# 1nc

## 1

#### Obama win now by a decisive, but narrow margin

Mark Blumenthal, HuffPo, 10/1/12, New 2012 Polls Show Little Change In State Of Race , www.huffingtonpost.com/2012/10/01/2012-polls-obama-romney\_n\_1928472.html?utm\_hp\_ref=elections-2012

With attention turning to the first of three upcoming national debates, new polls show President Barack Obama continuing to hold a narrow lead over Republican nominee Mitt Romney, both nationwide and in the key battleground states that are likely to decide the election.

Two new national surveys released on Monday morning both show a slightly closer race than most other recent polls, although those new results are consistent with previous surveys from the same organizations, indicating that Obama's September lead is holding.

The new Washington Post/ABC News survey finds Obama leading by just 2 percentage points nationwide (49 percent to 47 percent) among the voters deemed most likely to vote. But that result was no different than their previous survey, taken just after the Democratic convention three weeks ago, which showed Obama with a 1-point edge (49 percent to 48 percent).

However, among all registered voters nationwide, the new Post/ABC poll shows Obama leading by 5 percentage points (49 percent to 44 percent), again the same margin as their survey found three weeks ago. The Post also reports that Obama's lead over Romney is larger (52 percent to 41 percent) among a subset of likely voters in swing states.

Similarly, a new Politico/George Washington University Battleground poll also finds Obama leading by 2 percentage points among likely voters (49 percent to 47 percent), a finding essentially unchanged from the 3-point Obama margin (50 percent to 47 percent) found in their previous survey.

The four results have been collectively more favorable to Romney than those produced by other recent national polls, and more importantly, they have shown no statistically meaningful trend in September. The HuffPost Pollster tracking model, which draws on all national and state-level polling and corrects for consistent "house effect" differences among pollsters, continues to give Obama a slightly larger, 4 percentage point lead over Romney.

Similarly, a handful of new statewide surveys released over the weekend shows results consistent with a 3- to 4-point Obama lead nationwide.

In Iowa, a new Des Moines Register Iowa poll found Obama leading by 4 percentage points (49 percent to 45 percent), exactly the same margin as the Pollster tracking model.

In Ohio, an automated recorded-voice survey by the Democratic-affiliated firm Public Policy Polling gives Obama a 4 percentage point advantage, while a new Columbus Dispatch mail-in survey gives Obama a 9-point lead. Not surprisingly, Obama's lead on the Pollster tracking model falls somewhere in between.

Finally, another new PPP poll from North Carolina shows a dead-even race, with each candidate at 48 percent -- again, consistent with a similarly close margin on HuffPost's tracking model. North Carolina has been the closest of the 50 states over the last three weeks.

Thus, the combination of national and statewide polling continues to show Obama leading Romney by statistically meaningful margins in all of the battleground states except North Carolina. Were he to carry all of the states where he is currently leading, Obama would win 332 electoral votes -- far more than the 270 needed to win. Romney currently leads in states accounting for 191 electoral votes.

Can Wednesday night's nationally televised debates between Obama and Romney, the first of three to be held between now and late October, be a "game changer" for Romney? Not likely, according to George Washington University political scientist John Sides.

"When it comes to shifting enough votes to decide the outcome of the election," Sides writes in the Washington Monthly, "presidential debates have rarely, if ever, mattered."

Sides cites research by political scientists Robert Erikson and Christopher Wlezien, who studied polling from every election from 1952 to 2008 and found that while debates sometimes nudge results, they rarely produce substantial changes in voter preferences. Erikson and Wlezien found that since 1960, the leader in the polling before the debates remained the leader after the debates.

The most significant before-and-after debate shift was toward Gerald Ford in his 1976 race against Jimmy Carter. However, as Erikson and Wlezien note, "Carter's support was in steady decline" during the final month of the race.

It is worth remembering that while Obama enjoys a statistically meaningful lead in national polling, his margin remains relatively modest compared to past elections. So while a "nudge" toward Romney on the order of what debates produced in 1980, 2000 or 2004 might not be enough to move Romney ahead, it could make for a much closer race.

#### Plan causes environmental backlash

Leo Hickman, The Guardian, 8/23/11, Fusion power: is it getting any closer?, [www.guardian.co.uk/environment/2011/aug/23/fusion-power-is-it-getting-closer](http://www.guardian.co.uk/environment/2011/aug/23/fusion-power-is-it-getting-closer)

But ITER's projected costs are already rocketing, and politicians across Europe have expressed concern, demanding that budgets be capped. Fusion energy also has its environmental detractors. When the ITER project was announced in 2005, Greenpeace said it "deplored" the project, arguing that the money could be better spent building offshore wind turbines. "Advocates of fusion research predict that the first commercial fusion electricity might be delivered in 50-80 years from now," said Jan Vande Putte, Greenpeace International's nuclear campaigner. "But most likely, it will lead to a dead end, as the technical barriers to be overcome are enormous." Meanwhile, there is criticism from some plasma physicists that the design of ITER is wrong and alternative designs might produce better results for much less money.

#### That flips the election

Schnur, 4-9

Dan Schnur, director of the Jesse M. Unruh Institute of Politics at the University of Southern California; he served as the national communications director of Senator John McCain’s presidential campaign in 2000, “The President, Gas Prices and the Pipeline,” http://campaignstops.blogs.nytimes.com/2012/04/09/the-president-gas-prices-and-the-keystone-pipeline/

Like every president seeking re-election, Barack Obama walks the fine line every day between the discordant goals of motivating his party’s strongest loyalists and reaching out to swing voters for their support. A few weeks ago, that pathway took him to a tiny town in Oklahoma, where, caught between the anti-drilling demands of the environmental community and the thirst for more affordable gasoline from unions, business owners and drivers, the president announced his support for building half of an oil pipeline.

The economic impact of rising energy prices in itself is considerable, but the psychological toll on voters is just as significant, as tens of millions of motorists are reminded by large signs on almost every street corner of the financial pain of filling their gas tanks. Obama and his political lieutenants are acutely aware that this growing frustration has the potential to complicate an election year that otherwise seems to be shifting in the incumbent’s favor.

As a result, Obama has been hitting the energy issue hard in recent weeks, at least as hard as a candidate can hit when forced to navigate between two almost mutually exclusive political priorities. The result is a president who talks forcefully of the benefits of wind and solar power while also boasting about the amount of oil the nation produces under his leadership.

There are times when this gets slightly uncomfortable. Obama recently called for increased exploration along the Atlantic Coast but stopped short of calling for expanded drilling in that region. This is the energy policy equivalent of admitting to an experiment with marijuana but not inhaling.

Where the issue becomes more tangible and therefore trickier for Obama is when the multiple choices become binary. The debate over the proposed XL Keystone Pipeline that would transport Canadian oil through the nation’s heartland to the Gulf of Mexico crystallizes the choices involved and forces a shades-of-gray conversation into starker hues of black and white.

Obama recognizes that the devoted environmentalists who represent a critical portion of the Democratic party base need some motivation to turn out for him in the fall. But he also understands that centrist voters who support him on a range of other domestic and foreign policy matters could be lured away by a Republican opponent who either promises relief at the gas pump or who can lay blame at the White House doorstep for those higher prices. Even more complicated is the role of organized labor, which has poured immense amounts of support into Obama’s re-election but also prioritizes the job-creation potential of the pipeline.

The result of these competing political and policy pressures brought Obama to Ripley, Okla., where he tried to satisfy the needs of these various audiences without alienating any of them. First, the president endorsed the southern portion of the Keystone project in order to relieve the glut of domestically drilled oil that is now unable to make it to refineries near the Gulf of Mexico in a timely manner. This had the effect of irritating his environmental allies but failed to mollify the project’s advocates, who pointed out that the review process that the president called for was already underway.

He then reiterated the administration’s antipathy toward the northern section of the pipeline, which would allow Canadian-drilled oil to be transported into this country. This provided some comfort to drilling opponents, but infuriated both the pro-oil forces and the Canadian government. The most likely outcome is that Canada will still build a pipeline, but rather one that goes westward to the Pacific Ocean north of the United States border and then ships Canadian oil to China instead of into this country.

