over the useful lives of the investments. All of these special provisions tend to reduce the effective tax rate on benefiting energy industries. Data collected by the Energy Information Administration (EIA) suggest that the major U.S. energy firms paid federal taxes that were one-quarter to one-half the prevailing nominal rates between 1977 and 1995.

3.2.2 Conversion

Raw energy materials normally go through some conversion prior to consumption. Crude oil is refined into a wide range of specialized products such as gasoline and heating oil. Coal may be pulverized or cleaned prior to use. A combination of heat and machinery converts raw fuels (including wind and solar) into electricity. Common government supports to the conversion stage include capital subsidies, production tax credits or purchase requirements, and exemptions from appropriate protections for environmental quality, worker health, and accident risks. Because this third category affects multiple phases of the fuel cycle, it is addressed in a separate section.

3.2.2.1 Capital Subsidies Subsidies to capital formation, usually through accelerated depreciation or investment tax credits, are common. Although applicable to multiple economic sectors, they are often of great benefit to energy producers. This is due both to their relative capital intensity and to provisions in the tax code that grant special accelerated depreciation schedules for energy-related assets. For example, in the United States, three sectors of relevance to energy—electric light and power, gas facilities, and mining, shafts, and wells—have allow- able depreciation schedules that are 28, 45, and 44% faster, respectively, than the actual economic depreciation of their assets according to data compiled by the U.S. Treasury. Capital subsidies are of greatest benefit to large-scale generation assets with long construction times (nuclear, hydro, and coal) and are of greatest detriment to energy resources that conserve capital (most prominently energy conservation).

3.2.2.2 Tax Credits/Purchase Mandates A second class of subsidies to the conversion stage are tax credits or purchase mandates for certain types of energy. These subsidies occur at both the federal and the state/provincial levels and most often support emerging power sources such as solar, wind, and biomass-based electricity. Whereas many of the subsidies to conventional power sources are expen- sive regardless of whether the energy investments ultimately succeed, the tax credits and purchase mandates tend to be more efficient. For example, federal tax credits for wind energy in the United States cost taxpayers nothing unless a private investor is successful in getting a wind plant operating. If the plant goes offline, so too do the credits. Renewable portfolio standards (RPSs), a common form of purchase mandates adopted by many U.S. states, are even more efficient. In addition to providing no subsidy unless the power is delivered, RPSs often compete eligible power sources against each other, driving down the unit subsidy as technologies improve. Despite their benefits, these approaches have run into some political problems. Specifically, as the subsidies have grown, so too has lobbying pressure to expand the range of eligible sources. Federal tax credits now include poultry waste, a great benefit to the handful of very large chicken processors. At the state level, unsustainable biomass sources are sometimes included, as are waste-to-energy and landfill gas systems. Thus, although energy diversification goals are still being met, the supply is not necessarily renewable or particularly clean.

3.2.3 Transportation and Distribution

Fuel cycles may involve multiple transportation steps, including movement of raw fuels to point of refining, refined fuels to the point of consumption, and movement of wastes to disposal sites. Relevant modes of transport include road, rail, water, pipelines, and transmission lines.

Although specific energy resources vary widely in their transport intensity and in the modes of transportation and distribution on which they rely (Table IV), there are some common themes. Government construction, maintenance, and operation of transportation infrastructure frequently give rise to subsidies when user fees do not cover costs. These subsidies are often understated because municipalities might not properly cost the resources being consumed. For example, tax exemptions on transportation bonds used to finance roads are routinely ignored, as are the free grants of rights-of-ways for rail, road, pipeline, and transmission links. So too is the opportunity cost of land covered by roadways and parking facilities. Although this space occupies 1.7, 2.1, and 3.5% of the total land area in the United States, Germany, and Japan, respectively, Todd Litman of the Victoria Transport Policy Institute noted that no property tax is paid on the vast majority of this space. This understates the direct costs of the infrastructure and the rights to use it.

Cross-subsidies between user groups may further distort relative prices. Large trucks pay less in highway fees than the damage they cause, generating an incremental subsidy to deliveries of refined fuels such as gasoline. Deep-berth ships such as large oil tankers may be the primary drivers of channel- or port-deepening projects, yet they often contribute to costs based only on volume of shipments. In the electricity sector, transmission tariffs may represent broad averages of the cost of service rather than rising as the distance traveled and density of users decline. By delivering subsidized electricity to remote users, transmission cross-subsidies mask the cost of line maintenance and new construction. This can destroy niche markets in which off-grid technologies (often renewable) would otherwise have been able to compete. Cross-subsidies between peak pricing and low demand periods are also common in electricity markets because real-time metering is not widely used at the retail level. This can dampen retail investments in demand-side management.

Power sources such as wind and solar require no shipment of input fuels or waste. Improved energy efficiency and some off-grid technologies require no transmission grid either. As a result, subsidies to energy transport can increase the barriers to renewable energy and efficiency. A major U.S. study conducted by Cone and colleagues in 1978 found that an estimated $15.2 billion in federal money subsidized transport of U.S. oil stocks between 1950 and 1977. The policies generating these subsidies have continued during the ensuing quarter-century or so.

3.2.4 Accident Risks

A handful of energy activities have the potential to cause catastrophic harm, including large oil spills, dam failures, and nuclear accidents. Many governments cap, shift, or ignore the potential liabilities from these activities. Functioning insurance markets and litigation would normally help to drive up prices for the more dangerous energy sources or particularly negligent operators. Government policies that mask these signals impede substitution to safer alternatives.

3.2.4.1 Large Oil Spills Within the United States, the Oil Pollution Act of 1990 stipulates use of commercial insurance for a first tier of insurance. A public trust fund financed by levies on oil sales provides supplemental coverage, although payments out of the fund are capped at $1 billion per incident. Based on empirical assessments of spill cleanup costs by Anderson and Talley, at least five spills over the past three decades or so would have exceeded the $1 billion cap, although most spills will be adequately covered. Internationally, the 1992 Civil Liability Convention governs liability for oil spills, also using a two-tier system. Insurance held by the vessel owner provides the first tier. Levies on cargo owners feeds the second tier, with receipts held in the International Oil Pollution Compensation Fund. The maximum compensation available from both tiers is roughly $174 million, a level shown to be insufficient by spills occurring in both 1997 and 1999. Although the caps are likely to be raised by 50%, Alfred Popp, chairman of the group working on the latest rounds of reforms, noted that concerns about liability shortfalls persist. The subsidy value of these caps is not known.

3.2.4.2 Dam Failures Many activities that would pose a very large potential risk if accident scenarios materialized rely on a system of strict liability. Strict liability focuses only on magnitude of the potential damages rather than on the intent, negligence, or degree of care of the operator. Although the failure of a large dam near a populated area can cause catastrophic loss of life, assurance for such potential liabilities is poorly characterized. Although loss of life from a dam failure will likely trigger widespread litigation, the rules of that litigation are predominantly set at the state level. Analysis by Denis Binder for the Association of State Dam Safety Officials indicates that a slight majority of states reject strict liability in dam failures. Furthermore, the piecemeal approach to coverage within the United States makes it difficult to evaluate whether existing coverages are adequate. Poor characterization of the risks extends to the international arena as well. To the extent that liability insurance is not in place or is too low, subsidies to hydroelectricity would result.

3.2.4.3 Nuclear Accidents Nuclear accidents can expose large populations to dangerous levels of radioactivity, triggering enormous liabilities for the firm responsible. Caps on nuclear liability are common throughout the world. The United States, under the Price-Anderson Act, has a two-tier system of indemnification: a first tier of commercial insurance ($300 million per reactor) plus a second pooled tier (maximum of $83.9 million per reactor) funded by retroactive assessments on all reactors in case any reactor has an accident. Japanese nuclear operators must provide financial security of $520 million; damages above that amount will be paid by the government. In China, the limit is roughly $36 million. In Ukraine, it is roughly $70 million.

International efforts to standardize liability under the Convention on Supplementary Compensation for Nuclear Damage would establish minimum liability coverage worldwide, although for many countries this would also constitute the maximum. Under the convention, operators would directly face a first tier of liability. A country fund would provide secondary coverage. Because country payments rely on a sovereign guaranty rather than a prefunded instrument such as a trust fund, they may be at some risk.

Aggregate coverage under the U.S. system is estimated at roughly $9.2 billion per accident, although most of this is paid out over nearly 9 years by utilities, so the present value of the coverage is substantially lower. Liability levels established under the convention would provide less than $900 million per accident. Loss statistics from the Insurance Services Office and from the Disaster Insurance Information Office provide some context. Since 1950, there have been approximately 20 hurricanes with adjusted damages in excess of the convention cap, and both Hurricane Andrew and the Northridge earthquake had damages that exceeded the Price-Anderson cap even before adjusting retroactive premiums to present values.

Subsidies arise when government caps fall below expected damages from an incident and caps under both Price-Anderson and the convention are likely to do so. Damages above that level are, in effect, shifted to the state or to the affected population. Heyes estimated that the subsidy to reactors under Price-Anderson ranges between 2 and 3 cents per kilowatt-hour, a value that would roughly double the operating costs of nuclear plants. In addition, there are incremental subsidies associated with indemnification for nuclear contractors and government-owned facilities. Because other countries have lower liability caps and weaker inspection regimes, they likely have higher liability subsidies as well.

3.3. CONSUMPTION

Government support for energy consumption falls into three main categories: poverty alleviation, economy-wide below-market pricing, and targeted subsidies for certain classes of consumers.

3.3.1 Poverty Alleviation

Subsidies to heat and power for poorer citizens are common, frequently in the form of a lump-sum grant or reduced cost access to municipal resources. Often consumption oriented, these subsidies may miss opportunities to implement conservation measures among the target populations. Targeting can be a problem as well, with funds not reaching the groups most in need. According to the International Energy Agency (IEA), the poorest citizens often rely on noncommercial fuels such as dung (biomass comprises as much as 80% of the energy market in rural countries with a high reliance on subsistence agriculture) or live outside the reach of the subsidized electrical grid.

3.3.2 General Subsidies

Nations with large domestic energy industries sometimes institute policies that keep local prices well below world levels. These subsidies may protect antiquated energy-consuming industries that otherwise would be unable to compete, or they may serve as ''rewards'' to the electorate for supporting a particular official. For example, price gap data for Venezuela and Iran compiled by the Organization for Economic Cooperation and Development (OECD) and IEA show that these large oil producers heavily subsidize both industrial and residential use of petroleum. Subsidies are also common in many service areas close to large municipal hydroelectric generating stations. For example, rates to customers of the Power Marketing Administration dams in the United States were long heavily subsidized. Although the quantities of power or oil flowing through these regions make these subsidies seem costless, they are not. Domestic sales at subsidized rates forgo energy export revenues, increase local pollution, and contribute to a production base that is increasingly noncompetitive with that deployed elsewhere in the world.

3.3.3 Targeted Exemptions

Most OECD countries exempt coal and heavy fuel oils used in industry, as well as aviation fuels used on international flights, from the baseline levies on energy. Excise tax rates on coal used in the industrial or power sector are often lower than those on much cleaner natural gas. The OECD noted that these exemptions ''effectively mean that a large proportion of total carbon emissions in OECD countries is untaxed,'' generating weaker incentives to adopt even low-cost abatement options.

3.4 Postproduction Activities

Energy production and conversion require large facilities, often located in remote or pristine environments. Postoperational cleanup can be complex. Decommissioning addresses removal of physical infrastructure, whereas remediation and reclamation address problems with land and water. For markets to make accurate decisions about the relative cost of energy resources, the cost of these postproduction activities must be included in energy prices during the operating life of the facility in much the same way that the cost of an employee pension would be. Indeed, failure to accrue funds for postclosure costs during operations would make public subsidy likely given that revenues often drop to zero on plant closure.

3.4.1 Decommissioning

Decommissioning subsidies arise when infrastructure removal costs are ignored or underestimated or when accrued funds are mismanaged. Costs can be significant at large-scale energy installations such as hydroelectric dams and oil refineries. Where installations are remote (e.g., offshore oil rigs), radioactive (e.g., nuclear plants), or widely dispersed (e.g., gathering pipelines), costs per unit of capacity can be particularly high. Requirements for long-term environmental or safety monitoring (e.g., nuclear plants and some mines) can drive costs up further.