#### Romney win causes China-bashing – causes a trade war

Gerstein 11

(Josh, writer @ Politico, “The GOP's China syndrome”, 11/22/12, http://www.politico.com/news/stories/1111/68952.html)

Mitt Romney says America is at war with China — a “trade war” over its undervalued currency. “They’re stealing our jobs. And we’re gonna stand up to China,” the former Massachusetts governor declared in a recent Republican presidential debate, arguing that the United States should threaten to impose tariffs on Chinese imports. When Romney steps on stage tonight for another debate, this one devoted to foreign policy, that kind of China-bashing is likely to be a favorite theme. With a moribund economy and relatively little traction for other international issues, the threat posed by cheap Chinese imports and Chinese purchases of U.S. debt is an irresistible target. The problem, China experts are quick to point out, is that those attacks often fly in the face of the business interests Republicans have traditionally represented, not to mention the record many of the candidates have either supporting trade with China — or actively soliciting it. Just last year, for example, Romney slammed President Barack Obama for growth-killing protectionism after he put a 35 percent tariff on Chinese tires because of a surge of cheap imports. And, Romney wrote in his book, “No Apology: The Case for American Greatness,” “Protectionism stifles productivity.” And though Texas Gov. Rick Perry predicted at a debate this month that “the Chinese government will end up on the ash heap of history if they do not change their virtues,” a picture posted on the Internet shows a smiling Perry on a trade mission to Shanghai and Beijing posing with Chinese Foreign Minister Yang Jiechi after presenting him with a pair of cowboy boots. Nor has Perry been shy about encouraging Chinese investments in Texas: In October 2010, he appeared at the announcement of a new U.S. headquarters for Huawei Technologies to be located in Plano, Texas, despite lingering concerns among U.S. security officials that Huawei-made telecommunications equipment is designed to allow unauthorized access by the Chinese government. “There’s a certain pandering going on,” said Nicholas Lardy of the Peterson Institute for International Economics, who adds that the GOP rhetoric is squarely at odds with the views of the U.S. establishment, which believes a showdown with China over the trade issue “will make things worse, not better.” Not all of the 2012 GOP presidential hopefuls have taken to publicly pummeling Beijing. The only bona fide China expert in the group, former Ambassador to China Jon Huntsman, has criticized Romney for being cavalier and simplistic in his talk of tariffs. “You can give applause lines, and you can kind of pander here and there. You start a trade war if you start slapping tariffs randomly on Chinese products based on currency manipulation,” Huntsman said at a recent debate. “That doesn’t work.” Former Sen. Rick Santorum also rejected the idea of slapping tariffs on Beijing if it won’t buckle on the currency issue. “That just taxes you. I don’t want to tax you,” Santorum said. Newt Gingrich says he wants to bring a world of hurt down on Beijing for alleged Chinese cyberattacks on the U.S. and theft of intellectual property, though he’s vague about how. “We’re going to have to find ways to dramatically raise the pain level for the Chinese cheating,” the former house speaker declares. And Herman Cain talks of a threat from China, but says the answer is to promote growth in the U.S. “China’s economic dominance would represent a national security threat to the USA, and possibly to the rest of the world,” Cain wrote in May in the Daily Caller. “We can outgrow China because the USA is not a loser nation. We just need a winner in the White House.” Romney’s rhetoric has been **particularly harsh**. “It’s predatory pricing, it’s killing jobs in America,” he declared at the CNBC debate earlier this month, promising to make a formal complaint to the World Trade Organization about China’s currency manipulation. “I would apply, if necessary, tariffs to make sure that they understand we are willing to play at a level playing field.” The Romney campaign insists those tariffs are entirely distinguishable from the tire duties Obama imposed in 2009. “The distinction between Obama’s tire action and what Gov. Romney is proposing is simple,” said a Romney aide who did not want to be named. “President Obama is not getting tough with China or pushing them unilaterally, he is handing out political favors to union allies. [Romney’s] policy focuses on fostering competition by keeping markets open and the playing field level.” Romney, who helped set up investment bank Bain Capital, has long been a favorite of Wall Street, so his stridency on the China trade issue has taken some traditional conservatives — for whom free trade is a fundamental tenet — by surprise. National Review said Romney’s move “risk[ed] a trade war with China” **and was “a remarkably bad idea.”** In fact, many business leaders give Obama good marks for his China policy. “What the Obama administration has done in not labeling China as a ‘currency manipulator’ is correct,” said one U.S. business lobbyist who closely follows U.S.-China trade issues and asked not to be named. “We’re very leery of a tit-for-tat situation,” he added, while acknowledging that the anti-China rhetoric is “good politics.”

#### That goes nuclear

Taaffe 5

(Peter Taaffe, general secretary of the Socialist Party of England and Wales, “China, A New Superpower?,” Socialist Alternative.org, Nov 1, 2005, pg. <http://www.socialistalternative.org/news/article11.php?id=30>)

While this conflict is unresolved, the shadow of a trade war looms. Some commentators, like Henry C.K. Liu in the Asia Times, go further and warn that "trade wars can lead to shooting wars." China is not the Japan of the 21st century. Japan in the 1980s relied on the U.S. military and particularly its nuclear umbrella against China, and was therefore subject to the pressure and blackmail of the U.S. ruling class. The fear of the U.S., and the capitalists of the "first world" as a whole, is that China may in time "out-compete" the advanced nations for hi-tech jobs while holding on to the stranglehold it now seems to have in labor-intensive industries. As the OECD commented recently: "In the five-year period to 2003, the number of students joining higher education courses has risen by three and a half times, with a strong emphasis on technical subjects." The number of patents and engineers produced by China has also significantly grown. At the same time, an increasingly capitalist China - most wealth is now produced in the private sector but the majority of the urban labor force is still in state industries - and the urgency for greater energy resources in particular to maintain its spectacular growth rate has brought it into collision on a world scale with other imperialist powers, particularly the U.S. In a new worldwide version of the "Great Game" - the clash for control of central Asia's resources in the nineteenth century - the U.S. and China have increasingly come up against and buffeted one another. Up to now, the U.S. has held sway worldwide due to its economic dominance buttressed by a colossal war machine accounting for 47% of total world arms spending. But Iraq has dramatically shown the limits of this: "A country that cannot control Iraq can hardly remake the globe on its own." (Financial Times) But no privileged group disappears from the scene of history without a struggle. Donald Rumsfeld, U.S. defense secretary, has stated: "Since no nation threatens China, one must wonder: why this growing [arms] investment? Why these continuing large and expanding arms purchases?" China could ask the same question of the U.S. In order to maintain its position, the U.S. keeps six nuclear battle fleets permanently at sea, supported by an unparalleled network of bases. As Will Hutton in The Observer has commented, this is not because of "irrational chauvinism or the needs of the military-industrial complex, but because of the pressure they place on upstart countries like China." In turn, the Chinese elite has responded in kind. For instance, in the continuing clash over Taiwan, a major-general in the People's Liberation Army baldly stated that if China was attacked "by Washington during a confrontation over Taiwan... I think we would have to respond with nuclear weapons." He added: "We Chinese will prepare ourselves for the destruction of all of the cities east of Xian. Of course, the Americans would have to be prepared that hundreds... of cities would be destroyed by the Chinese." This bellicose nuclear arms rattling shows the contempt of the so-called great powers for the ordinary working-class and peasant peoples of China and the people of the U.S. when their interests are at stake.

## 2

#### Fiscal cliff negotiations will succeed now, but pre-election groundwork key

Jonathan Weisman, NYTimes, 10/1/12, Leaders at Work on Plan to Avert Mandatory Cuts, www.nytimes.com/2012/10/02/us/senate-leaders-at-work-on-plan-to-avert-fiscal-cliff.html?\_r=2&hp&&pagewanted=all

Senate leaders are closing in on a path for dealing with the “fiscal cliff” facing the country in January, opting to try to use a postelection session of Congress to reach agreement on a comprehensive deficit reduction deal rather than a short-term solution.

Senate Democrats and Republicans remain far apart on the details, and House Republicans continue to resist any discussion of tax increases. But lawmakers and aides say that a bipartisan group of senators is coalescing around an ambitious three-step process to avert a series of automatic tax increases and deep spending cuts.

#### Fusion’s unpopular

Broad, 9/29

(NYT Columnist, “So Far Unfruitful, Fusion Project Faces a Frugal Congress,” http://www.nytimes.com/2012/09/30/science/fusion-project-faces-a-frugal-congress.html?\_r=2&pagewanted=all)

For more than 50 years, physicists have been eager to achieve controlled fusion, an elusive goal that could potentially offer a boundless and inexpensive source of energy. To do so, American scientists have built a giant laser, now the size of a football stadium, that takes target practice on specks of fuel smaller than peppercorns. The device has so far cost taxpayers more than $5 billion, making it one of the most expensive federally financed science projects ever. But so far, it has not worked. Unfortunately, the due date is Sunday, the last day of the fiscal year. And Congress, which would need to allocate more money to keep the project alive, is going to want some explanations. “We didn’t achieve the goal,” said Donald L. Cook, an official at the National Nuclear Security Administration who oversees the laser project. Rather than predicting when it might succeed, he added in an interview, “we’re going to settle into a serious investigation” of what caused the unforeseen snags. The failure could have broad repercussions not only for the big laser, which is based at the Lawrence Livermore National Laboratory in California, but also for federally financed science projects in general. On one hand, the laser’s defenders point out, hard science is by definition risky, and no serious progress is possible without occasional failures. On the other, federal science initiatives seldom disappoint on such a gargantuan scale, and the setback comes in an era of tough fiscal choices and skepticism about science among some lawmakers. The laser team will have to produce a report for Congress about what might have gone wrong and how to fix it if given more time.

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

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

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

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

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

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

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

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

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

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

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

#### Middle East goes nuclear

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

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

## 3

#### The fifty states should substantially increase financial support for fusion energy generation in the United States, paid for using renewable portfolio standard compliance fees, lottery revenues, pollution charges, and revenue bonds.