Pipelines and hydroelectric dams provide examples of costs being ignored entirely. Koplow and Martin made inquiries to many U.S. officials regarding pipeline closure. They found that although there are regulations governing proper abandonment, advance funding of closures was not required. The risks of insolvency appeared to be fairly high, especially for the smaller companies that often own older gathering pipelines. Regarding dams, the U.S. Federal Energy Regulatory Commission indicated in a 1994 policy statement that it will ''not generically impose decommissioning funding requirements on licensees'' but rather will stipulate them on a case-by-case basis at the time of relicensing. According to Andrew Fahlund of American Rivers, this policy has been implemented such that if a ''dam owner is too poor, it is too burdensome to require them to maintain a fund, and if they are rich, they will have plenty of money available for such an eventuality.''

Underestimating decommissioning requirements is of great concern with nuclear plants. IEA data indicate that the anticipated cost per unit of power capacity can vary by a factor of 10 across plants. IEA multicountry data suggest median decommissioning values of between 21 and 37% of the overnight capital cost (i.e., before financing) to build the plant. If funds are not properly accumulated during the plant's operating life, taxpayer burdens will be large. Inadequate provision for closure is also apparent in the oil and gas sector. Koplow and Martin found shortfalls in funding to plug and abandon oil wells in the United States approaching $600 million per year, of which approximately 75% represented insufficient bonding at wells still in operation.

Public bailouts can also be required if accrued funds for postclosure activities are lost through negligence, bankruptcy, or theft. If funds are retained within the firm, bankruptcy is a significant risk, especially given the 40- to 60-year time frame between fund collection and use. Increased segregation of each energy asset into its own company (now becoming the norm in the U.S. nuclear industry) greatly increases this risk. Loss through negligence is less likely where regulations preclude speculative investing. Nuclear decommissioning trusts within the United States are held outside the firm and are subject to conservative investment requirements to reduce the likelihood of loss.

3.4.2 Reclamation and Remediation

Small subsidies to site reclamation and remediation may arise through government-sponsored research into remediation technologies or through regulatory oversight of extraction activities that are not recovered via user fees. Much larger subsidies are associated with remediation of government-owned energy-related installations or where reclamation bonding has been insufficient to pay for the damage caused by private operators. James Boyd at Resources for the Future pointed to widespread inadequacy of reclamation bonding levels. For example, in the U.S. states of Indiana, Kentucky, and Tennessee, reclamation of coal mine sites is below 20%. Reclamation bond levels have generally been inadequate. Estimated liability for high priority (public health and safety concerns) coal mine remediation in the United States is $6.6 billion, according to the U.S. Office of Surface Mining Reclamation and Enforcement. Many mining regions around the world have unreliable, incomplete, or nonexistent data on abandoned mines and their associated costs. These shortfalls may be made up by general tax revenues. However, more often, resource damage is not mitigated and continuing environ-mental releases are not controlled. Spending to address environmental concerns at nuclear energy-related infrastructure owned by the U.S. government has run approximately $500 million per year, much of which is paid by general taxpayers.

3.5 Energy Externalities

External costs of energy production and consumption can include pollution, land degradation, health impairments, congestion, and energy security. This article differentiates between two types of subsidies. The first involves existing government spending to address recognized problems associated with particular energy resources. Included here would be public funding to protect energy supplies and assets; public absorption of energy worker health care costs; and/or public subsidies to pollution control or abatement. Because this spending involves actual outlays, it is counted as a fiscal subsidy. A second class of policies involves loopholes in regulatory controls that allow additional damages to human health or the environment to continue without compensation. This second group is often difficult to quantify and is segregated as an externality.

3.5.1 Energy Security Energy plays a central role in industrialized economies, and supply disruptions can trigger widespread economic dislocations. Geopolitical problems, accidents, and terrorism all are potential triggers. Lovins and Lovins identified a handful of factors that drive security concerns. These include long distribution channels, geographically concentrated delivery or production systems, interconnected systems that can spread failures, specialized labor and control systems to operate capital-intensive facilities that are very difficult to replace, and dangerous materials that can elevate the severity of any breach.

Energy security strategies include protection of energy-related assets and supply routes, stockpiling of vulnerable resources, and supply diversification. Where costs of these responses are borne by the general public rather than by the appropriate energy producers and/or consumers, the market incentive to build a more resilient, decentralized, and diversified supply system is reduced. Security subsidies tend to benefit oil the most, with particularly high transfers to imported oil from unstable regions such as the Persian Gulf. Additional beneficiaries are centralized electricity and natural gas. Off-grid power and conservation are the sources most disadvantaged. Subsidies to protecting energy installations and stockpiling are explored in detail in the following subsections.

3.5.1.1 Protection of Assets and Supply Links

The larger the energy installation, the greater the target and the bigger the dislocation that an attack or accident would cause. Defending energy-related assets is an increasing concern of governments around the world. Pipeline defense is listed as its own objective within Georgia s defense and security strategy. The United States has become involved with training the Colombian military to defend oil pipelines in that country, pushing for funding of $98 million to support the effort. Within the United States, core assets include the Trans-Alaska Pipeline System (TAPS), through which nearly 25% of total U.S. crude production flows, and nuclear plants. In response to inquiries from Koplow and Martin, Alaskan and federal officials said that no public funds were spent ensuring TAPS security. Nonetheless, the military has historically conducted training and planning exercises around the pipeline. In the nuclear sector, increased public subsidies have come through rising deployment of state-level security or National Guard troops around plants during periods of high terrorist alerts. However, surveys of nuclear plant workers by the Project on Government Oversight reveal employee concerns that training and spending levels are still insufficient. Although these anecdotes indicate that public expenditures in the area of protecting energy-related assets are likely large, data to quantify the subsidies are generally unavailable.

The costs of defending oil shipments through the Persian Gulf is an exception. As one of three central missions for the U.S. military in the region, there have been multiple efforts to value the subsidy to oil. Koplow and Martin reviewed eight historical studies of these costs and found general agreement that this presence is of great benefit to oil supply security. Disagreements centered on cost attribution. Some assessments attributed an extremely small portion of the military cost to oil, arguing that the same basic force structure would be needed for the other missions. Koplow and Martin pointed out that equivalent arguments could be made for each mission area given that the common costs of the vessels and personnel are what are most expensive.

They argued instead for treating the military presence through the lens of joint costs and allocating a reasonable portion (in this case, one-third) to the oil sector. This approach yields a subsidy to the oil sector in the range of $11.1 billion to $27.4 billion per year (roughly $1.65-$3.65/barrel originating from the region), depending on which of the detailed costing studies are used. Although funded by U.S. taxpayers, the benefits accrue to oil consumers in Europe and Japan as well. Recovering this cost via an excise fee on shipments would help to encourage increased supply diversification.

3.5.1.2 Stockpiling Petroleum has been the main focus of stockpiling efforts given its importance to world transport and military readiness. Under the terms of the IEA, oil-importing member states are required to hold stocks equal to 90 days of the previous year's net oil imports as a buffer against short-term supply disruptions. Subsidies arise if the costs of stockpiling are borne by taxpayers rather than by oil consumers. Relevant expenses include constructing and operating the stockpiles, interest costs on oil inventories and infrastructure, and any payments to third parties for nongovernmental stockpiling (two-thirds of IEA-mandated stocks are held commercially).

Buffer stocks for oil within the United States are held within the publicly owned Strategic Petroleum Reserve (SPR). The SPR has incomplete cost accounting, most prominently ignoring the interest costs associated with more than $16 billion it has spent to purchase its oil inventory since the reserve's inception. Private firms must finance all working capital, including inventory, in their operations, and cost savings from reducing inventory levels can be large. Public oil stockpiles are no different; capital tied up in the enterprise much be borrowed, at interest, through Treasury bond markets. Analysis by Koplow and Martin for 1995 estimated annual subsidies to the SPR at between $1.7 billion and $6.l billion, depending on whether unpaid interest on oil inventories is compounded. Because carrying costs are sensitive to the cost of capital, declining interest rates during recent years mean that current SPR subsidies will be lower than they were during the mid-1990s. Although the details of stockpile financing in other countries are not easy to discern (the IEA collects data only on physical flows, not on financial flows), some countries do recover at least a portion of their stockpiling costs from consumers. These include Japan, France, Germany, Korea, and Taiwan.

Subsidies to stockpiles slow transition to less vulnerable, more diversified supplies. Formal tracking of stockpile finance by the IEA, as well as the formalization of accounting rules for calculating costs, would leverage market forces for improved supply security.

3.5.2 Environmental, Health, and Safety Externalities

Externalities involve damages associated with energy production or use that are imposed on surrounding populations or ecosystems without compensation. These may include environmental damage, materials damage, human health effects, and nuisance factors such as bad smells and loud noises. Worker health is sometimes not counted as an externality under the argument that workers are compensated for the added risks of their jobs through higher wages. Such a conclusion requires that workers have some degree of choice in whether or not to accept jobs and that employers can be taken to task retroactively for gross negligence. This is not the case in many countries around the world. As a result, it is reasonable to consider as subsidies high levels of occupational illness, especially when the costs of maintaining those workers falls on the general taxpayers.

Governments are routinely involved with efforts to make certain energy-related activities safer for workers. This is most prominent regarding coal and nuclear fuel cycles, where dedicated government agencies exist to inspect and educate mines and production sites. If these costs are not paid entirely by the producers or consumers of the affected energy type, subsidies ensue. Public responsibility for workers' health care and/or pension costs also constitute subsidies. This has been quite common in the area of coal. For example, government payments to U.S. coal miners afflicted with black lung have exceeded $30 billion. Black lung levels are now rising (or are being better documented) in other countries such as Russia, Ukraine, and China. Coal mine fatalities continue at extremely high levels in many of these countries as well.

#### Vote negative

#### Limits---there are endless obscure energy technologies the aff could develop---overstretches our research burden and undermines preparedness for all debates---err neg because the terms incentives and restrictions serve no limiting function

#### Ground---all disads are based on directly increasing the actual production of energy---R&D lets the aff skirt links because they don’t guarantee any energy is actually produced

### K

#### Expanding energy production is caused by an ontology that subordinates nature to manipulation---that obscures consumption that’s the root cause of the case

Gary Backhaus 9 Phil @ Loyola Maryland, "Automobility: Global Warming as Symptomatology" April 2009, [www.mdpi.com/2071-1050/1/2/187](http://www.mdpi.com/2071-1050/1/2/187)

Gore unwittingly bases his exposition on unwarranted epistemological assumptions that comprise an ordering function in the received modern liberal worldview, which has enjoyed hegemony since the eighteenth-century bourgeois revolutions. His delineation of the modalities of morality, sociality, politics, economics, and technology implies that they are separate domains that are then linked through thought and forged together by cultural relations, which is an ideology based in the doctrine of atomistic association. Gore does not recognize a holistic interrelation whereby each of these modalities is already pregnant with the others, e.g., that some technology or other already implicates political, economic, social, and moral processes and structures in its very essence/Being. Gore's assumed doctrine of functional neutrality, i.e., "it depends on how you use it", carries some sense of correctness in that forms of implementation do matter within the overall cultural context, but the doctrine of technological neutrality remains dangerously naive. For example, with his concern for the lack of community, Gore seems not to recognize that certain forms of technology may indeed undermine the very possibility of community, and moreover by exacerbating this undermining in a free market system where people can basically buy and sell what they want, the proliferation of such community-disintegrative technology may destroy the possibility for the political will that he so cherishes. No such radical and critical reflection enters his discussions. The major consequence of his assumed modern epistemological atomism (in this case partitioned forms constitutive of a culture) is that Gore's evaluation of a need for cultural change and his proposed solutions to the environmental crisis do not go deep and far enough, if indeed we are to hold ourselves to the goal of sustainability. The concept-formation of sustainability is not compatible with an atomistic epistemology through which problem-solving directives issue forth only as the shallow implementations of instrumental rationality. My treatment of automobility as the fundamental obstacle in the way of developing sustainable forms of life involves a holistic ontological approach that uncovers the way of Being from which the auto¬mobile organization of life is its spatial concretization. Martin Heidegger's radical ontological hermeneutics can provide a clearing that supports the concept formation of sustainability by starting with a critical investigation into the restructuring matrix of automobility, the spatial moment of a modern technological way of life that is the anthropogenic source for global warming, or what we now call climate change.

In his discussion of technology and science, Gore writes of advances or progress and their unintended side-effects [1]. This way of speaking already fosters human-centered chauvinism in the sense that human intentions are taken as the hegemonic constitutive measure, while the unintended phenomena accompanying or associated with human activities are glitches in a humanly designed world, as if the earth/world does not have constitutive efficacy and as if human expressivities are not simply one set of agencies in a complex context of many agencies [2]. In addition, the doctrine of side-effects does not take into account that all cultural objectivations of human expressivities exhibit their own Being, incommensurate, to some degree or another, with our intentions [3]. Moreover, this received hubris of modern scientific ideology, "the control and elimination of side-effects", leads Gore to a sanguine position concerning the solving of the climate crisis—that we can tackle the crisis technologically through a new political will and with the recognition that we need not choose between environmental and economic health. His related enthusiastic adoption of the information age and computer technology is indicative of this fundamental belief in so-called technological progress [4].