States can effectively support energy R&D

Milford, 12

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

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

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

## 4

#### Simulating conflict scenarios ignores the complexity which taints predictions—the aff’s linear war-planning fails and causes escalating conflict

Jervis, professor of international affairs – Columbia, ‘97

(Robert, “Complex Systems: The Role of Interactions,” in Complexity, Global Politics, and National Security, eds. David S. Alberts and Thomas J. Czerwinski, National Defense University)

Because actions change the environment in which they operate, identical but later behavior does not produce identical results: history is about the changes produced by previous thought and action as people and organizations confront each other through time. The final crisis leading to World War II provides an illustration of some of these processes. Hitler had witnessed his adversaries give in to pressure; as he explained, "Our enemies are little worms. I saw them at Munich."21 But the allies had changed because of Hitler’s behavior. So had Poland. As A.J.P. Taylor puts it, "Munich cast a long shadow. Hitler waited for it to happen again; Beck took warning from the fate of Benes."22 Hitler was not the only leader to fail to understand that his behavior would change his environment. Like good linear social scientists, many statesmen see that their actions can produce a desired outcome, all other things being equal, and project into the future the maintenance of the conditions that their behavior will in fact undermine. This in part explains the Argentine calculations preceding the seizure of the Falklands/Malvinas. Their leaders could see that Britain’s ability to protect its position was waning, as evinced by the declining naval presence, and that Argentina’s claim to the islands had received widespread international support. But what they neglected was the likelihood that the invasion would alter these facts, unifying British opinion against accepting humiliation and changing the issue for international audiences from the illegitimacy of colonialism to the illegitimacy of the use of force. A similar neglect of the transformative power of action may explain why Saddam Hussein thought he could conquer Kuwait. Even if America wanted to intervene, it could do so only with the support and cooperation of other Arab countries, which had sympathized with Iraq’s claims and urged American restraint. But the invasion of Kuwait drastically increased the Arabs’ perception of threat and so altered their stance. Furthermore, their willingness to give credence to Iraqi promises was destroyed by the deception that had enabled the invasion to take everyone by surprise. Germany’s miscalculation in 1917 was based on a related error: although unrestricted submarine warfare succeeded in sinking more British shipping than the Germans had estimated would be required to drive Britain from the war, the American entry (which Germany expected) led the British to tolerate shortages that otherwise would have broken their will because they knew that if they held out, the U.S. would rescue them.23

The failure to appreciate the fact that the behavior of the actors is in part responsible for the environment which then impinges on them can lead observers—and actors as well— to underestimate actors’ influence. Thus states caught in a conflict spiral believe that they have little choice but to respond in kind to the adversary’s hostility. This may be true, but it may have been the states’ earlier behavior that generated the situation that now is compelling. Robert McNamara complains about how he was mislead by faulty military reporting but similarly fails to consider whether his style and pressure might have contributed to what he was being told.24

Products of Interaction as the Unit of Analysis

Interaction can be so intense and transformative that we can no longer fruitfully distinguish between actors and their environments, let alone say much about any element in isolation. We are accustomed to referring to roads as safe or dangerous, but if the drivers understand the road conditions this formulation may be misleading: the knowledge that, driving habits held constant, one stretch is safe or dangerous will affect how people drive—they are likely to slow down and be more careful when they think the road is dangerous and speed up and let their attention wander when it is "safe." It is then the road-driver system that is the most meaningful unit of analysis. In the wake of the sinking of a roll-on roll-off ferry, an industry representative said: With roro’s, the basic problem is that you have a huge open car deck with doors at each end. But people are well aware of this, and it is taken into account in design and operation. You don’t mess around with them. There have not been too many accidents because they are operated with such care.25

#### Warfighting based on linearity causes extinction—rethinking the terms of the simulation itself is key to grappling with every threat environment

Skyttner, professor of natural science – University of Gâvle, professor – Royal Swedish Military Academy, ‘5

(Lars, “Systems theory and the science of military command and control,” Kybernetes Vol. 34, Issue 7/8, p. 1240-1260)

Military activity has constantly been characterised by the need to design, realize, train and thereafter maintain an organization capable to fight against various kinds of external threats. Such a force has always been used in offensive as well as defensive tasks, e.g. from attacking neighbouring enemies to going together in order to defend oneself from invading forces. To succeed with this, strategical, operational and tactical skill is necessary for the joint effort. Further, a flexible tactical adaptation is necessary when the enemy changes his behaviour or take countermeasure.

The military manoeuvring has always felt the need for some kind of decision support and a management system. The decision support has sometimes manifested itself as good advisors or as today in the shape of advanced high-technological computer-aided expert systems. The management system has always consisted of various communication and control devices. How these systems should be constructed, adapted and developed to challenge new threatening pictures in the constantly changing surrounding world is no simple task.

Today the socio-technical systems of the modern society are increasingly all embracing and tighter integrated. System-relations more and more stand out as untransparent, incomprehensible and unmanageable. Furthermore, the world around is so rapidly changed that circumstantial planning often is a thing of the past.

The uncertainties regarding the nature of future combat therefore bring about great demands of flexibility and adaptability of our command and control systems. That qualities like information-advantage and a realistic surrounding-world apprehension call for increased integration of different sensors, arms and communication systems are nevertheless given. As given is that success in combat always is a function of how command is executed and how danger, stress, obscurity and general confusion which constantly exist will be handled. When the enemy no longer is seen in our binoculars and when we not even know who has released an attack against us, the need for creative thinking is of highest priority. Today an event of war even can lack the attacking component and imply hitherto unknown social phenomena.

As compared with such circumstances, traditional military thinking could not be considered particularly successful. There tactical problems always have been reduced to easily recognizable situations with a well-learned standard response. Quite natural, critical thinking, questioning and creativity have not got a prominent role in this kind of education.

Today the security policy situation of Sweden is radically different from the situation only ten years ago. New, extremely fragmented scenarios of a threat exist. A military threatening picture still exists even if it has deteriorated substantially after the end of the cold war. Russia still has attacking capability via distant and NBC-weapons. A military recovery in this country can result in nonmilitary information operations within a ten-year period. The development is difficult to judge but is coherent with the democratic development and the relations to the West.

Just now the most probable threat comes from terrorism. The last years have signified a development towards an ever increasing extent of terrorist groups with better and better armaments. No doubt, some of these groups have NBC-weapons. Those who not have access to such weapons strive for them. Attacks resulting in thousands of victims among innocent people, today is a reality which has been demonstrated by the assault upon World Trade Centre. It is quite possible that such groups will choose to locate internal controversies to neutral ground like Stockholm with pertinent consequence like taking hostages, etc. When such things happen, the odds are against the anti terrorist forces. The terrorists only need to have success once while the combatting forces must be successful every time.

A third kind of security policy threat are those which are information technology related. States as well as criminal gangs and terrorist organisations already today use IT-related systems as weapons apart from their ordinary use. Attacks can be targeted toward our own IT systems, electricity supply systems, telecommunications and economical systems. In our highly computerized society, a small group can cause damages which early required an army. That the danger of IT-attacks has increased can be related to the simple fact that the more something is exposed, the more the threatening picture is reinforced. A special problem in this context is the difficulty to discover if an attack exists at all. The defence against such information warfare will be a big problem in the foreseeable future for our vulnerable society.

It is also not possible to leave out of account the threats coming from economical warfare. Even if the country today has a reasonably stable economy and is supported by the membership of EU, strongly increased fuel price during a period will destabilize society. Large-scale economical crimes pursued for example by the powerful drug mafia in Colombia can also be a real threat. This organisation has scarcely an interest to capture a geographical area. However, they want to consolidate and expand their economical flows. It is necessary to bear in mind that their financial annual turnover is bigger than most European countries.

Consequently, it is necessary to realise that the old and exact security-policy classification into “war” and “peace” hardly is relevant today. A war-like terror action with disastrous consequence can happen without early warning in a situation which we apprehend to be in deepest peace. The goal can be to crush our basic values – not our geographical area. An enumeration of what the modern societies consider these values to be, can be the following:

territorial integrity in the livingspace;

political sovereignty and democracy;

freedom of thought, religion and speech;

a state governed by law with human rights and minority rights;

free market economy; and

the free university.

In the protection of these values, the extensive invasion and mobilization defence with its mass army no longer has a justification. Not including the frontiers of land, sea and air combat, a new frontier has emerged where the battle is fought with global information systems. There the strategic goals have changed so that destruction has been replaced by manipulation, infiltration and assimilation.

All this taken together is the reason why big-scale problem solving seldom work as before. The traditional way of managing war with a large quantity of troops fighting a well defined and localized enemy is barely no longer possible. The lack of success for traditional methods is visible also on civil frontiers like the war against poverty, the war against drugs, and the attempts to extinct AIDS.

The new, multinational and complex threatening pictures which have replaced the old ones, can only be met with a smaller, more modern and flexible elite-force. The heavy striking-force with small command and intelligence resources will be reduced in favour of a network-defence based on the development within information and communication technology. The designation network will, however, not in the first instance represent the connecting of different technical systems. Instead it will represent a more flexible way of handling a new situation – to combine different entities and components for more complex tasks. One of its main duties will be peace-keeping international contributions. Another task will be to handle attacks realised with nerve-gas or bacteria. High-technological data-virus should also be possible to combat.

The building up of such a defence will demand an entirely new way of thinking regarding decision-making, command and control and use of modern technology. Internationally, this kind of thinking has attracted great interest and got the designation “Revolution in Military Affairs” (RMA). The term is based on a number of technological breakthroughs which have occurred after the end of the cold war about 1990. In several ways, these have changed the ground for modern warfare. Here the most important achievements have been the information-technological progresses which will permit the use of lots of sensors and the capability to transfer and manage big information-flows. Realistic training with the aid of virtual three-dimensional computer scenarios (“Battlefield Computer Games”), has signified a pronounced increase in the combat-skill of tank-crews.

Some important trends within the RMA-concept is presented below:

Unmanned fighting vehicles and aircrafts. Automated, computerized technology will replace drivers and pilots. Start navigation, interpreting of the surrounding world, target-interpretation, target combatting and possible landing, is handled completely automatic. The opportunity of human handling and target combats remain. No consideration regarding the weight of the pilot, G-forces and life-supporting systems is necessary. The construction can be lighter, stronger, more rapid and cheaper. The instruction time can be shorter.

Data-streams, threat-analyses and military preparedness. Miniaturized networks of cheap sensors deliver data from areas which earlier have not been accessible. Immediate processing creates information which is distributed via coded broadband to all units needing it.

Chemical, bacteriological, radiological detection and protection. Micro sensors integrated in new protective clothes will dramatically increase the ability to move and increase freedom of action in contaminated areas. High sensibility and selectivity will make possible an immediate detection of the threat.

Body-armour for fighting soldiers. Extremely strong and light bullet proof materials increase the survival on the battlefield.

Field-equipment of lightweight type. New, lightweight materials will decrease the total carrying load for the soldier. Hence endurance and strength will increase. This holds well for uniforms, personal weapons, communication equipment and darkness-optics.

New bio-treatment for augmented performance. Without the use of drugs, human staying power can be doubled. Lack of sleep and impaired vigilance now can be compensated for as well as the impact of physical damage.

A science of command and control

Today's military command and control embrace different kinds of affairs from battle conduct to more administrative activities. It takes place on different strata from lower tactical levels to the highest strategical level. In contrast to civil command and control it includes fundamental questions regarding life and death for involved persons. In battlefields the unmasked principle of causality always rules. There the connection between conclusions and orders and their consequences are terrifyingly short.

A simple definition of the aim of command and control could be the coordination of human actions with different resources to get effects. In practise, this is often considered as something diffuse. Difficulties often arise when analysing the content and form of the activity. Problem solutions too often are seen as applied science without either theories or scientific method. Obstacles to attain a comprehensive view with hitherto used frames of reference have been experienced by both commanders and military theorists.

With this background, an attempt to regard command and control as part of “The Art of War” may be understandable. As an art, it can only be developed and reach its fulfilment inside the born leader with his special creativity, intuition capability and the divine vestige, existing in very few persons. However, such a view will have some less successful consequences, especially for the education of higher commanders. The divine vestige is scarcely possible to gauge and the number of born leaders is not in enough supply for the demands of society. At all events it cannot be the foundation for the recruitment of general staff candidates. Here more measurable and tangible properties must be decisive.

A more fruitful attitude therefore has appeared to be an integration of the problems of military management into a general scientific educational frame and denote it a science of command and control. The military competent at once realise that this area has two central questions at issue, on the one hand to make relevant decisions and on the other to carry them out adequately. With a slight reformulation it is possible to say that decision-making is to determine what should be done. The realization, the command, concerns how it should be done. Here the continuous existing aspect of time is present with its deadlines for thinking, planning, decision-making, taking measures, etc. This kind of activity always embraces the old truism of the equal importance of making the right things as doing things right. Regarding civil decision-making and execution, it often differs marginally (in principle) from the military counterpart. Thus, it is possible to speak of a general science of command and control.

In English, the area is denoted by the words command, control, communication and information with the acronym C3I. Command implies goal-oriented conduct and action, executed by people over people who all are living creatures and thereby process information for their survival. The process of life is to adapt the own situation to an ever-changing environment and a relation between information and control. Control comprises the processing of information, programming, decision and communication. Two-way communication between the controller and the controlled feeds back the result of the action for necessary justification and new activity.

In reality, the described control and command process is a very complex phenomenon. The physical and mental status of the decision-maker as well as deeply existing conceptions and preferences influence the procedure. Also organisational structures and technical equipment will influence the result. “Everything is connected to everything else”. Later in the text, it will be evident that the used English keywords can represent subsets of a comprehensive theory. Without this theory the term science in the label “A science of command and control” should be irrelevant.

To synthesize a new subject field like command and control will imply the finding and understanding of the joint factors existing within different kinds of the area. It also demands definitions regarding basic terms and concepts as a starting point for problem-solving and various kinds of reasoning. Below some fundamental concept are presented.

The theory of command and control is founded on a number of related academic areas. The integration of these creates the theoretical basis which allows a commander to understand the function of command and control. That is to master the prerequisite for relevant decisions and their transformation into reality.

The science of command and control is the application of the theory in a real world. It indicates how a system of command and control should be designed and used for decision-making, execution, followup, and government in a mainly unpredictable and chaotic environment (especially the combat).

A system of command and control is an integrated gathering of people, functions, procedures and equipment which together constitute the function of command and control. This system is the tool of the commander and secures that the capacity of the directed unity is utilized in the best manner in order to fulfill the goal.

The research problem of the science of command and control can be formulated as: How should the intentions of the commander be converted into reality as completely as possible?

Something which must be elucidated in the definitions above is the concept of a commander. The presumption that one can count with an unambiguous, conclusive commander as in military units, civil service departments or oil-tankers are not always correct. A committee, a board or some kind of collective often is the equivalent. This must be considered the rule when controversial political problems should be solved.

The concept of a commander implies that somebody (sometimes several) can formulate a criterion for the best problem solution and take the responsibility for a decision. Likewise that this (or these) people finally shoulder the responsibility for execution even if this can be transferred to other instances.

Today a science of command and control is necessary to adapt managing power and exercise of command to new kinds of organisations and new operational principles. The area is transformed at a rapid pace by social changes and new trends like the internationalisation of economies and knowledge production, globalization of media and knowledge mediation and also changed forms of cooperation and conflicts.

Moreover, modern leadership is often executed at a distance which implies both possibilities and risks. Today's communication technology will permit operations (both surgical and military!) to be literally managed and controlled from the other side of the globe. Modern dispersed organisations thus have their specific problems which cannot be neglected. How should social relations be managed when the personal encounter becomes a rare event and directors are dematerialized to a voice in a satellite-mediated phone call?

Regarding military command and control systems, they are today typically multi-component phenomena. The deciding functions are performed by people, simple decision-support systems in computer-based algorithms and advanced expert-systems. The decision-components are geographically dispersed dependent on the appearance of the environment but also for reason of survival. This distributed system gets its character by the quality of the sensors together with velocity and effectiveness of actual weapons.

The need for a comprehensive theory

For the military scientist it is obvious that studies in such a complex area as command and control scarcely are possible without the help of a theory of generalization, a meta-theory. Such a theory must be able to sum up and explain common factors and problems existing in all kinds of command and control. It must also be able to integrate different knowledge and reflections from various subject fields, which apparently do not seem to be related. In addition it must preferably furnish a hierarchy of theories and models where key-variables and their changes are intelligible and measurable. The supply of relevant models to facilitate studies, simulations and calculations defines the limits for both knowledge acquisition and information-dispersal.

A meta-theory likewise must supply general definitions and a common language, joining all subareas which taken together, will constitute a science of command and control. The application must take place in an area which has an ever growing need for rapid decisions and the mastering of very complex processes despite tight margins, ambiguous and disturbed information. As a frame of reference it must also be able to answer the same questions like other scientific areas, namely:

what theories represent the core of the field?

which methods are used?

which sources are used? and

to what extent are these theories, methods and sources universally applicable?

Does such a theory exist? From the viewpoint of the systems-scientist, the answer is affirmative. General Systems Theory (GST) studies patterns which do not relate to a specific area. It examines generalizations, applicable on specific problems, e.g. in command and control. As meta-discipline it can transfer its knowledge-structure to other areas without calling in question their content. It can supplement a great number of areas and integrate phenomena which had not been successfully handled. Above all this theory will support the generalist, who often is found to solve today's problem better than the specialist with his narrow limits.

A popular formulation could be that systems theory creates a knowledge structure which facilitates the providing of fact to the right place and creates possibilities to see a connected whole. A locution is that its main task is to help scientists to elucidate the complexity of the existence, technologists to make use of it and generalists to learn to live with it.

#### The alternative is to reject linear scenario planning in favor of complex theoretical analysis—unconditionally inserting complexity analysis into the simulation creates better policy planning

Rosenau, professor emeritus of international affairs – George Washington University, ‘97

(James, “Many Damn Things Simultaneously: Complexity Theory and World Affairs,” in Complexity, Global Politics, and National Security, eds. David S. Alberts and Thomas J. Czerwinski, National Defense University)

In short, there are strict limits within which theorizing based on the premises of complexity theory must be confined. It cannot presently—and is unlikely ever to— provide a method for predicting particular events and specifying the exact shape and nature of developments in the future. As one observer notes, it is a theory "meant for thought experiments rather than for emulation of real systems."18

Consequently, it is when our panacean impulses turn us toward complexity theory for guidance in the framing of exact predictions that the policy payoffs are least likely to occur and our disillusionment is most likely to intensify. For the strides that complexity theorists have made with their mathematical models and computer simulations are still a long way from amounting to a science that can be relied upon for precision in charting the course of human affairs that lies ahead. Although their work has demonstrated the existence of an underlying order, it has also called attention to a variety of ways in which the complexity of that order can collapse into pervasive disorder. Put differently, while human affairs have both linear and nonlinear dimensions, and while there is a range of conditions in which the latter dimensions are inoperative or "well behaved,"19 it is not known when or where the nonlinear dimensions will appear and trigger inexplicable feedback mechanisms. Such unknowns lead complexity theorists to be as interested in patterns of disorder as those of order, an orientation that is quite contrary to the concerns of policy makers.