On the issue of economics, many environmentalists that develop a doctrine of sustainability do not agree with him [5]. We will indeed have to continue to choose between environmental and economic health as long as we support an economic system that requires growth (e.g., surplus value and a continued consumerism) and we choose growth-oriented solutions (e.g., green products with green economic incentives as the way to eliminate unwanted side-effects are to be counted as a shallow approach). Green technologies contextualized in an economic system of growth remain impotent when considering the strident goal of developing viable policies of sustainability. Sustainability requires a new contextualization of human intentions whereby unintended results from continued growth are not a cue for a greater manipulation of the natural world, but less. In the cases just cited we see that intentions involving technological mastery and environmentalism as a function of economics must be called into question. Thus, automobility, as the major factor of global warming and other environmental problems, is treated in a way that calls for the continual hegemony of economic concerns, as green machines and vehicles are supposed to save us from our environmental degradation while economic expansion continues on its same course.

#### That results in destructive practices that make their impacts inevitable---ensures serial policy failure and extinction

Gary Backhaus 9 Phil @ Loyola Maryland, "Automobility: Global Warming as Symptomatology" April 2009, [www.mdpi.com/2071-1050/1/2/187](http://www.mdpi.com/2071-1050/1/2/187)

Many environmental thinkers have questioned the presupposed tenets, e.g., the doctrine of linear progress, on which Gore bases his belief in the success of a scientific/technological solution to global warming and environmental problems in general. "Professional ecologists such as Frank Egler have countered that 'Nature is not only more complex than we think, it is more complex than we can think [6]'". I believe that a commitment to sustainability must recognize limits to human cognition and thus must take a radically different approach. This does not mean that science and technology have reduced roles, but that their roles must be based on a new attitude of respectful humility [7]. The manipulation and appropriation of nature must no longer be our technological goals. Rather, we should be modifying our own societal/cultural forms, which include science and technology, to live in greater harmony within the context of natural conditions and agencies. Sciences and technologies that apprehend those conditions can serve to help us become much more respectful of natural conditions. Neither science nor technology needs to challenge natural processes; it rather needs to challenge us to live more responsibly. The chauvinist worldview with its doctrine of reactive reparation when it comes to environmental degradation, no longer can be promoted as a viable behavioral process. We can no longer appropriate nature and then deal with the so called "unintended side-effects"—a dealing that amounts to a continual re-engineering of nature, which leads to consequences that dangerously exceed our powers of forecasting. But a new pro-activity conducive to sustainability should be more focused on changing our relation to nature, not so much on changing nature. Gore's critical analysis merely focuses on wiser uses of technology; he does not call into question radically enough the doctrine of forcing nature to serve us and does not clearly advocate a science and technology that serves nature as first priority. This can be accomplished only by fundamental transformations in human interpretative praxes. In practical language the transformation advocated here means that we dramatically minimize our ecological footprints, which entails new geo- economic/political/social spatial productions, concerning which science and technology play a vital role. Cultural transformation for sustainability requires a new epistemological basis that recognizes the ontological structure of sustainable ecology as having priority over human intentions such that we eliminate certain of our expressivities and objectivations, rather than continuing with the manipulation of nature to accommodate our intentions— a move away from anthropocentric hegemony to a model of human contextualization that leads away from a worldview that presupposes the culture/nature dualism.

Bio-regionalists have called for new and radical political changes such as the re-construction of political boundaries to be correlative with biospheric boundaries so that the political domain becomes interfused with the natural domain in an organic development pattern [8]. Forms of human life then are organized in context with natural ecologies—an interrelation for mutual benefit. This ecological rootedness to a place, to its place-character or genius loci as the key to ecological bounded praxes, must be accomplished without the fascist tendencies of race/nation imperialisms of the past, which are avoidable through the political tactics of decentralization and networking and the value of diversity within local-bounds. Gore champions the democratic process but really offers no proposals that would restructure political bodies in a way that would support the implementation of sustainability. A society that culturally and politically does not attune its practices to place-bound ecologies and their interrelations does not merit the accolade of supporting sustainability. As I will show, to call into question the geography of automobility requires thinking about how the task to de-structure automobility might show us how to re-structure life toward the goal of sustainability.

There is still another point germane to the issue of automobility which shows the non-viability of Gore's shallow ecology. Peak oil theorists are issuing very serious warnings concerning non-renewable energy consumption [9]. Hypothetically, if we could immediately solve the global warming (climate change) problem in Gore's shallow, technological sense, then we would nevertheless still be in the most utterly grave circumstances concerning energy. Even if it were possible to solve the problem of global warming with the use of alternative energy sources, there still would remain an energy crisis both in terms of shortages and implementations that carry many unwanted so-called side-effects. A policy of sustainability would entail tackling the energy crisis directly, not because of its link to the global warming problem; sustainability entails more dramatic measures, necessary curbs on modern excesses promoted by neo-liberal economic globalization and the social structures that it constructs, concerning which Gore's sanguine liberal-based ideology is not prepared to face.

My fundamental criticism, however, is that Gore sees global warming as the problem rather than as a symptom of a much deeper flaw/problematic in culture, and this delimits his thinking to remain within a shallow ecological viewpoint, foiling an analysis that would develop toward a viable sustainability. His focus on global warming limits his solution to the environmental crisis to a shallow technological fix. Sure he advocates a change in forms of life, but these are merely a function of, or the requirement for, the implementation of technologies that will save us and the planet. In this way his thinking remains within the modern scientistic attitude that in a deep or foundational sense has led to the predicament in which we find ourselves [10]. The efforts to dominate nature, dominations implemented through modern technological praxes, have led to drastic changes to the planet as a whole in an extremely short time. We now see that those changes, based on considering our needs only (the mentality of natural resources to be ordered about on our terms), are destroying the life of, and on, the planet.

#### This requires a rejection of their symptom-focus in favor of an ontological reconfiguration of our relationship to nature that does not render it a standing reserve

Gary Backhaus 9 Phil @ Loyola Maryland, "Automobility: Global Warming as Symptomatology" April 2009, [www.mdpi.com/2071-1050/1/2/187](http://www.mdpi.com/2071-1050/1/2/187)

The twentieth-century philosopher Martin Heidegger provides an approach that allows us to transcend the ideological-bound techno-rationalization represented in Gore's analysis of the problem of global warming so that we engage a more fundamental analysis that uncovers deeper interpretive roots. A more reflective total approach (versus the instrumental rationality of problem-solving) is necessary to inform the development of sustainability, for we must uncover the presuppositions of the worldview that deliver us over to auto-mobility, which opens us to a new reflection on sustainability. In his magnus opus, Being and Time, Heidegger puts forth a thesis—that Being itself is not a being/entity— that strikes at the core of Western thinking [15]. For example, Aristotle privileged primary substance, the individual entity, as the fundamental being, linking all other manners of being to it, his ten categories. According to Heidegger, Western thinking has continued to misunderstand the question of Being as a question of beings. In doing so, correctness, or the relation between a statement and a state of affairs, has substituted for a deeper sense of truth. When we focus on beings, trying to properly define them, Being hides, for Being is other than the entities brought forth from its context. Being is the whole or horizonal context that allows for the appearing of beings in the first place. This sounds like mysticism to those who don't understand the metaphysical tradition of the West. But Heidegger's notion here is no less understandable the scientific principle of Gestalt psychology that the whole is different than the sum of the parts. So, if your way of knowing limits you to examining parts, you will not understand the meaning of the whole. A way of Being (a whole—a worldview) is what we are seeking to understand through this attempt to engage in a deeper analysis. Thus, Being must be pursued in a way that we arrive at the happening of truth, how a particular way of Being brings forth or unconceals beings, which means that we must think beyond the whatness of beings in terms of the correctness of definitions. Truth involves unconcealment of the essence of something through a way, an interpretive form of Being. "Some things" concretely manifest through socio-historical worldviews that allow entities to be brought into the clearing, that is, to be recognized/understood as something, as a type of being/entity. Before correctness can be established, the being must first be allowed to appear as something and this unconcealment is the deeper domain of truth. So a way of Being is an ontological agency, an ontological interpretive filter that allows certain beings to appear as the something that they appear as, as a function of the interpretive context. It is this essence/Being of automobility indicated by its symptom, global warming, that we must seek to uncover.

Taking up Heidegger's hermeneutic ontology in its reflection on Being allows us to envision global warming as a symptom, as an appearing, complex phenomenon through a particular way, the interpretive form of Being to which modern human life has been claimed. We are led to the essence of which global warming is an appearing symptom, which is other than its correct definition—one of the goals of Gore's book is to responsibly inform the average non-scientifically educated person as to the whatness of global warming, a correct saying of the phenomenon. From a Heideggerian standpoint, Gore's shallow analysis is blind to deeper truths that concern more than establishing correct statements describing the whatness of global warming.

In the analysis of a later treatise, "The Question Concerning Technology'", Heidegger maintains that the essence of technology is not something technological—its Being is not to be interpreted as itself a being (a technology). He provides what is regarded as the (standard/accepted) correct definition of technology as a human activity and as a means to an end. By contrast to the correct definition, Heidegger's analysis shows that the truth in the revealing/unconcealment or the essence/Being of modern technology that allows for modern technological entities to show themselves as such is a "challenging, which puts to nature the unreasonable demand that it supply energy which can be extracted and stored as such. But does this not hold true for the old windmill as well? No. Its sails do indeed turn in the wind; they are left entirely to the wind's blowing. But the windmill does not unlock energy from the air currents in order to store it [16]". The challenging is a setting-in-order, a setting upon nature, such that "the earth now reveals itself as a coal mining district" and "what the river is now, a water-power supplier, derives from the essence of the power station [16]". What is the character of this unconcealment? "Everywhere everything is ordered to stand by, to be immediately on hand, indeed to stand there just so that it may be on call for a further ordering. Whatever is ordered about in this way has its own standing. We call it standing reserve [16]". And the challenging that claims man to challenge nature in this way Heidegger labels, enframing. "Enframing means the gathering together of that setting-upon that sets upon man, i.e., challenges him forth, to reveal the real, in the mode of ordering, as standing-reserve. Enframing means that the way of revealing that holds sway in the essence of modern technology and that is itself nothing technological [16]". Modern physics, which interprets nature as a system of calculable forces is the herald of enframing. The way of Being through which entities stand in the clearing, as technological instrumentalities, is enframing and the way of Being of those entities is that of standing reserve.

This very brief discussion of Heidegger is important for two reasons. First, because my conception of automobility emphasizes the spatial organization of standing reserve, which Heidegger does not treat, and because automobility entails an empirical manifestation of man's ordering attitude and behavior in terms of spatial production, we recognize an already established ontological analysis from which automobility is to be interpreted. Secondly, we have an exemplar by which we can see what is to be done to uncover the Being that allows something to appear as that something, which is always other than the appearing beings. Heidegger's hermeneutics provides the possibility to claim that the solution to the technologically induced problem of global warming is not itself something technological, if indeed we are to open ourselves to other possible interpretational modes of Being such that other kinds of entities would then be unconcealed. We want to free ourselves up to sustainability as a way of Being by being open for a new way of interpretation, a new worldview, a new paradigm for living, other than enframing, by which new kinds of entities other than those of standing reserve will show themselves from its clearing.

3.3. Redirecting Reflection from Symptom to Source

Al Gore is correct in stating that global warming is caused by the increase of greenhouse gasses trapping infrared radiation, with CO2 being the most prevalent. In the U.S., coal burning power plants and automobiles are the chief contributors. He also states correctly that methane and nitric oxide are also contributors to global warming, which reach dangerous levels through industrialized orderings of farm animals, etc. All of these involve environmental contamination, what Gore would call side-effects of technological, industrialized society. But if we reflect on the essence of fossil fuel energy, we will be led to the way of Being that brings the symptom of global warming to unconcealment. Global warming is a symptom of the spatial productions of automobility manifesting the enframing that challenges nature and transforms living-spaces of the earth into sites of energy orderings in a dialectical intensification: the more storage of energy, the more production of auto-mobile spatiality. We want to redirect attention in order to come to terms with the disease rather than its symptomatic manifestation.

### CP

#### Text:

#### The 50 states should substantially increase financial support for fusion energy research and development in the United States

#### State solve

NEI 09 (Nuclear Energy Institute, “Policies That Support New Nuclear Power Plant Development”, http://www.nei.org/resourcesandstats/documentlibrary/newplants/factsheet/policiessupportnewplantdevelopment/?print=true)

State Policies Several states have passed legislation or implemented regulations, or both, to support construction of new nuclear power plants. These policies range from property tax incentives to pre-determination of rate-making principles for a project before construction begins. The policies that help most with financing new plants in regulated states are those that: Require the state public utility commission to determine if a proposed plant is prudent before construction begins and approve costs periodically during construction, thereby guaranteeing these capital costs will be added to the rate base when the plant comes online. Allow the carrying cost of construction work in progress (CWIP)—or the financing cost associated with¶ construction—to be passed on to ratepayers during construction. Allowing CWIP reduces the cost ratepayers will pay for power from the plant when it goes into commercial operation. Some unregulated states assist with financing for unregulated plants by allowing pre-negotiated, long-term power purchase agreements (PPA). PPAs guarantee the project will have a source of cash flow (and cost recovery) once it is operational. State-level policies send positive signals to the financial community, helping companies finance projects reasonably, and, thereby, keeping the cost of electricity for consumers lower.

### Obama DA

#### Obama will win now but it’s close and could reverse

Burns and Schultheis 9/19 Alexander and Emily are writers for Politico. “Mitt Romney needs poll vault to win,” 2012, http://www.politico.com/news/stories/0912/81392.html

Mitt **Romney faces an** increasingly daunting **path to victory in the 2012 presidential race,** as a wave of national and state-level polling suggests that President Barack **Obama has cemented a** small but meaningful lead **across the battleground states.**¶Individual polls show varying snapshots of the Obama-Romney race: NBC News and the Wall Street Journal gave Obama a 5-point national lead in a survey published Tuesday night, while an AP-GfK poll released Wednesday morning pegged the president’s lead at just 1 point. Gallup’s tracking poll, meanwhile, showed Obama’s post-convention polling bounce fading to a 1-point lead.¶ The rosiest picture of the race for Obama came this afternoon from the Pew Research Center, which found Obama drawing **51 percent of the vote to Romney’s 43 percent**, leading on nearly every issue question and fighting his challenger to a draw on who would better handle the economy.¶ From the fog of survey data available on the 2012 race, some consistent, post-convention trends have clearly begun to emerge. In the most credible national polls, Obama rarely leads Romney by more than a few points. **But the president is almost invariably in the lead**.¶ These polls were taken after the parties’ conventions, but mostly before the release this week of a controversial video of Romney this week in which he says that 47 percent of people don’t pay income taxes and are dependent on the government for services. Some data was collected before the attacks on U.S. diplomatic outposts in North Africa; some was collected afterward.¶ More problematic for Romney is the state-level data that gives Obama a slight edge in more than enough states to block his challenger from amassing 270 electoral college votes. Because of the makeup of the electoral map, Romney has to win nearly all the swing states on the table, while Obama only has to win a handful.¶ Of the biggest prizes up for grabs — Ohio, Virginia, Florida and North Carolina — Obama is the favorite in two, according to public surveys. NBC/Wall Street Journal polling and the Democratic firm Public Policy Polling gave Obama an edge in Ohio in the mid-to-high single digits. In Virginia, one survey from the Washington Post and another from Quinnipiac University, CBS News and the New York Times placed Obama at or above the 50 percent mark.¶ There has been little public polling in Florida — without which it becomes much harder for Romney to win — and strategists on both sides say the race there remains close. Only in North Carolina is Romney believed to have a slim edge.¶ In the bigger picture, it would take a national shift of several percentage points or the flipping of more than a few major swing states to put Romney back in the lead, and the momentum — with less than two months to go, doesn’t seem to be moving in the challenger’s direction.¶ Even if Romney were to win Virginia, North Carolina, Florida, Iowa, Colorado and New Hampshire — all states Obama won in 2008 — the Republican would still be three electoral votes short of victory.¶ And right now, Romney is not leading in many of those states, leaving him well short of the threshold he needs to clear and under urgent pressure to reshuffle the race’s dynamics.¶ “The bottom line is, you’d rather be in **Obama**’s shoes than Romney’s. He **has a lead in the battleground states and he probably has to carry fewer of them**,” said Marist College pollster Lee Miringoff, who conducts swing-state polls for NBC and the Wall Street Journal.¶ The problem for Romney, Miringoff said, is that Romney has to be “drawing an inside straight” in the state-by-state numbers in order to cross the 270-vote threshold.¶ “If you take Florida away from Romney, then it becomes paramount for him to do lots of other states. You take Ohio away, it’s not quite as dramatic but it still leads to the same conclusion,” Miringoff said. “Having said that, **there’s also the** possibility **that the national numbers shift** two or three points. The battleground states, although they’re obviously all separate, could react similarly.”¶ Purple Strategies pollster Doug Usher emphasized the severity of Romney’s electoral college challenge, agreeing that the loss of any one mega-state, like Florida, would deepen Romney’s problems by an order of magnitude everywhere else.¶ “Florida is a must-win for Romney by any measure. If he doesn’t win Florida, he has to win Ohio and Pennsylvania and Colorado and a bunch of other states that he’s not going to win in combination, and certainly not going to win in an electorate where Florida goes for Obama,” Usher said.¶ Michael Dimock, associate director of the Pew Research Center, said his organization’s data illustrated “the seriousness of the problem for Romney right now, not only in the margin but in all of the internals.”¶ ”Even on an issue like the deficit, where Romney had an advantage earlier in the year, that advantage is now a virtual tie on who would best handle that situation, as well as the job situation,” he said. “Earlier in the year, there was a clearer [contrast], on the one hand Obama’s more likable but people trust Romney on the economy … That’s not really holding in the current poll.”¶ Republicans have taken issue with more than a few national and state-level polls, which they say oversample Democrats and show Obama leading by wider margins than private polling suggests. But while GOP strategists argue with the magnitude of Obama’s advantage conveyed in public surveys, few dispute that the president is currently leading.¶ If private Republican polling suggests that Obama has an entirely surmountable advantage, the polls still show him with an advantage in big electoral prizes like Ohio, as well as struggling in smaller swing states such as Nevada and Colorado.¶ There is also fading optimism in the GOP about Romney’s ability to stretch the electoral map by competing in Democratic-leaning states such as Michigan and Wisconsin, though Romney’s super PAC is currently running a new round of TV ads in both states. Pennsylvania, where Obama has led in the high single digits and low teens, appears to have fallen off the map for Republicans entirely.¶ A Wednesday morning poll from Quinnipiac, the New York Times and CBS gave Obama a 6-point lead in Wisconsin and placed him over the 50-percent mark. The Michigan pollster EPIC/MRA had Obama 10 points ahead there and Romney is not running TV ads in the state.¶ Even if — under an optimistic scenario — Romney is actually faring 3 or 4 points better in most states than public data indicates, he would still need to make up additional ground in order to take the lead nationally.¶ Republican pollster David Winston said that Obama has a “small advantage” nationally at the moment, but questioned whether it was more of an edge than the incumbent has had for most of the year. The challenge for Romney, he said, was changing the contours of a race that has stubbornly resisted attempts to shake it up.¶ “This political equilibrium, as it exists, is a slight advantage for President Obama. The challenge for the Romney campaign is, how do they change this political equilibrium, given that additional attacks [from both campaigns] tend to reinforce the equilibrium?” Winston said. “The Romney campaign’s got to figure out a way to change that equilibrium. Because if they don’t, the race continues the way it has been.”¶ Ipsos pollster Julia Clark, whose firm conducts surveys for Reuters, said that Obama has a “pretty constant, couple-point lead,” though still nothing dramatically outside the range of 2 to 4 percentage points. The most encouraging trend for Obama is the modest rise in the percentage of Americans saying the country is on the right track and the economy is improving.

### Spending---Generic

#### The deficit is the key election issue - Obama needs to appear fiscally responsible - new spending causes him to lose

USA Today 5/26 "Obama campaign goes on the defensive on spending, debt," 2012, http://www.usatoday.com/news/politics/story/2012-05-26/obama-romney-debt-spending/55221120/1

WASHINGTON (AP)---Government spending and debt are emerging as a campaign tug-of-war, with Mitt Romney blaming President Obama for a "prairie fire of debt" and Obama calling the charge a "cowpie of distortion." House Speaker John Boehner is talking about a debt ceiling that is still more than eight months away.¶ What gives? In a word, polling.¶ **The American public is growing increasingly distressed about government spending and high budgets.** The issue now ranks as high on the worry scale as lack of jobs. And it worked well for Republicans in 2010, who galvanized voters with ads and flyers that drew attention to government red ink and took back control of the U.S. House after four years of Democratic rule.¶ Republicans are looking for that magic again.¶ Romney has maintained a drumbeat of criticism over Obama's handling of federal spending and the national debt in recent weeks, **forcing the president on the defensive on an issue where public opinion is stacked against him.**¶ In Iowa earlier this month, Romney said a "prairie fire of debt" was sweeping across the nation, threatening the country's future. He accused Obama of inflating the debt that he had pledged to reduce and ballooning the federal budget deficit with the 2009 economic stimulus and 2010 health care bill after saying he would cut it sharply.¶ Obama, in campaign events in Colorado, California and Iowa this week, argued that federal spending had slowed to rates not seen in decades after he inherited a $1 trillion large debt and later pushed for $2 trillion in spending cuts. The president pointed to Romney's tax proposal, saying it would give millionaires tax cuts at the expense of the debt.¶ Obama called Romney's claims a "cowpie of distortion" and would saddle the debt with $5 trillion in new tax cuts, likening it to trying to put out "a prairie fire with some gasoline."¶ "What happens is, the Republicans run up the tab, and then we're sitting there and they've left the restaurant," Obama said at a campaign event in Des Moines. "And then they point and (say), 'Why did you order all those steaks and martinis?'"¶ **Obama's defensive crouch on debt and spending reflect a hard reality: Polls consistently show voters, including sought-after independents, placing more trust in Romney to handle the massive debt.** The nation's economy remains a focal point for voters but many remain concerned that years of heavy federal spending on guns and butter could leave the U.S. in a similar position as Greece and other European nations grappling with massive debt.¶ A Gallup/USA Today poll conducted May 10-13 found that overall, **82% of Americans called the "federal budget deficit and debt" extremely or very important**, a level of interest comparable to unemployment. The same poll found Romney with a broad advantage on handling the budget deficit and debt, with 54% saying he would do a better job handling it compared with 39% who chose Obama.¶ The results mirrored an April Washington Post/ABC News poll, which found 51% of Americans sided with Romney on handling the federal budget deficit, compared with 38% for Obama. Among independents, 60% preferred Romney while 29% thought Obama would do a better job handling it.¶ The White House has tried to respond. Traveling to Colorado Springs, Colo., White House press secretary Jay Carney cited an analysis by MarketWatch that said spending under Obama had grown more slowly than any president since Dwight Eisenhower.¶ A few hours later, Obama picked up on the piece, telling donors in Denver that his work to pay down the federal debt in a "balanced and responsible" way was "starting to appear in places — real liberal outlets like the Wall Street Journal— since I've been president, federal spending has risen at the lowest pace in nearly 60 years." MarketWatch is published by Dow Jones & Co., which also publishes the Wall Street Journal.¶ Yet, Obama's budget stewardship is open to interpretation. The debt now stands at $15.7 trillion, compared to $10.6 trillion on his inauguration day. On a dollar basis, that's the biggest ever jump in the debt. How much the debt has grown can also be measures as a percentage of what he inherited. By that measure, the debt has increased by half during the three-and-a-half year Obama administration. During President Ronald Reagan's eight-year administration, the debt nearly tripled, from about $910 billion to more than $2.6 trillion.¶ Still, much of the increase during Obama's tenure has been a consequence of the recession. In a poor economy, government spending increases automatically because more Americans become eligible for food stamps, unemployment assistance and Medicaid. Also, a poor economy leads to unemployment which cuts into tax revenue. As a result, deficits are inevitable as more money goes out and less comes in.¶ To be sure, Obama pushed through a stimulus package that cost more than $800 billion and he and President George Bush both approved spending of the $700 billion bank bailout in 2008 and 2009. But those costs are not recurrent.¶ "It's important to understand the reason why the debt went up by so much," said Robert Bixby of the budget watchdog group The Concord Coalition. "We certainly do have a very serious long-term debt problem in the country. We have an underlying structural imbalance between what we are promising, mostly in entitlement benefits, and what we're willing to pay for in taxes. But in the short-term there are a lot of factors that are pushing the debt up that aren't related to fiscal policy."¶ Add to the mix Boehner, who has said when Congress is asked to raise the nation's borrowing cap after the election, he will insist on spending cuts to offset the increase. Democratic leaders call it an irresponsible course of action, noting that the gridlock over the debt ceiling last year caused a downgrading of the U.S. government's credit rating.¶ All of this is aimed at unaligned, independent voters.¶ In turning attention to debt, Republicans are tapping a winning issue they deployed in congressional races two years ago. In October of 2010, Republican pollster Wes Anderson said, congressional campaigns shifted "away from jobs and economy to government taking us over the cliff." **The emphasis proved to be a success at the ballot box.**¶ These days, the economy remains the preeminent issue in voters' minds, but Anderson says **middle-of-the-road votes are the targets of the big government message.¶** "The middle is angry about where we are at and they really see two villains on this stage, this play has two antagonists. Both of them are big," said Anderson, who is working on congressional and statewide political campaigns in several states that are presidential battlegrounds. "One is big business, big Wall Street, big insurance, big oil, just big, abusing the middle class, abusing small businesses, abusing the taxpayer. The other is big government — big government wildly running up massive deficits and debt which abuse the taxpayer, the middle class and small business."¶ Independent voters, he said, "hold both of those central tenets to be true."