Theorizing Within the Limits

To acknowledge the limits of complexity theory, however, is not to assert that it is of no value for policy makers and academics charged with comprehending world affairs. Far from it: if the search for panaceas is abandoned and replaced with a nuanced approach, it quickly becomes clear that the underlying premises of complexity theory have a great deal to offer as a perspective or world view with which to assess and anticipate the course of events. Perhaps most notably, they challenge prevailing assumptions in both the academic and policy-making communities that political, economic, and social relationships adhere to patterns traced by linear regressions. Complexity theory asserts that it is not the case, as all too many officials and analysts presume, that "we can get a value for the whole by adding up the values of its parts."20 In the words of one analyst, Look out the nearest window. Is there any straight line out there that wasn’t man-made? I’ve been asking the same question of student and professional groups for several years now, and the most common answer is a grin. Occasionally a philosophical person will comment that even the lines that look like straight lines are not straight lines if we look at them through a microscope. But even if we ignore that level of analysis, we are still stuck with the inevitable observation that natural structures are, at their core, nonlinear. If [this] is true, why do social scientists insist on describing human events as if all the rules that make those events occur are based on straight lines?21

A complexity perspective acknowledges the nonlinearity of both natural and human systems. It posits human systems as constantly learning, reacting, adapting, and changing even as they persist, as sustaining continuity and change simultaneously. It is a perspective that embraces non-equilibrium existence. Stated more generally, it is a mental set, a cast of mind that does not specify particular outcomes or solutions but that offers guidelines and lever points that analysts and policy makers alike can employ to more clearly assess the specific problems they seek to comprehend or resolve. Furthermore, the complexity perspective does not neglect the role of history even though it rejects the notion that a single cause has a single effect. Rather, focusing as it does on initial conditions and the paths that they chart for systems, complexity treats the historical context of situations as crucial to comprehension.

The first obstacle to adopting a complexity perspective is to recognize that inevitably we operate with some kind of theory. It is sheer myth to believe that we need merely observe the circumstances of a situation in order to understand them. Facts do not speak for themselves; observers give them voice by sorting out those that are relevant from those that are irrelevant and, in so doing, they bring a theoretical perspective to bear. Whether it be realism, liberalism, or pragmatism, analysts and policy makers alike must have some theoretical orientation if they are to know anything. Theory provides guidelines; it sensitizes observers to alternative possibilities; it highlights where levers might be pulled and influence wielded; it links ends to means and strategies to resources; and perhaps most of all, it infuses context and pattern into a welter of seemingly disarrayed and unrelated phenomena.

It follows that the inability of complexity theory to make specific predictions is not a serious drawback. Understanding and not prediction is the task of theory. It provides a basis for grasping and anticipating the general patterns within which specific events occur. The weather offers a good example. It cannot be precisely predicted at any moment in time, but there are building blocks—fronts, highs and lows, jet streams, and so on—and our overall understanding of changes in weather has been much advanced by theory based on these building blocks....We understand the larger patterns and (many of) their causes, though the detailed trajectory through the space of weather possibilities is perpetually novel. As a result, we can do far better than the old standby: predict that "tomorrow’s weather will be like today’s" and you stand a 60 percent probability of being correct. A relevant theory for [complex adaptive systems] should do at least as well.22 Given the necessity of proceeding from a theoretical standpoint, it ought not be difficult to adopt a complexity perspective. Indeed, most of us have in subtle ways already done so. Even if political analysts are not—as I am not—tooled up in computer science and mathematics, the premises of complexity theory and the strides in comprehension they have facilitated are not difficult to grasp. Despite our conceptual insufficiencies, we are not helpless in the face of mounting complexity. Indeed, as the consequences of turbulent change have become more pervasive, so have observers of the global scene become increasingly wiser about the ways of the world and, to a large degree, we have become, each of us in our own way, complexity theorists. Not only are we getting accustomed to a fragmegrative world view that accepts contradictions, anomalies, and dialectic processes, but we have also learned that situations are multiply caused, that unintended consequences can accompany those that are intended, that seemingly stable situations can topple under the weight of cumulated grievances, that some situations are ripe for accidents waiting to happen, that expectations can be self-fulfilling, that organizational decisions are driven as much by informal as formal rules, that feedback loops can redirect the course of events, and so on through an extensive list of understandings that appear so commonplace as to obscure their origins in the social sciences only a few decades ago.23 Indeed, we now take for granted that learning occurs in social systems, that systems in crisis are vulnerable to sharp turns of directions precipitated by seemingly trivial incidents, that the difference between times one and two in any situation can often be ascribed to adaptive processes, that the surface appearance of societal tranquillity can mask underlying problems, and that "other things being equal" can be a treacherous phrase if it encourages us to ignore glaring exceptions. In short, we now know that history is not one damn thing after another so much as it is many damn things simultaneously.

And if we ever slip in our understanding of these subtle lessons, if we ever unknowingly revert to simplistic formulations, complexity theory serves to remind us there are no panaceas. It tells us that there are limits to how much we can comprehend of the complexity that pervades world affairs, that we have to learn to become comfortable living and acting under conditions of uncertainty.

The relevance of this accumulated wisdom—this implicit complexity perspective—can be readily illustrated. It enables us to grasp how an accidental drowning in Hong Kong intensified demonstrations against China, how the opening of a tunnel in Jerusalem could give rise to a major conflagration, how the death of four young girls can foster a "dark and brooding" mood in Brussels, how an "October surprise" might impact strongly on an American presidential election, or how social security funds will be exhausted early in the next century unless corrective policies are adopted—to cite three recent events and two long-standing maxims.24 We know, too that while the social security example is different from the others—in that it is founded on a linear projection of demographic change while the other examples involve nonlinear feedback loops—the world is comprised of linear as well as nonlinear dynamics and that this distinction is central to the kind of analysis we undertake.

In other words, while it is understandable that we are vulnerable to the appeal of panaceas, this need not be the case. Our analytic capacities and concepts are not so far removed from complexity theorists that we need be in awe of their accomplishments or be ready to emulate their methods. Few of us have the skills or resources to undertake sophisticated computer simulations—and that may even be an advantage, as greater technical skills might lead us to dismiss complexity theory as inapplicable—but as a philosophical perspective complexity theory is not out of our reach. None of its premises and concepts are alien to our analytic habits. They sum to a perspective that is consistent with our own and with the transformations that appear to be taking the world into unfamiliar realms. Hence, through its explication, the complexity perspective can serve as a guide both to comprehending a fragmegrated world and theorizing within its limits.

## 5

#### Financial support for fusion energy production excludes support to develop fusion tech

ICTSD 11

ICTSD Global Platform on Climate Change, Trade and Sustainable Energy, Nov. 2011, Fostering Low Carbon Growth: The Case for a Sustainable Energy Trade Agreement, http://ictsd.org/i/publications/117557/?view=details

In assessing the implications of policies and incentives for sustainable energy, **it is useful to distinguish between incentives provided for** sustainable **power generation versus incentives provided for equipment manufacture**. While nearly every country in the world – depending to a large extent on geographical factors and resource endowment – would benefit from the deployment of sustainable energy, perhaps the same urgency or priority does not hold true for the deployment of manufacturing activity in sustainable energy equipment. Certain countries may be more suited to manufacturing sustainable energy equipment or parts for various reasons, including skills, low labour costs, or infrastructure. Yet most countries desire to attract manufacturing activity, in addition to sustainable power generation. This is due to obvious benefits related to employ- ment generation, economic activity, technology flow and diffusion, along with the need to simply try and establish early leadership in an area that many believe will witness rapid growth in the coming years.

#### R&D is not exclusively targeted at production—means the plan text excludes their solvency mechanism!

EIA, Energy Information Administration, Office of Energy Markets and End Use, U.S. DOE, ‘92

(“Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets,” ftp://tonto.eia.doe.gov/service/emeu9202.pdf)

Research and development. The budgetary cost of Government-funded research and development (R&D) is easy to measure. Determining the extent to which Government energy R&D is a subsidy is more problematic: often it takes the form of a direct payment to producers or consumers, but the payment is not tied to the production or consumption of energy in the present. If successful, Federal-applied R&D will affect future energy prices and costs, and so could be considered an indirect subsidy.

## solvency

#### No fusion

Geoff Brumfiel, Scientific American, June 2012, Fusion's Missing Pieces, EBSCO

Scientists such as Lee have been seduced by fusion for half a century. Many before him have promised its impending arrival. Although some of those researchers were charlatans, the vast majority of them turned out to be plain wrong. Fusion is tough, and nature breaks promises.

Here is the core challenge: because hydrogen ions repel one another, scientists must slam them together to make them fuse. ITER's strategy is to heat the hydrogen inside a magnetic cage. The particular type of magnetic cage it employs is called a tokamak -- a metal doughnut circled by loops of coil that generate magnetic fields. These magnetic cuffs squeeze a charged plasma of hydrogen ions as it warms to hundreds of millions of degrees -- temperatures no solid material can withstand.

In the 1970s tokamaks looked so promising that some researchers predicted they could build fusion electricity plants by the mid-1990s. The only challenge was scaling research reactors up to sufficient size -- in general, the bigger the tokamak, the hotter the plasma can get, and the more efficient fusion becomes.