#### Romney decks US-Russia Relations – threatens global insecurity and

Felton 12 Emmanuel Felton is a Toni Stable Fellow at the Columbia School of Journalism. "Mitt Romney Russia Quotes Signal Big Problems For Future US-Russian Relations," March, http://www.policymic.com/articles/6202/mitt-romney-russia-quotes-signal-big-problems-for-future-us-russian-relations

The importance of America’s alliance with Russia is highlighted by the very context of Obama and Medvedev’s conversation. Obama and Medvedev were speaking in private at the Nuclear Security Summit in Seoul, South Korea. Russia is an important U.S. ally in fight against nuclear proliferation. Of the nearly 20,000 nuclear weapons that are in existence, Russia has 10,000 and the United States 8,500. Most will agree that this number is simply far too high. **An alliance with Russia is essential to reducing the cold-war stockpile of nuclear weapons that** **continue to threaten humanity.** Flexibility is critical to any alliance. Despite the strategic importance of a relationship with Russia, Republicans have signaled that any compromise on the issue of the missile defense system will be a non-starter if they gain control of the White House and Capitol Hill. The initial criticisms of Obama’s comments went something like this: “What plans are he formulating, that make his “last election” relevant? What is he planning to do that, if the American people were aware of it, would make him unelectable?” While the initial responses to Obama’s comments were purely motivated by November’s elections, Mitt Romney’s remarks went much further. Romney called Russia America’s “number one geopolitical foe.” While you could argue that this is another etch-a-sketch moment, Romney’s comments show a complete disregard for any U.S.-Russian alliance. Romney’s comments are particularly important because he is the most likely to succeed Obama in the fall. His comments have signaled to the world that Republicans don’t necessarily believe that any alliance exists in the first place. This gives Russia free reign to take more hardline positions on nuclear proliferation issues. While Romney’s comments were clearly motivated by election year politics, they also indicate that the party has not escaped Cold War thinking, an approach that says any compromise with Russia is tantamount to weakening America’s strategic position. Until that mindset is broken, global security will continue to be undermined by an increasingly hostile Kremlin.

#### US-Russia relations key to solve extinction

Allison 11 (Graham, 10/30, Director of the Belfer Center for Science and International Affairs at Harvard’s Kennedy School of Government, “10 reasons why Russia still matters,” http://dyn.politico.com/printstory.cfm?uuid=161EF282-72F9-4D48-8B9C-C5B3396CA0E6)

That central point is that Russia matters a great deal to a U.S. government seeking to defend and advance its national interests. Prime Minister Vladimir Putin’s decision to return next year as president makes it all the more critical for Washington to manage its relationship with Russia through coherent, realistic policies. No one denies that Russia is a dangerous, difficult, often disappointing state to do business with. We should not overlook its many human rights and legal failures. Nonetheless, Russia is a player whose choices affect our vital interests in nuclear security and energy. It is key to supplying 100,000 U.S. troops fighting in Afghanistan and preventing Iran from acquiring nuclear weapons. Ten realities require U.S. policymakers to advance our nation’s interests by engaging and working with Moscow. First, Russia remains the only nation that can erase the United States from the map in 30 minutes. As every president since John F. Kennedy has recognized, Russia’s cooperation is critical to averting nuclear war. Second, Russia is our most consequential partner in preventing nuclear terrorism. Through a combination of more than $11 billion in U.S. aid, provided through the Nunn-Lugar [CTR] Cooperative Threat Reduction program, and impressive Russian professionalism, two decades after the collapse of the “evil empire,” not one nuclear weapon has been found loose. Third, Russia plays an essential role in preventing the proliferation of nuclear weapons and missile-delivery systems. As Washington seeks to stop Iran’s drive toward nuclear weapons, Russian choices to sell or withhold sensitive technologies are the difference between failure and the possibility of success. § Marked 07:20 § Fourth, Russian support in sharing intelligence and cooperating in operations remains essential to the U.S. war to destroy Al Qaeda and combat other transnational terrorist groups. Fifth, Russia provides a vital supply line to 100,000 U.S. troops fighting in Afghanistan. As U.S. relations with Pakistan have deteriorated, the Russian lifeline has grown ever more important and now accounts for half all daily deliveries. Sixth, Russia is the world’s largest oil producer and second largest gas producer. Over the past decade, Russia has added more oil and gas exports to world energy markets than any other nation. Most major energy transport routes from Eurasia start in Russia or cross its nine time zones. As citizens of a country that imports two of every three of the 20 million barrels of oil that fuel U.S. cars daily, Americans feel Russia’s impact at our gas pumps. Seventh, Moscow is an important player in today’s international system. It is no accident that Russia is one of the five veto-wielding, permanent members of the U.N. Security Council, as well as a member of the G-8 and G-20. A Moscow more closely aligned with U.S. goals would be significant in the balance of power to shape an environment in which China can emerge as a global power **without overturning the existing order**. Eighth, Russia is the largest country on Earth by land area, abutting China on the East, Poland in the West and the United States across the Arctic. This territory provides transit corridors for supplies to global markets whose stability is vital to the U.S. economy. Ninth, Russia’s brainpower is reflected in the fact that it has won more Nobel Prizes for science than all of Asia, places first in most math competitions and dominates the world chess masters list. The only way U.S. astronauts can now travel to and from the International Space Station is to hitch a ride on Russian rockets. The co-founder of the most advanced digital company in the world, Google, is Russian-born Sergei Brin. Tenth, Russia’s potential as a spoiler is difficult to exaggerate. Consider what a Russian president intent on frustrating U.S. international objectives could do — from stopping the supply flow to Afghanistan to selling S-300 air defense missiles to Tehran to joining China in preventing U.N. Security Council resolutions.

### Advantage 3

#### New proliferators will build small arsenals which are uniquely stable.

**Seng 98** (Jordan, PhD Candidate in Pol. Sci. – U. Chicago, Dissertation, “Strategy for Pandora's Children: Stable Nuclear Proliferation Among Minor States”, p. 203-206)

However, this "state of affairs" is not as dangerous as it might seem. The nuclear arsenals of limited nuclear proliferators will be small and, consequently, the command and control organizations that manage those arsenals will be small as well. The small arsenals of limited nuclear proliferators will mitigate against many of the dangers of the highly delegative, 'non-centralized' launch procedures Third World states are likely to use. This will happen in two main ways. First, only a small number of people need be involved in Third World command and control. The superpowers had tens of thousands of nuclear warheads and thousands of nuclear weapons personnel in a variety of deployments organized around numerous nuclear delivery platforms. A state that has, say, fifty nuclear weapons needs at most fifty launch operators and only a handful of group commanders. This has both quantitative and qualitative repercussions. Quantitatively, the very small number of people 'in the loop' **greatly diminishes the statistical probability** that accidents or human error will result in inappropriate nuclear launches. All else being equal, the chances of finding some guard asleep at some post increases with the number of guards and posts one has to cover. Qualitatively, small numbers makes it possible to centrally train operators, to screen and choose them with exceeding care, 7 and to keep each of them in direct contact with central authorities in times of crises. With very small control communities, there is no need for intermediary commanders. Important information and instructions can get out quickly and directly. Quality control of launch operators and operations is easier. In some part, at least, Third World states can compensate for their lack of sophisticated use-control technology with a more controlled selection of, and more extensive communication with, human operators. Secondly, and relatedly, Third World proliferators will not need to rely on cumbersome standard operating procedures to manage and launch their nuclear weapons. This is because the number of weapons will be so small, and also because the arsenals will be very simple in composition. Third World stares simply will not have that many weapons to keep track of. Third World states will not have the great variety of delivery platforms that the superpowers had (various ballistic missiles, cruise missiles, long range bombers, fighter bombers, missile submarines, nuclear armed ships, nuclear mortars, etc., etc.), or the great number and variety of basing options, and they will not employ the complicated strategies of international basing that the superpowers used. The small and simple arsenals of Third World proliferators will not require highly complex systems to coordinate nuclear activities. This creates two specific organizational advantages. One, small organizations, even if they do rely to some extent of standard operating procedures, can be flexible in times of crisis. As we have discussed, the essential problem of standard operating procedures in nuclear launch processes is that the full range if possible strategic developments cannot be predicted and specified before the fact, and thus responses to them cannot be standardized fully. An unexpected event can lead to 'mismatched' and inappropriate organizational reactions. In complex and extensive command and control organizations, standard operating procedures coordinate great numbers of people at numerous levels of command structure in a great multiplicity of places. If an unexpected event triggers operating procedures leading to what would be an inappropriate nuclear launch, it would be very difficult for central commanders to “get the word out' to everyone involved. The coordination needed to stop launch activity would be at least as complicated as the coordination needed to initiate it, and, depending on the speed of launch processes, there may be less time to accomplish it. However, the small numbers of people involved in nuclear launches and the simplicity of arsenals will make it far easier for Third World leaders to 'get the word out' and reverse launch procedures if necessary. Again, so few will be the numbers of weapons that all launch operators could be contacted directly by central leaders. The programmed triggers of standard operating procedures can be passed over in favor of unscripted, flexible responses based on a limited number of human-to-human communications and confirmations. Two, the smallness and simplicity of Third World command and control organizations will make it easier for leaders to keep track of everything that is going on at any given moment. One of the great dangers of complex organizational procedures is that once one organizational event is triggered—once an alarm is sounded and a programmed response is made—other branches of the organization are likely to be affected as well. This is what Charles Perrow refers to as interactive complexity, 8 and it has been a mainstay in organizational critiques of nuclear command and control s ystems.9 The more complex the organization is, the more likely these secondary effects are, and the less likely they are to be foreseen, noticed, and well-managed. So, for instance, an American commander that gives the order to scramble nuclear bombers over the U.S. as a defensive measure may find that he has unwittingly given the order to scramble bombers in Europe as well. A recall order to the American bombers may overlook the European theater, and nuclear misuse could result. However, when numbers of nuclear weapons can be measured in the dozens rather than the hundreds or thousands, and when deployment of those weapons does not involve multiple theaters and forward based delivery vehicles of numerous types, tight coupling is unlikely to cause unforeseen and unnoticeable organizational events. Other things being equal, it is just a lot easier to know all of what is going on. In short, while Third World states may not have the electronic use-control devices that help ensure that peripheral commanders do nor 'get out of control,' they have other advantages that make the challenge of centralized control easier than it was for the superpowers. The small numbers of personnel and organizational simplicity of launch bureaucracies means that even if a few more people have their fingers on the button than in the case of the superpowers, there will be less of a chance that weapons will be launched without a definite, informed and unambiguous decision to press that button.

**Uncertainty solves war**

**Karl 96**—president of the Asia Strategy Initiative and a lecturer in IR, USC (David, Winter, “Proliferation Pessimism and Emerging Nuclear Powers”, http://www.jstor.org/stable/2539274?seq=9, Aly M)

Optimists have relaxed views of the preventive-war dangers entailed in situations in which a nuclear power confronts a nuclearizing rival. The practical difficulties of ensuring a disarming strike to preclude any possibility of nuclear retaliation make preventive actions a military gamble that states are very unlikely to take. As Waltz explains, "prevention and pre-emption are difficult games because the costs are so high if the games are not perfectly played.... Ultimately, the inhibitions [against such attacks] lie in the impossibility of knowing for sure that a disarming strike will totally destroy an opposing force and in the immense destruction even a few warheads can wreak."25 To optimists, states will have to learn to live with a rival's emerging nuclear armory. Because strategic uncertainty is seen as having a powerful dissuasive effect, optimists usually view the very increase in the numbers of nuclear-armed states as an additional element of stability Dagobert Brito and Michael Intriligator, for instance, argue that uncertainty over the reaction of other nuclear powers will make all hesitant to strike individually26 As an example, they point to the restraint the superpowers exercised on each other in the 1960s, when first the United States and then the Soviet Union contemplated military action against China's nascent nuclear weapon sites. The net effect of the uncertain reaction of others is that "**the probability of** deliberate **nuclear attack falls to** near **zero** with three, four, or more nuclear nations."27 Similarly, Waltz reasons that even in cases of asymmetric proliferation within conflict dyads, nuclear weapons will prove "poor instruments for blackmail" because a "country that takes the nuclear offensive has to fear an appropriately punishing strike by someone. Far from lowering the expected cost of aggression, a nuclear offense even against a non-nuclear state raises the possible costs of aggression to **incalculable heights** because the aggressor cannot be sure of the reaction of other nuclear powers."28

#### Prolif will be slow

Tepperman 9Deputy Editor at Newsweek. Frmr Deputy Managing Editor, Foreign Affairs. LLM, i-law, NYU. MA, jurisprudence, Oxford. (Jonathan, Why Obama Should Learn to Love the Bomb, http://jonathantepperman.com/Welcome\_files/nukes\_Final.pdf)

The risk of an arms race—with, say, other Persian Gulf states rushing to build a bomb after Iran got one—is a bit harder to dispel. Once again, however, history is instructive. "In 64 years, the most nuclear-weapons states we've ever had is 12," says Waltz. "Now with North Korea we're at nine. That's not proliferation; that's spread at glacial pace." Nuclear weapons are so controversial and expensive that only countries that deem them absolutely critical to their survival go through the extreme trouble of acquiring them. That's why South Africa, Ukraine, Belarus, and Kazakhstan voluntarily gave theirs up in the early '90s, and why other countries like Brazil and Argentina dropped nascent programs. This doesn't guarantee that one or more of Iran's neighbors—Egypt or Saudi Arabia, say—might not still go for the bomb if Iran manages to build one. But the risks of a rapid spread are low, especially given Secretary of State Hillary Clinton's recent suggestion that the United States would extend a nuclear umbrella over the region, as Washington has over South Korea and Japan, if Iran does complete a bomb. If one or two Gulf states nonetheless decided to pursue their own weapon, that still might not be so disastrous, given the way that bombs tend to mellow behavior.

#### Prolif decreases war and encourages rationality

Simon Shen, IR prof @ Hong Kong Inst. Of Ed., 2011, “Have Nuclear Weapons Made the DPRK a Rogue State?” J. of Comparative Asian Development, v. 10, iss. 2, t&f

In our traditional mentality, the determination to denuclearize the DPRK quite explicitly assumes that nuclear weapons are evil; as Scott Sagan (2003, p. 49) puts it, “Nuclear weapons have been given a bad name.” This negative perception of nuclear weapons is built upon the basis of the huge devastation that would result in the world if a nuclear war, of whatever scale, broke out. Coupled with the peculiar nature of the DPRK's autocratic regime, a nuclear-armed DPRK is then perceived as too hostile and destructive to its neighbours. However, applying the analogy of “more may be better”, an alternative discourse with respect to nuclear proliferation maintained by Waltz could well pinpoint a far more optimistic scenario. Contrary to conventional wisdom, Waltz asserts that nuclear proliferation not only reduces the possibility of going to war, but also encourages new nuclear states, which used to rule in a radical manner domestically, to behave in an increasingly rational manner diplomatically. At the extreme, Waltz suggests that nuclear proliferation may maintain peace rather than threaten global security. Surprisingly, the application of his theory to the DPRK is rather limited; and is confined only to media reports (Swami, 2010).¶ In his classic study Waltz (1995) proposes five fundamental assumptions to illustrate his argument. First, he argues that the international system is anarchical, i.e., no global authority protects security, provides public goods or controls domestic affairs above the state level. As a result, states have to ensure their own security by preventing attack from other states themselves. In other words, the anarchical system drives states to self-help. The absence of a world government then prompts individual states to gain access to weapons to compensate for a sense of insecurity. Acquisition of nuclear weapons and inducement of an arms race between states show the self-help system at work.¶ Second, as “states coexist in a condition of anarchy”, they try hard to advance the sophistication of weapons and enhance military capability as much as possible to avoid aggression from adversaries (Waltz, 1995, p. 4). This self-strengthening process is what Waltz calls “security maximization”. What do states do with their weapons throughout this process? Waltz thinks that states mainly possess the weapons for a defensive purpose. When a state enhances its military capability (the relevant gain), its neighbouring states immediately face relevant loss to the military equilibrium. In consequence, the latter have to strengthen their military power in response to the relevant loss in order to maintain a balance of power. Waltz (1995, p. 5) explains the defensive intention of security maximization as follows:¶ One way to counter an intended attack is to build fortifications and to muster forces that look forbiddingly strong. To build defenses so patently strong that no one will try to destroy or overcome them would make international life perfectly tranquil, I call this the defensive ideal.¶ However, this statement does not imply that these states will not use weapons to attack others. In the event that a state perceives gains from aggression to outweigh the cost of war, battle might break out. Waltz argues that this scenario is unlikely to happen between nuclear powers. Since Waltz, different schools deriving from neo-realism have offered different assumptions on the likeliness of conflicts owing to different assessments of uncertainty and risk, such as offensive realism or defensive realism. Some might put the defensive rationale by indicating that states tend to keep the nuclear weapons as an “existential deterrent” so as to deter others from military actions (Naval Studies Board & US Research Council, 1997).¶ Third, Waltz (1995, pp. 7, 9) maintains that nuclear weapons, unlike conventional weapons, give “an easy clarity” for states to predict the action of other states and thereby “makes war less likely”. This is because all states realize that nuclear weapons have the potential to cause unlimited and devastating suffering. At the extreme, the concept of mutual assured destruction (MAD) sends a very clear message to both sides should two nuclear powers go to war. In contrast, as the suffering from conventional weapons can be to some extent contained, states might deem the cost of such war affordable and recklessly wage war and suffer the results of miscalculation. Waltz (1995, p. 9) defines the fundamental essence of nuclear weapons thus:¶ In a nuclear world, prediction is easy to make because it does not require close estimates of opposing forces. … In a conventional world, deterrent threats are ineffective because the damage threatened is distant, limited, and problematic.¶ Fourth, Waltz (1995, p. 7) assumes state actors are rational and are able to predict scenarios as well as calculate their self-interests, so that states will not take the risk of going to war when they predict the battle could only “win much and might lose everything”. Waltz offers the case of the Cuban Missile Crisis to illustrate this point. As nuclear weapons can wreak unlimited damage to states, the strategy of MAD further makes states cautious. This deterrent effect in a nuclear world consequently avoids any miscalculation of gains and losses. Regardless of the regime type, historical context and the political spectrum, nuclear weapons and nuclear wars constantly imply a massive relevant loss to states, thus preventing them from going to war. Even if the historical context might determine a nuclear pair, such as the US and the Soviet Union, China and the Soviet Union, India and Pakistan, many realists argues that rational calculation is more fundamental than bitterness (Rajain, 2005). As Waltz (1995, p. 12) puts it: “Those who believe that bitterness causes wars assume a close association that is seldom found between bitterness among nations and their willingness to run high risks.” In short, states will not go to nuclear war as they are rational actors in international relations.¶ Fifth, when calculation of the prospects makes nuclear states reluctant to go to war, Waltz suggests horizontal nuclear proliferation is encouraged in world politics while vertical proliferation is made redundant. “Vertical proliferation” of nuclear weapons, according to Waltz, was demonstrated during the Cold War, especially between the US and the Soviet Union, when the number of nuclear warheads and their technological quality rapidly increased. Waltz (1995, p. 7) argues that further vertical proliferation is unnecessary since only a few nuclear weapons and a “second strike” capability may be a sufficient deterrent to other would-be attackers. Rather, “horizontal proliferation”, which means the spread of nuclear weapons to different countries, is seen by Waltz as more crucial in preserving peace in the world. When more states possess nuclear weapons, calculations about using them become complicated (Waltz, 1995, p. 15). States will thus be reluctant to take the risk of starting a nuclear war because of the uncertainty of the response from other states and the certainty of unlimited nuclear destruction to both sides should a nuclear response be elicited. This helps exclude the option of using nuclear weapons for the mere purpose of interest maximization.

#### Prolif solves conventional wars

Preston 9—assoc prof, IR, Wash State U (Thomas, From Lambs to Lions, 31-2)

Advocates of deterrence seldom take the position that it will always work or that it cannot fail. Rather, they take the position that if one can achieve the requisite elements required to achieve a stable deterrent relationship between parties, it vastly decreases the chances of miscalculation and resorting to war—even in contexts where it might otherwise be expected to occur (George and Smoke 1974; Harvey 1997a; Powell 1990, 2003; Goldstein 2000). Unfortunately, critics of deterrence take the understandable, if unrealistic, position that if deterrence cannot be 100 percent effective under all circumstances, then it is an unsound strategic approach for states to rely upon, especially considering the immense destructiveness of nuclear weapons. Feaver (1993,162). for example, criticizes reliance on nuclear deterrence because it can fail and that rational deterrence theory can only predict that peace should occur most of the time (e.g., Lebow and Stein 1989). Yet, were we to apply this standard of perfection to most other policy approaches concerning security matters—whether it be arms control or proliferation regime efforts, military procurement policies, alliance formation strategies, diplomacy, or sanctions—none could be argued with any more certainty to completely remove the threat of equally devastating wars either. Indeed, one could easily make the argument that these alternative means have shown themselves historically to be far less effective than nuclear arms in preventing wars. Certainly, the twentieth century was replete with examples of devastating conventional conflicts which were not deterred through non-nuclear measures. Although the potential costs of a nuclear exchange between small states would indeed cause a frightful loss of life, it would be no more costly (and likely far less so) than large-scale conventional conflicts have been for combatants. Moreover, if nuclear deterrence raises the potential costs of war high enough for policy makers to want to avoid (rather than risk) conflict, it is just as legitimate (if not more so) for optimists to argue in favor of nuclear deterrence in terms of the lives saved through the avoidance of far more likely recourses to conventional wars, as it is for pessimists to warn of the potential costs of deterrence failure. And, while some accounts describing the "immense weaknesses"' of deterrence theory (Lebow and Stein 1989. 1990) would lead one to believe deterrence was almost impossible to either obtain or maintain, since 1945 **there has not been one** **single historical instance of** nuclear **deterrence failure** {especially when this notion is limited to threats to key central state interests like survival, and not to minor probing of peripheral interests). Moreover, the actual costs of twentieth-century conventional conflicts have been staggeringly immense, especially when compared to the actual costs of nuclear conflicts (for example, 210,000 fatalities in the combined 1945 Hiroshima and Nagasaki atomic bombings compared to 62 million killed overall during World War II. over three million dead in both the Korean and Vietnam conflicts, etc.) (McKinzie et al. 2001.28).3 Further, as Gray (1999. 158-59) observes, "it is improbable that policymakers anywhere need to be educated as to the extraordinary qualities and quantities of nuclear armaments." Indeed, the high costs and uncontestable, immense levels of destruction that would be caused by nuclear weapons have been shown historically to be facts that have not only been readily apparent and salient to a wide range of policy makers, but ones that have clearly been demonstrated to moderate extreme policy or risk-taking behavior (Blight 1992; Preston 2001) Could it go wrong? Of course. There is always that potential with human beings in the loop. Nevertheless, it has also been shown to be effective at moderating policy maker behavior and introducing an element of constraint into situations that otherwise would likely have resulted in war (Hagerty 1998).