Then problems arose. Plasma conducts electricity and so can suffer from self-generated currents that make it buck and writhe. Violent turbulence snaps the plasma out of its cage, firing it toward the machine's wall. As the temperature rises, the tokamak grows to give the plasma space, and the magnetic fields need to be stronger to hold it. Extra room and stronger magnetic fields require higher electric current in the doughnut's copper coils. And higher current requires more power. Put simply: the larger and more powerful a machine becomes, the more energy it consumes trying to hold everything together.

This feedback meant that conventional tokamaks would never produce more energy than they consumed. Lee and others knew of only one solution: superconductors -- special materials that, at very low temperatures, can carry extremely high current with no resistance. If a tokamak's magnets were superconducting, they could be pumped up with current and left to run indefinitely. It would solve the energy problem but would not be cheap. Superconductors are exotic, expensive materials. And to work, they need to be constantly cooled with liquid helium to just four kelvins above absolute zero.

#### Err neg—this is nonsense

Chris Rhodes, Sussex University, Physical Chemistry Professor, 6/10/12, The Progress made in the Different Fields of Nuclear Fusion, oilprice.com/Alternative-Energy/Nuclear-Power/The-Progress-made-in-the-Different-Fields-of-Nuclear-Fusion.html

When I was about 10, I recall hearing that nuclear fusion power would become a reality "in about thirty years". The estimate has increased steadily since then, and now, forty odd years on, we hear that fusion power will come on-stream "in about fifty years". So, what is the real likelihood of fusion-based power stations coming to our aid in averting the imminent energy crisis? Getting two nuclei to fuse is not easy, since both carry a positive charge and hence their natural propensity is to repel one another. Therefore, a lot of energy is required to force them together so that they can fuse. To achieve this, suitable conditions of extremely high temperature, comparable to those found in stars, must be met. A specific temperature must be reached in order for particular nuclei to fuse with one another. This is termed the "critical ignition temperature", and is around 400 million degrees centigrade for two deuterium nuclei to fuse, while a more modest 100 million degrees is sufficient for a deuterium nucleus to fuse with a tritium nucleus. For this reason, it is deuterium-tritium fusion that is most sought after, since it should be most easily achieved and sustained.

One disadvantage of tritium is that it is radioactive and decays with a half-life of about 12 years, and consequently, it exists naturally in only negligible amounts. However, tritium may be "bred" from lithium using neutrons produced in an initial deuterium-tritium fusion. Ideally, the process would become self-sustaining, with lithium fuel being burned via conversion to tritium, which then fuses with deuterium, releasing more neutrons. While not unlimited, there are sufficient known resources of lithium to fire a global fusion programme for about a thousand years, mindful that there are many other uses for lithium, ranging for various types of battery to medication for schizophrenics. The supply would be effectively limitless if lithium could be extracted from the oceans.

In a working scenario, some of the energy produced by fusion would be required to maintain the high temperature of the fuel such that the fusion process becomes continuous. At the temperature of around 100 - 300 million degrees, the deuterium/lithium/tritium mixture will exist in the form of a plasma, in which the nuclei are naked (having lost their initial atomic electron clouds) and are hence exposed to fuse with one another.

The main difficulty which bedevils maintaining a working fusion reactor which might be used to fire a power station is containing the plasma, a process usually referred to as "confinement" and the process overall as “magnetic confinement fusion” (MCF). Essentially, the plasma is confined in a magnetic bottle, since its component charged nuclei and electrons tend to follow the field of magnetic force, which can be so arranged that the lines of force occupy a prescribed region and are thus centralised to a particular volume. However, the plasma is a "complex" system that readily becomes unstable and leaks away. Unlike a star, the plasma is highly rarefied (a low pressure gas), so that the proton-proton cycle that powers the sun could not be thus achieved on earth, as it is only the intensely high density of nuclei in the sun's core that allows the process to occur sustainably, and that the plasma is contained within its own gravitational mass, and isolated within the cold vacuum of space.

In June 2005, the EU, France, Japan, South Korea, China and the U.S. agreed to spend $12 billion to build an experimental fusion apparatus (called ITER) by 2014. It is planned that ITER will function as a research instrument for the following 20 years, and the knowledge gained will provide the basis for building a more advanced research machine. After another 30 years, if all goes well, the first commercial fusion powered electricity might come on-stream.

The Joint European Torus (JET)

I attended a fascinating event recently - a Cafe' Scientifique meeting held in the town of Reading in South East England. I have also performed in this arena, talking about "What Happens When the Oil Runs Out?", which remains a pertinent question. This time it was the turn of Dr Chris Warrick from the Culham Centre for Fusion Energy based near Abingdon in Oxfordshire, which hosts both the MAST (Mega Amp Spherical Tokamak) and the better known JET (Joint European Torus) experiments. In the audience was a veteran engineer/physicist who had worked on the pioneering ZETA4 experiment in the late 1950s, from which neutrons were detected leading to what proved later to be false claims that fusion had occurred, their true source being different versions of the same instability processes that had beset earlier machines.

Nonetheless, his comment was salient: "In the late 50s, we were told that fusion power was 20 years away and now, 50-odd years later it is maybe 60 years away." Indeed, JET has yet to produce a positive ratio of output power/input energy, and instability of the plasma is still a problem. Dr Warrick explained that while much of the plasma physics is now sorted-out, minor aberrations in the magnetic field allow some of the plasma to leak out, and if it touches the far colder walls of the confinement chamber, it simply "dies". In JET it is fusion of nuclei of the two hydrogen isotopes, deuterium and tritium that is being undertaken, a process that as noted earlier, requires a "temperature" of 100 million degrees.

I say "temperature" because the plasma is a rarefied (very low pressure) gas, and hence the collisions between particles are not sufficiently rapid that the term means the same distribution of energy as occurs under conditions of thermal equilibrium. It is much the same as the temperatures that may be quoted for molecules in the atmospheric region known as the thermosphere which lies some 80 kilometres above the surface of the Earth. Here too, the atmosphere is highly rarefied and thus derived temperatures refer to translational motion of molecules and are more usefully expressed as velocities. However expressed, at 100 million degrees centigrade, the nuclei of tritium and deuterium have sufficient translational velocity (have enough energy) that they can overcome the mutual repulsion arising from their positive charges and come close enough that they are drawn together by attractive nuclear forces and fuse, releasing vast amounts of energy in the process.

JET is not a small device, at 18 metres high, but bigger machines will be necessary before the technology is likely to give out more energy than it consumes. Despite the considerable volume of the chamber, it contains perhaps only one hundredth of a gram of gas, hence its very low pressure. There is another matter and that is how long the plasma and hence energy emission can be sustained. Presently it is fractions of a second but a serious "power station" would need to run for some hours. There is also the problem of getting useful energy from the plasma to convert into electricity even if the aforementioned and considerable problems can be overcome and a sustainable, large-scale plasma maintained.

The plan is to surround the chamber with a "blanket" of lithium with pipes running through it and some heat-exchanger fluid passing through them. The heated fluid would then pass on its heat to water and drive a steam-turbine, in the time-honoured fashion used for fossil fuel fired and nuclear power plants. Now my understanding is that this would not be lithium metal but some oxide material. The heat would be delivered in the form of very high energy neutrons that would be slowed-down as they encounter lithium nuclei on passing through the blanket. In principle this is a very neat trick, since absorption of a neutron by a lithium nucleus converts it to tritium, which could be fed back into the plasma as a fuel. Unlike deuterium, tritium does not exist is nature, being radioactive with a half-life of about 12 years. However produced, either separately or in the blanket, lithium is the ultimate fuel source, not tritium per se. Deuterium does exist in nature but only to the extent of one part in about two thousand of ordinary hydrogen (protium) and hence the energy costs of its separation are not inconsiderable.

The neutron flux produced by the plasma is very high, and to enhance the overall breeding efficiency of lithium to tritium the reactor would be surrounded with a “lithium” blanket about three feet thick. The intense neutron flux will render the material used to construct the reactor highly radioactive, to the extent that it would not be feasible for operators to enter its vicinity for routine maintenance. The radioactive material will need to be disposed of similarly to the requirements for nuclear waste generated by nuclear fission, and hence fusion is not as "clean" as is often claimed. Exposure to radiation of many potential materials necessary to make the reactor, blanket, and other components such as the heat-exchanger pipes would render them brittle, and so compromise their structural integrity. There is also the possibility that the lithium blanket around the reactor might be replaced by uranium, so enabling the option of breeding plutonium for use in nuclear weapons.

Providing a fairly intense magnetic field to confine the plasma (maybe Tesla - similar to that in a hospital MRI scanner) needs power (dc not ac as switching the polarity of the field would cause the plasma to collapse) and large power-supply units containing a lot of metals including rare earths which are mined and processed using fossil fuels. The issue of rare earths is troublesome already, and whether enough of them can be recovered to meet existing planned wind and electric car projects is debatable, let alone that additional pressure should be placed upon an already fragile resource to build a first generation of fusion power stations.

World supplies of lithium are also already stressed, and hence getting enough of it not only to make blankets for fusion reactors and tritium production but also for the millions-scale fleet of electric vehicles needed to divert our transportation energy demand away from oil is probably a bridge too far, unless we try getting it from seawater, which takes far more energy than mining lithium minerals. The engineering requirements too will be formidable, however, most likely forcing the need to confront problems as yet unknown, and even according to the most favourable predictions of the experts, fusion power is still 60 years away, if it will arrive at all. Given that the energy crisis will hit hard long before then, I suggest we look to more immediate solutions, mainly in terms of energy efficiency, for which there is ample scope.