#### Curbing nuclear prolif causes a shift to bioweapons.

Zilinskas 2k**—**Former Clinical Microbiologist. Dir. – Chem/Bio Weapons Nonproliferation Program – Center for Nonproliferation Studies, Monterey Institute of International Studies (Raymond, Biological warfare: modern offense and defense, 1-2)

It is an odd characteristic of biological weapons that military generals tend to view them with distaste, but civilian bioscientists often have lobbied for their development and deployment. There are, of course, understandable reasons for this oddity; generals find that these weapons do not fit neatly into tactical or strategic military doctrines of attack or defense, whereas researchers have observed that transforming microbes into weapons presents interesting scientific challenges whose solution governments have been willing to pay well for. Another oddity is that whenever biological weapons have been employed in battle, they have proven militarily ineffectual, yet bellicose national leaders persevere in seeking to acquire them. There is also a facile explanation for this anomaly, namely, that although pathogens are all too willing to invade prospective hosts, human ingenuity so far has failed to devise reliable methods for effectively conveying a large number of pathogens to the population targeted for annihilation by disease. This repeated failure has not deterred leaders; again and again they become allured by the potential destructive power of biological weapons. Perhaps trusting science too much, they direct government scientists to develop them, believing that this time a usable weapon of mass destruction will be achieved. Their belief so far has been thwarted, but is it possible that within the foreseeable future the potential of biological weapons will be realized and that the effect of a biological bomb, missile, or aerosolized cloud can be as readily predetermined as that of a bomb or missile carrying a conventional or nuclear warhead? There are many who believe that today's bioscientists and chemical engineers working in unison and wielding the techniques of molecule biology developed since the early 1970s could, if so commanded, develop militarily effective biological weapons within a fairly short time. If this supposition is correct, our perception of biological weapons as being undependable, uncontrollable, and unreliable must change. The reason is simple: if these weapons are demonstrated to possess properties that make it possible for commanders to effect controlled, confined mass destruction on command, all governments would be forced to construct defenses against them and some undoubtedly would be tempted to arm their military with these weapons that would be both powerful and relatively inexpensive to acquire. Ironically, **as tougher** international **controls are put into place to deter nations from seeking** to acquire chemical and **nuclear weapons, leaders may be** even more **drawn to biological arms as the most accessible form of weapon of mass destruction.** Before beginning a consideration of the implications of molecular biology for biological warfare (BW) and defense, it is worthwhile to briefly review the history of microbiology. It has passed through two eras, and we presently are in its third era. The first was the “pre-Pasteur” era; when the underlying science of fermentation was unknown, so microbiology was applied strictly on an empirical basis. Although undoubtedly any fine beers and wines, as well as breads and other fermented foods, were produced through the use of empirically developed fermentation techniques, no finely controlled production of chemicals was possible. During this era, BW was also empirically based. Common tactics included contaminating water sources with bloated animal carcasses and catapulting infected cadavers into citadels (Poupard and Miller, 1992).

#### Extinction

Ochs 2[Richard, Naturalist – Grand Teton National park with Masters in Natural Resource Management – Rutgers, “Biological Weapons must be abolished immediately” 6-9, http://www.freefromterror.net/other\_articles/abolish.html]

Of all the weapons of mass destruction, the genetically engineered biological weapons, many without a known cure or vaccine, are an extreme danger to the continued survival of life on earth. Any perceived military value or deterrence pales in comparison to the great risk these weapons pose just sitting in vials in laboratories. While a "nuclear winter," resulting from a massive exchange of nuclear weapons, could also kill off most of life on earth and severely compromise the health of future generations, they are easier to control. Biological weapons, on the other hand, can get out of control very easily, as the recent anthrax attacks has demonstrated. There is no way to guarantee the security of these doomsday weapons because very tiny amounts can be stolen or accidentally released and then grow or be grown to horrendous proportions. The Black Death of the Middle Ages would be small in comparison to the potential damage bioweapons could cause. Abolition of chemical weapons is less of a priority because, while they can also kill millions of people outright, their persistence in the environment would be less than nuclear or biological agents or more localized. Hence, chemical weapons would have a lesser effect on future generations of innocent people and the natural environment. Like the Holocaust, once a localized chemical extermination is over, it is over. With nuclear and biological weapons, the killing will probably never end. Radioactive elements last tens of thousands of years and will keep causing cancers virtually forever. Potentially worse than that, bio-engineered agents by the hundreds with no known cure could wreck even greater calamity on the human race than could persistent radiation. AIDS and ebola viruses are just a small example of recently emerging plagues with no known cure or vaccine. Can we imagine hundreds of such plagues? HUMAN EXTINCTION IS NOW POSSIBLE.

### Advantage 1

#### No risk of resource wars---historical evidence all concludes neg---cooperation is way more likely and solves

Jeremy Allouche 11 is currently a Research Fellow at the Institute of Development Studies at the University of Sussex. "The sustainability and resilience of global water and food systems: Political analysis of the interplay between security, resource scarcity, political systems and global trade" Food PolicyVolume 36, Supplement 1, January 2011, Pages S3-S8 Accessed via: Science Direct Sciverse

Water/food resources, war and conflict

The question of resource scarcity has led to many debates on whether scarcity (whether of food or water) will lead to conflict and war. The underlining reasoning behind most of these discourses over food and water wars comes from the Malthusian belief that there is an imbalance between the economic availability of natural resources and population growth since while food production grows linearly, population increases exponentially. Following this reasoning, neo-Malthusians claim that finite natural resources place a strict limit on the growth of human population and aggregate consumption; if these limits are exceeded, social breakdown, conflict and wars result. Nonetheless, it seems that most empirical studies do not support any of these neo-Malthusian arguments. Technological change **and greater inputs of capital** have **dramatically increased labour productivity in agriculture.** More generally, the neo-Malthusian view has suffered because during the last two centuries **humankind has breached many resource barriers that seemed unchallengeable**.¶ Lessons from history: alarmist scenarios, resource wars and international relations¶ In a so-called age of uncertainty, a number of alarmist scenarios have linked the increasing use of water resources and food insecurity with wars. The idea of water wars (perhaps more than food wars) is a dominant discourse in the media (see for example Smith, 2009), NGOs (International Alert, 2007) and within international organizations (UNEP, 2007). In 2007, UN Secretary General Ban Ki-moon declared that ‘water scarcity threatens economic and social gains and is a potent fuel for wars and conflict’ (Lewis, 2007). Of course, this type of discourse has an **instrumental purpose**; security and conflict are here used for raising water/food as key policy priorities at the international level.¶ In the Middle East, presidents, prime ministers and foreign ministers have also used this bellicose rhetoric. Boutrous Boutros-Gali said; ‘the next war in the Middle East will be over water, not politics’ (Boutros Boutros-Gali in Butts, 1997, p. 65). The question is not whether the sharing of transboundary water sparks political tension and alarmist declaration, but rather to what extent water has been a principal factor in international conflicts. The evidence seems quite weak. Whether by president Sadat in Egypt or King Hussein in Jordan, none **of these declarations have been followed up by military action**.¶ The governance of transboundary water has gained increased attention these last decades. This has a direct impact on the global food system as water allocation agreements determine the amount of water that can used for irrigated agriculture. The likelihood of conflicts over water is an important parameter to consider in assessing the stability, sustainability and resilience of global food systems.¶ None **of the** various and extensive databases on the causes of war show water as a casus belli. Using the International Crisis Behavior (ICB) data set and supplementary data from the University of Alabama on water conflicts, Hewitt, Wolf and Hammer found only seven disputes where water seems to have been at least a partial cause for conflict (Wolf, 1998, p. 251). In fact, about 80% of the incidents relating to water were limited purely to governmental rhetoric intended for the electorate (Otchet, 2001, p. 18).¶ As shown in The Basins At Risk (BAR) water event database, **more than two-thirds of over 1800 water-related ‘events’ fall on the ‘cooperative’ scale** (Yoffe et al., 2003). Indeed, if one takes into account a much longer period, the following figures clearly demonstrate this argument. According to studies by the United Nations Food and Agriculture Organization (FAO), organized political bodies signed between the year 805 and 1984 more than 3600 water-related treaties, and approximately 300 treaties dealing with water management or allocations in international basins have been negotiated since 1945 ([FAO, 1978] and [FAO, 1984]).¶ The fear around water wars have been driven by a Malthusian outlook which equates scarcity with violence, conflict and war. There is however **no direct correlation between water scarcity and transboundary conflict**. Most specialists now tend to agree that the major issue is not scarcity per se but rather the allocation of water resources between the different riparian states (see for example [Allouche, 2005], [Allouche, 2007] and [Rouyer, 2000]). Water rich countries have been involved in a number of disputes with other relatively water rich countries (see for example India/Pakistan or Brazil/Argentina). The perception of each state’s estimated water needs really constitutes the core issue in transboundary water relations. Indeed, whether this scarcity exists or not in reality, perceptions of the amount of available water shapes people’s attitude towards the environment (Ohlsson, 1999). In fact, some water experts have argued that scarcity drives the process of co-operation among riparians ([Dinar and Dinar, 2005] and [Brochmann and Gleditsch, 2006]).¶ In terms of international relations, the threat of water wars due to increasing scarcity **does not make much sense in the light of the recent** historical record. Overall, the water war rationale expects conflict to occur over water, and appears to suggest that violence is a viable means of securing national water supplies, an argument which is highly contestable.¶ The debates over the likely impacts of climate change have again popularised the idea of water wars. The argument runs that climate change will precipitate worsening ecological conditions contributing to resource scarcities, social breakdown, institutional failure, mass migrations and in turn cause greater political instability and conflict ([Brauch, 2002] and [Pervis and Busby, 2004]). In a report for the US Department of Defense, Schwartz and Randall (2003) speculate about the consequences of a worst-case climate change scenario arguing that water shortages will lead to aggressive wars (Schwartz and Randall, 2003, p. 15). Despite growing concern that climate change will lead to instability and violent conflict, **the evidence base to substantiate the connections is thin** ([Barnett and Adger, 2007] and [Kevane and Gray, 2008]).

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

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

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

#### No impact to heg

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At the same time, preeminence creates burdens and facilitates imprudent behavior. Indeed, because of America’s unique political ideology, which sees its own domestic values and ideals as universal, and the relative openness of the foreign policymaking process, the United States is particularly susceptible to both the temptations and burdens of preponderance. For decades, perhaps since its very founding, the United States has viewed what is good for itself as good for the world. During its period of preeminence, the United States has both tried to maintain its position at the top and to transform world politics in fundamental ways, combining elements of realpolitik and liberal universalism (democratic government, free trade, basic human rights). At times, these desires have conflicted with each other but they also capture the enduring tensions of America’s role in the world. The absence of constraints and America’s overestimation of its own ability to shape outcomes has served to weaken its overall position. And because foreign policy is not the reserved and exclusive domain of the president---who presumably calculates strategy according to the pursuit of the state’s enduring national interests---the policymaking process is open to special interests and outside influences and, thus, susceptible to the cultivation of misperceptions, miscalculations, and misunderstandings. Five features in particular, each a consequence of how America has used its power in the unipolar era, have worked to diminish America’s long-term material and strategic position. Overextension. During its period of preeminence, the United States has found it difficult to stand aloof from threats (real or imagined) to its security, interests, and values. Most states are concerned with what happens in their immediate neighborhoods. The United States has interests that span virtually the entire globe, from its own Western Hemisphere, to Europe, the Middle East, Persian Gulf, South Asia, and East Asia. As its preeminence enters its third decade, the United States continues to define its interests in increasingly expansive terms. This has been facilitated by the massive forward presence of the American military, even when excluding the tens of thousands of troops stationed in Iraq and Afghanistan. The U.S. military has permanent bases in over 30 countries and maintains a troop presence in dozens more.13 There are two logics that lead a preeminent state to overextend, and these logics of overextension lead to goals and policies that exceed even the considerable capabilities of a superpower. First, by definition, preeminent states face few external constraints. Unlike in bipolar or multipolar systems, there are no other states that can serve to reliably check or counterbalance the power and influence of a single hegemon. This gives preeminent states a staggering freedom of action and provides a tempting opportunity to shape world politics in fundamental ways. Rather than pursuing its own narrow interests, preeminence provides an opportunity to mix ideology, values, and normative beliefs with foreign policy. The United States has been susceptible to this temptation, going to great lengths to slay dragons abroad, and even to remake whole societies in its own (liberal democratic) image.14 The costs and risks of taking such bold action or pursuing transformative foreign policies often seem manageable or even remote. We know from both theory and history that external powers can impose important checks on calculated risk-taking and serve as a moderating influence. The bipolar system of the Cold War forced policymakers in both the United States and the Soviet Union to exercise extreme caution and prudence. One wrong move could have led to a crisis that quickly spiraled out of policymakers’ control. Second, preeminent states have a strong incentive to seek to maintain their preeminence in the international system. Being number one has clear strategic, political, and psychological benefits. Preeminent states may, therefore, overestimate the intensity and immediacy of threats, or to fundamentally redefine what constitutes an acceptable level of threat to live with. To protect itself from emerging or even future threats, preeminent states may be more likely to take unilateral action, particularly compared to when power is distributed more evenly in the international system. Preeminence has not only made it possible for the United States to overestimate its power, but also to overestimate the degree to which other states and societies see American power as legitimate and even as worthy of emulation. There is almost a belief in historical determinism, or the feeling that one was destined to stand atop world politics as a colossus, and this preeminence gives one a special prerogative for one’s role and purpose in world politics. The security doctrine that the George W. Bush administration adopted took an aggressive approach to maintaining American preeminence and eliminating threats to American security, including waging preventive war. The invasion of Iraq, based on claims that Saddam Hussein possessed weapons of mass destruction (WMD) and had ties to al Qaeda, both of which turned out to be false, produced huge costs for the United States---in political, material, and human terms. After seven years of war, tens of thousands of American military personnel remain in Iraq. Estimates of its long-term cost are in the trillions of dollars.15 At the same time, the United States has fought a parallel conflict in Afghanistan. While the Obama administration looks to dramatically reduce the American military presence in Iraq, President Obama has committed tens of thousands of additional U.S. troops to Afghanistan. Distraction. Preeminent states have a tendency to seek to shape world politics in fundamental ways, which can lead to conflicting priorities and unnecessary diversions. As resources, attention, and prestige are devoted to one issue or set of issues, others are necessarily disregarded or given reduced importance. There are always trade-offs and opportunity costs in international politics, even for a state as powerful as the United States. Most states are required to define their priorities in highly specific terms. Because the preeminent state has such a large stake in world politics, it feels the need to be vigilant against any changes that could impact its short-, medium-, or longterm interests. The result is taking on commitments on an expansive number of issues all over the globe. The United States has been very active in its ambition to shape the postCold War world. It has expanded NATO to Russia’s doorstep; waged war in Bosnia, Kosovo, Iraq, and Afghanistan; sought to export its own democratic principles and institutions around the world; assembled an international coalition against transnational terrorism; imposed sanctions on North Korea and Iran for their nuclear programs; undertaken ‘‘nation building’’ in Iraq and Afghanistan; announced plans for a missile defense system to be stationed in Poland and the Czech Republic; and, with the United Kingdom, led the response to the recent global financial and economic crisis. By being so involved in so many parts of the world, there often emerges ambiguity over priorities. The United States defines its interests and obligations in global terms, and defending all of them simultaneously is beyond the pale even for a superpower like the United States. Issues that may have received benign neglect during the Cold War, for example, when U.S. attention and resources were almost exclusively devoted to its strategic competition with the Soviet Union, are now viewed as central to U.S. interests. Bearing Disproportionate Costs of Maintaining the Status Quo. As the preeminent power, the United States has the largest stake in maintaining the status quo. The world the United States took the lead in creating---one based on open markets and free trade, democratic norms and institutions, private property rights and the rule of law---has created enormous benefits for the United States. This is true both in terms of reaching unprecedented levels of domestic prosperity and in institutionalizing U.S. preferences, norms, and values globally. But at the same time, this system has proven costly to maintain. Smaller, less powerful states have a strong incentive to free ride, meaning that preeminent states bear a disproportionate share of the costs of maintaining the basic rules and institutions that give world politics order, stability, and predictability. While this might be frustrating to U.S. policymakers, it is perfectly understandable. Other countries know that the United States will continue to provide these goods out of its own self-interest, so there is little incentive for these other states to contribute significant resources to help maintain these public goods.16 The U.S. Navy patrols the oceans keeping vital sea lanes open. During financial crises around the globe---such as in Asia in 1997-1998, Mexico in 1994, or the global financial and economic crisis that began in October 2008--- the U.S. Treasury rather than the IMF takes the lead in setting out and implementing a plan to stabilize global financial markets. The United States has spent massive amounts on defense in part to prevent great power war. The United States, therefore, provides an indisputable collective good---a world, particularly compared to past eras, that is marked by order, stability, and predictability. A number of countries---in Europe, the Middle East, and East Asia---continue to rely on the American security guarantee for their own security. Rather than devoting more resources to defense, they are able to finance generous social welfare programs. To maintain these commitments, the United States has accumulated staggering budget deficits and national debt. As the sole superpower, the United States bears an additional though different kind of weight. From the Israeli-Palestinian dispute to the India Pakistan rivalry over Kashmir, the United States is expected to assert leadership to bring these disagreements to a peaceful resolution. The United States puts its reputation on the line, and as years and decades pass without lasting settlements, U.S. prestige and influence is further eroded. The only way to get other states to contribute more to the provision of public goods is if the United States dramatically decreases its share. At the same time, the United States would have to give other states an expanded role and greater responsibility given the proportionate increase in paying for public goods. This is a political decision for the United States---maintain predominant control over the provision of collective goods or reduce its burden but lose influence in how these public goods are used. Creation of Feelings of Enmity and Anti-Americanism. It is not necessary that everyone admire the United States or accept its ideals, values, and goals. Indeed, such dramatic imbalances of power that characterize world politics today almost always produce in others feelings of mistrust, resentment, and outright hostility. At the same time, it is easier for the United States to realize its own goals and values when these are shared by others, and are viewed as legitimate and in the common interest. As a result of both its vast power but also some of the decisions it has made, particularly over the past eight years, feelings of resentment and hostility toward the United States have grown, and perceptions of the legitimacy of its role and place in the world have correspondingly declined. Multiple factors give rise toanti-American sentiment, and anti-Americanism takes different shapes and forms.17 It emerges partly as a response to the vast disparity in § Marked 07:24 § power the United States enjoys over other states. Taking satisfaction in themissteps and indiscretions of the imposing Gulliver is a natural reaction. In societies that globalization (which in many parts of the world is interpreted as equivalent to Americanization) has largely passed over, resentment and alienation are felt when comparing one’s own impoverished, ill-governed, unstable society with the wealth, stability, and influence enjoyed by the United States.18 Anti-Americanism also emerges as a consequence of specific American actions and certain values and principles to which the United States ascribes. Opinion polls showed that a dramatic rise in anti-American sentiment followed the perceived unilateral decision to invade Iraq (under pretences that failed to convince much of the rest of the world) and to depose Saddam Hussein and his government and replace itwith a governmentmuchmore friendly to the United States. To many, this appeared as an arrogant and completely unilateral decision by a single state to decide for itselfwhen---and under what conditions---military force could be used. A number of other policy decisions by not just the George W. Bush but also the Clinton and Obama administrations have provoked feelings of anti-American sentiment. However, it seemed that a large portion of theworld had a particular animus for GeorgeW. Bush and a number of policy decisions of his administration, from voiding the U.S. signature on the International Criminal Court (ICC), resisting a global climate change treaty, detainee abuse at Abu Ghraib in Iraq and at Guantanamo Bay in Cuba, and what many viewed as a simplistic worldview that declared a ‘‘war’’ on terrorism and the division of theworld between goodand evil.Withpopulations around theworld mobilized and politicized to a degree never before seen---let alone barely contemplated---such feelings of anti-American sentiment makes it more difficult for the United States to convince other governments that the U.S.’ own preferences and priorities are legitimate and worthy of emulation. Decreased Allied Dependence. It is counterintuitive to think that America’s unprecedented power decreases its allies’ dependence on it. During the Cold War, for example, America’s allies were highly dependent on the United States for their own security. The security relationship that the United States had with Western Europe and Japan allowed these societies to rebuild and reach a stunning level of economic prosperity in the decades following World War II. Now that the United States is the sole superpower and the threat posed by the Soviet Union no longer exists, these countries have charted more autonomous courses in foreign and security policy. A reversion to a bipolar or multipolar system could change that, making these allies more dependent on the United States for their security. Russia’s reemergence could unnerve America’s European allies, just as China’s continued ascent could provoke unease in Japan. Either possibility would disrupt the equilibrium in Europe and East Asia that the United States has cultivated over the past several decades. New geopolitical rivalries could serve to create incentives for America’s allies to reduce the disagreements they have with Washington and to reinforce their security relationships with the United States.

### Advantage 2

Science diplomacy fails – administration isn’t viewed as credible

David Dickson, 6/4/09, “The limits of science diplomacy”, <http://www.scidev.net/en/editorials/the-limits-of-science-diplomacy.html>

Recently, the Obama administration has given this field a new push, in its desire to pursue "soft diplomacy" in regions such as the Middle East. Scientific agreements have been at the forefront of the administration's activities in countries such as Iraq and Pakistan. But — as emerged from a meeting entitled New Frontiers in Science Diplomacy, held in London this week (1–2 June) — using science for diplomatic purposes is not as straightforward as it seems. Some scientific collaboration clearly demonstrates what countries can achieve by working together. For example, a new synchrotron under construction in Jordan is rapidly becoming a symbol of the potential for teamwork in the Middle East. But whether scientific cooperation can become a precursor for political collaboration is less evident. For example, despite hopes that the Middle East synchrotron would help bring peace to the region, several countries have been reluctant to support it until the Palestine problem is resolved. Indeed, one speaker at the London meeting (organised by the UK's Royal Society and the American Association for the Advancement of Science) even suggested that the changes scientific innovations bring inevitably lead to turbulence and upheaval. In such a context, viewing science as a driver for peace may be wishful thinking. Conflicting ethos Perhaps the most contentious area discussed at the meeting was how science diplomacy can frame developed countries' efforts to help build scientific capacity in the developing world. There is little to quarrel with in collaborative efforts that are put forward with a genuine desire for partnership. Indeed, partnership — whether between individuals, institutions or countries — is the new buzzword in the "science for development" community. But true partnership requires transparent relations between partners who are prepared to meet as equals. And that goes against diplomats' implicit role: to promote and defend their own countries' interests. John Beddington, the British government's chief scientific adviser, may have been a bit harsh when he told the meeting that a diplomat is someone who is "sent abroad to lie for his country". But he touched a raw nerve. Worlds apart yet co-dependent The truth is that science and politics make an uneasy alliance. Both need the other. Politicians need science to achieve their goals, whether social, economic or — unfortunately — military; scientists need political support to fund their research. But they also occupy different universes. Politics is, at root, about exercising power by one means or another. Science is — or should be — about pursuing robust knowledge that can be put to useful purposes.

Clinton solves – commitment to science diplomacy now

Vaughan C. Turekian, 7/21/10, Chief international officer, AAAS, Washington, DC. Medical News Today, 21 July. <http://www.medicalnewstoday.com/articles/195393.php>

"Innovation, science [and] technology must again become fundamental components of how we conduct development work," Secretary of State Hillary Rodham Clinton told a "high-level meeting of international development and science experts" last week,[SciDev.net](http://www.scidev.net/en/news/clinton-puts-science-at-heart-of-us-development-strategy.html" \t "_blank) reports. The meeting, Transforming Development Through Science Technology and Innovation, "was originally billed as a consultation to help map out a 'bold new' science strategy for [USAID]. But observers say it went beyond that, putting science and innovation firmly at the heart of USAID's work and the administration's development policy." The article notes that the meeting "follows the recent appointment of a science and technology adviser and repeated calls for USAID to consider more focused approach to its support of science and technology in developing countries," the news service writes. Specifically, Clinton "emphasised the need to collaborate with the private sector, non-governmental organizations and, particularly, local groups." She also said the administration is encouraging science diplomacy and exploring ways to promote innovation by including competitions "that encourage more people to put their own intellectual capital to work."

#### No impact to disease

Posner 5—Senior Lecturer, U Chicago Law. Judge on the US Court of Appeals 7th Circuit. AB from Yale and LLB from Harvard. (Richard, Catastrophe, http://goliath.ecnext.com/coms2/gi\_0199-4150331/Catastrophe-the-dozen-most-significant.html)

Yet the fact that Homo sapiens has managed to survive every disease to assail it in the 200,000 years or so of its existence is a source of genuine comfort, at least if the focus is on extinction events. There have been enormously destructive plagues, such as the Black Death, smallpox, and now AIDS, but none has come close to destroying the entire human race. There is a biological reason. Natural selection favors germs of limited lethality; they are fitter in an evolutionary sense because their genes are more likely to be spread if the germs do not kill their hosts too quickly. The AIDS virus is an example of a lethal virus, wholly natural, that by lying dormant yet infectious in its host for years maximizes its spread. Yet there is no danger that AIDS will destroy the entire human race. The likelihood of a natural pandemic that would cause the extinction of the human race is probably even less today than in the past (except in prehistoric times, when people lived in small, scattered bands, which would have limited the spread of disease), despite wider human contacts that make it more difficult to localize an infectious disease.