To quote again the ZETA veteran, "I wonder if maybe man is not intended to have nuclear fusion," and all in all, other than from solar energy I wonder if he is right. At any rate, garnering real electrical power from fusion is so far distant as to have no impact on the more immediately pressing fossil fuels crisis, particularly for oil and natural gas. Fusion Power is a long-range "holy grail" and part of the illusion that humankind can continue in perpetuity to use energy on the scale that it presently does. Efficiency and conservation are the only real means to attenuate the impending crisis in energy and resources.

#### No commercialization—definitely not fast

Geoff Brumfiel, Scientific American, June 2012, Fusion's Missing Pieces, EBSCO

ITER will prove whether fusion is achievable. It will not prove whether it is commercially viable. There is good reason to think it might not be. For starters, the radiation from fusion is very intense and will damage ordinary material such as steel. A power plant will have to incorporate some as yet undeveloped materials that can withstand years of bombardment from the plasma -- otherwise the reactor will be constantly down for servicing. Then there is the problem of tritium fuel, which must be made on-site, probably by using the reactor's own radiation.

Arguably the greatest obstacle to building a reactor based on ITER is the machine's incredible complexity. All the specialized heating systems and custom-built parts are fine in an experiment, but a power plant will need to be simpler, says Steve Cowley, CEO of the U.K.'s Atomic Energy Authority. "You can't imagine producing power day in and day out on a machine that's all bells and whistles," he says. Another generation of expensive demonstration reactors must be built before fusion can come onto the grid. Given ITER's lumbering development, none of these will be up and running before the middle of the century.

## development

#### Data disproves hegemony impacts

Fettweis, 11

Christopher J. Fettweis, Department of Political Science, Tulane University, 9/26/11, Free Riding or Restraint? Examining European Grand Strategy, Comparative Strategy, 30:316–332, EBSCO

It is perhaps worth noting that there is no evidence to support a direct relationship between the relative level of U.S. activism and international stability. In fact, the limited data we do have suggest the opposite may be true. During the 1990s, the United States cut back on its defense spending fairly substantially. By 1998, the United States was spending $100 billion less on defense in real terms than it had in 1990.51 To internationalists, defense hawks and believers in hegemonic stability, this irresponsible “peace dividend” endangered both national and global security. “No serious analyst of American military capabilities,” argued Kristol and Kagan, “doubts that the defense budget has been cut much too far to meet America’s responsibilities to itself and to world peace.”52 On the other hand, if the pacific trends were not based upon U.S. hegemony but a strengthening norm against interstate war, one would not have expected an increase in global instability and violence.

The verdict from the past two decades is fairly plain: The world grew more peaceful while the United States cut its forces. No state seemed to believe that its security was endangered by a less-capable United States military, or at least none took any action that would suggest such a belief. No militaries were enhanced to address power vacuums, no security dilemmas drove insecurity or arms races, and no regional balancing occurred once the stabilizing presence of the U.S. military was diminished. The rest of the world acted as if the threat of international war was not a pressing concern, despite the reduction in U.S. capabilities. Most of all, the United States and its allies were no less safe. The incidence and magnitude of global conflict declined while the United States cut its military spending under President Clinton, and kept declining as the Bush Administration ramped the spending back up. No complex statistical analysis should be necessary to reach the conclusion that the two are unrelated.

Military spending figures by themselves are insufficient to disprove a connection between overall U.S. actions and international stability. Once again, one could presumably argue that spending is not the only or even the best indication of hegemony, and that it is instead U.S. foreign political and security commitments that maintain stability. Since neither was significantly altered during this period, instability should not have been expected. Alternately, advocates of hegemonic stability could believe that relative rather than absolute spending is decisive in bringing peace. Although the United States cut back on its spending during the 1990s, its relative advantage never wavered.

However, even if it is true that either U.S. commitments or relative spending account for global pacific trends, then at the very least stability can evidently be maintained at drastically lower levels of both. In other words, even if one can be allowed to argue in the alternative for a moment and suppose that there is in fact a level of engagement below which the United States cannot drop without increasing international disorder, a rational grand strategist would still recommend cutting back on engagement and spending until that level is determined. Grand strategic decisions are never final; continual adjustments can and must be made as time goes on. Basic logic suggests that the United States ought to spend the minimum amount of its blood and treasure while seeking the maximum return on its investment. And if the current era of stability is as stable as many believe it to be, no increase in conflict would ever occur irrespective of U.S. spending, which would save untold trillions for an increasingly debt-ridden nation.

It is also perhaps worth noting that if opposite trends had unfolded, if other states had reacted to news of cuts in U.S. defense spending with more aggressive or insecure behavior, then internationalists would surely argue that their expectations had been fulfilled. If increases in conflict would have been interpreted as proof of the wisdom of internationalist strategies, then logical consistency demands that the lack thereof should at least pose a problem. As it stands, the only evidence we have regarding the likely systemic reaction to a more restrained United States suggests that the current peaceful trends are unrelated to U.S. military spending. Evidently the rest of the world can operate quite effectively without the presence of a global policeman. Those who think otherwise base their view on faith alone.

#### No challengers

Kaplan, senior fellow – Center for a New American Security, and Kaplan, frmr. vice chairman – National Intelligence Council, ‘11

(Robert D and Stephen S, “America Primed,” *The National Interest*, March/April)

But in spite of the seemingly inevitable and rapid diminution of U.S. eminence, to write America’s great-power obituary is beyond premature. The United States remains a highly capable power. Iraq and Afghanistan, as horrendous as they have proved to be—in a broad historical sense—are still relatively minor events that America can easily overcome. The eventual demise of empires like those of Ming China and late-medieval Venice was brought about by far more pivotal blunders.

Think of the Indian Mutiny against the British in 1857 and 1858. Iraq in particular—ever so frequently touted as our turning point on the road to destruction—looks to some extent eerily similar. At the time, orientalists and other pragmatists in the British power structure (who wanted to leave traditional India as it was) lost some sway to evangelical and utilitarian reformers (who wanted to modernize and Christianize India—to make it more like England). But the attempt to bring the fruits of Western civilization to the Asian subcontinent was met with a violent revolt against imperial authority. Delhi, Lucknow and other Indian cities were besieged and captured before being retaken by colonial forces. Yet, the debacle did not signal the end of the British Empire at all, which continued on and even expanded for another century. Instead, it signaled the transition from more of an ad hoc imperium fired by a proselytizing lust to impose its values on others to a calmer and more pragmatic empire built on international trade and technology.1 There is no reason to believe that the fate of America need follow a more doomed course.

Yes, the mistakes made in Iraq and Afghanistan have been the United States’ own, but, though destructive, they are not fatal. If we withdraw sooner rather than later, the cost to American power can be stemmed. Leaving a stable Afghanistan behind of course requires a helpful Pakistan, but with more pressure Washington might increase Islamabad’s cooperation in relatively short order.

In terms of acute threats, Iran is the only state that has exported terrorism and insurgency toward a strategic purpose, yet the country is economically fragile and politically unstable, with behind-the-scenes infighting that would make Washington partisans blanch. Even assuming Iran acquires a few nuclear devices—of uncertain quality with uncertain delivery systems—the long-term outlook for the clerical regime is itself unclear. The administration must only avoid a war with the Islamic Republic.

To be sure, America may be in decline in relative terms compared to some other powers, as well as to many countries of the former third world, but in absolute terms, particularly military ones, the United States can easily be the first among equals for decades hence.

China, India and Russia are the only major Eurasian states prepared to wield military power of consequence on their peripheries. And each, in turn, faces its own obstacles on the road to some degree of dominance.

The Chinese will have a great navy (assuming their economy does not implode) and that will enforce a certain level of bipolarity in the world system. But Beijing will lack the alliance network Washington has, even as China and Russia will always be—because of geography—inherently distrustful of one another. China has much influence, but no credible military allies beyond possibly North Korea, and its authoritarian regime lives in fear of internal disruption if its economic growth rate falters. Furthermore, Chinese naval planners look out from their coastline and see South Korea and a string of islands—Japan, Taiwan and Australia—that are American allies, as are, to a lesser degree, the Philippines, Vietnam and Thailand. To balance a rising China, Washington must only preserve its naval and air assets at their current levels.

India, which has its own internal insurgency, is bedeviled by semifailed states on its borders that critically sap energy and attention from its security establishment, and especially from its land forces; in any case, India has become a de facto ally of the United States whose very rise, in and of itself, helps to balance China.

Russia will be occupied for years regaining influence in its post-Soviet near abroad, particularly in Ukraine, whose feisty independence constitutes a fundamental challenge to the very idea of the Russian state. China checks Russia in Central Asia, as do Turkey, Iran and the West in the Caucasus. This is to say nothing of Russia’s diminishing population and overwhelming reliance on energy exports. Given the problems of these other states, America remains fortunate indeed.

The United States is poised to tread the path of postmutiny Britain. America might not be an empire in the formal sense, but its obligations and constellation of military bases worldwide put it in an imperial-like situation, particularly because its air and naval deployments will continue in a post-Iraq and post-Afghanistan world. No country is in such an enviable position to keep the relative peace in Eurasia as is the United States—especially if it can recover the level of enduring competence in national-security policy last seen during the administration of George H. W. Bush. This is no small point. America has strategic advantages and can enhance its power while extricating itself from war. But this requires leadership—not great and inspiring leadership which comes along rarely even in the healthiest of societies—but plodding competence, occasionally steely nerved and always free of illusion.

#### Competitiveness not key to heg

Brooks and Wohlforth, 8

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

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

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

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

#### Their theory is wrong

Bhide, 9

[Amar, Glaubinger Professor of Business at Columbia University, editor of Capitalism and Society, member of the Council on Foreign Relations, and author of The Origin and Evolution of New Businesses, “ The Venturesome Economy: How Innovation Sustains

Prosperity in a More Connected World,” Journal of Applied Corporate Finance • Volume 21 Number 1, Winter 2009]

 The techno-nationalist claim that U.S. prosperity requires that the country “maintain its scientific and technological lead” is particularly dubious: the argument fails to recognize that the development of scientific knowledge or cutting-edge technology is not a zero-sum competition. The results of scientific research are available at no charge to anyone anywhere in the world. Most arguments for the public funding of scientific research are in fact based on the unwillingness of private investors to undertake research that cannot yield a profit. Cutting-edge technology (as opposed to scientific research) has commercial value because it can be patented; but patent owners generally don’t charge higher fees to foreign licensors. The then tiny Japanese company Sony was one of the first licensors of Bell Labs’ transistor patent. Sony paid all of $50,000—and only after first obtaining special permission from the Japanese Ministry of Finance—for the license that started it on the road to becoming a household name in consumer electronics.

Moreover, if patent holders choose not to grant licenses but to exploit their inventions on their own, this does not mean that the country of origin secures most of the benefit at the expense of other countries. Suppose IBM chooses

to exploit internally, instead of licensing, a breakthrough from its China Research Laboratory (employing 150 research staff in Beijing). This does not help China and hurt everyone else. Rather, as I discuss at length later, the benefits go to IBM’s stockholders, to employees who make or market the product that embodies the invention, and—above all—to customers, who secure the lion’s share of the benefit from most innovations. These stockholders, employees, and customers, who number in the tens of millions, are located all over the world.

In a world where breakthrough ideas easily cross national borders, the origin of ideas is inconsequential. Contrary to Thomas Friedman’s assertion, it does not matter that Google’s search algorithm was invented in California. After all, a Briton invented the protocols of the World Wide Web—in a lab in Switzerland. A Swede and a Dane in Tallinn, Estonia, started Skype, the leading provider of peer-to-peer Internet telephony. How did the foreign origins of these innovations harm the U.S. economy?

#### Status quo solves—Obama has moved to multilateralism on Libya and beyond. The UN is back, and other nations are following the US lead!

**World Outline**, postgraduate student in international affairs at King’s College, **1/24**/2012

[“How valuable is multilateral diplomacy in a post-9/11 world?,” <http://worldoutline.wordpress.com/2012/01/24/how-valuable-is-multilateral-diplomacy-in-a-post-911-world/>]

At the turn of the last century, 189 world leaders convened at the Millennium Summit and approved the Millennium Declaration which outlined eight specific goals that the United Nations was to achieve by 2015.[4] Yet, just a year later the 9/11 terrorist attacks tilted the world upon its head. The Security Council was rallied into action after the attacks and unanimously backed the United States against the threat which had caused so much devastation.[5] However, a wounded United States became increasingly relentless and unilateral in their ‘War on Terror’; when the Security Council refused to authorise a US attack upon an allegedly nuclear-armed Iraq, the United States, led by George. W. Bush, launched the assault anyway without UN approval.[6] This has been referred to as the ‘crisis of multilateralism’, as the United States undermined the very institution of which it is the biggest financial contributor and the most influential player.[7] If the founding member of the UN was refusing to follow the guidelines of the institution then why should other states follow the rules? This act set a worrying precedent for the rest of the world and, as Kofi Annan asserted, ‘undermined confidence in the possibility of collective responses to our common problems’.[8] Other instances of American unilateralism are Bush’s abstention from the Human Rights Council, his refusal to sign the Kyoto Protocol and the US departure from the Comprehensive Test Ban Treaty. The United States was losing sight of the benefits that multilateral diplomacy has to offer. However, the arrival of Barack Obama at the Oval Office has **revived multilateral values within US foreign policy**. The Obama administration has realised that it must now engage with the UN and this has marked a ‘**transitional moment in the history of multilateralism**’.[9] In his 2010 National Security Strategy, Obama acknowledged the fact that the US had been successful after the Second World War by pursuing their interests within multilateral forums such as the United Nations and not outside of them.[10] The global financial crisis of 2008 and the European Union’s sovereign debt crisis have demonstrated just how interdependent the economies of the western world are and these crises have created an age of austerity in which multilateralism is needed more than ever before.[11] The US has overstretched its resources and is now currently winding down two wars in Afghanistan and Iraq; they have realised that they simply do not have the means to conduct their foreign affairs exclusively anymore. **Clear indications of Washington’s improved multilateral engagement with the UN** since Obama’s inauguration, **and the changing attitude in US foreign policy**, are the economic sanctions negotiated over Iran, Obama’s decision for the US to join the Human Rights Council and, more specifically, its participation in the recent Libya mission. In Libya, the US provided support for the mission, yet played a subdued role in the campaign, allowing its European counterparts to take the lead. In contrast to his predecessor, Obama is displaying pragmatism rather than sentimentalism in his search for partners, making alliances in order to adapt to the emerging multipolar world; this is typified by Obama’s recent visit to the Asia-Pacific and his tour of South America (Brazil, Chile and El Salvador) in 2010. For the time being, US unipolarity looks to be a thing of the past; its **foreign policy is changing from Bush’s unilateralism at the start of the century to a more multilateral approach at the beginning of a new decade** under Obama.[12] This is the **correct precedent** that the most powerful nation in the world should be setting for other states to follow. The fact that the US is now engaging with the UN to counter global problems has restored the credibility that the UN had lost after the Iraq debacle and, by setting this example, **other nations will follow suit** and the international community as a whole can only benefit. From this change in US foreign policy, it is clear that multilateral diplomacy is of more value today than it was a decade ago.

#### No crunch – best evidence

Indur **Goklany 10**, policy analyst for the Department of the Interior – phd from MSU, “Population, Consumption, Carbon Emissions, and Human Well-Being in the Age of Industrialization (Part IV – There Are No PAT Answers, or Why Neo-Malthusians Get It Wrong)”, April 26, <http://www.masterresource.org/2010/04/population-consumption-carbon-emissions-and-human-well-being-in-the-age-of-industrialization-part-iv-there-are-no-pat-answers-or-why-neo-malthusians-get-it-wrong/>

Neo-Malthusians believe that humanity is doomed unless it reins in population, affluence and technological change, and the associated consumption of materials, energy and chemicals. But, as shown in the previous posts and elsewhere, empirical data on virtually every objective indicator of human well-being indicates that the state of humanity has never been better, despite unprecedented levels of population, economic development, and new technologies. In fact, human beings have never been longer lived, healthier, wealthier, more educated, freer, and more equal than they are today. Why does the Neo-Malthusian worldview fail the reality check? The fundamental reasons why their projections fail are because they assume that population, affluence and technology — the three terms on the right hand side of the IPAT equation — are independent of each other. Equally importantly, they have misunderstood the nature of each of these terms, and the nature of the misunderstanding is essentially the same, namely, that contrary to their claims, each of these factors instead of making matters progressively worse is, in the long run, necessary for solving whatever problems plague humanity. Compounding these misunderstandings, environmentalists and Neo-Malthusians frequently conflate human well-being with environmental well-being. While the latter influences the former, the two aren’t the same. Few inside, and even fewer outside, rich countries would rank environmental indicators among the most important indicators of human well-being except, possibly, access to safe water and sanitation. These two environmental indicators also double as indicators of human well-being because they have a large and direct bearing on human health. In any case, they are subsumed within life expectancy, which, as noted, is the single most important indicator of human well-being. The UNDP’s Human Development Index, for instance, uses three indicators — life expectancy, per capita income and some combined measure of education and literacy. None of these three are related to the environment. The disconnect between environmental indicators and indicators of human well-being is further evidenced by the fact that over the last century, the most critical indicators of human well-being — life expectancy, mortality rates, prevalence of hunger and malnutrition, literacy, education, child labor, or poverty — generally improved regardless of whether environmental indicators (e.g., levels of air and water pollution, loss of biodiversity) fluctuated up or down (see, e.g., the previous post and here). Moreover, fears that the world’s population would continue to increase exponentially have failed to materialize. The world’s population growth rate peaked in the late 1960s. Population increased by 10.6% from 1965–70, but only 6.0% from 2000–05. Many countries are now concerned that fewer young people means that their social security systems are unsustainable. Projections now suggest that the world’s population may peak at around 9 billion around mid-century (see here). The slowdown in the population growth rate, unanticipated by Neo-Malthusians, can be attributed to the fact that population (P) is dependent on affluence (or the desire for affluence) and technology (A and T in the IPAT equation). Empirical data show that as people get wealthier or desire greater wealth for themselves or their offspring, they tend to have fewer children. Cross-country data shows that the total fertility rate (TFR), which measures the number of children per women of child-bearing age, drops as affluence (measured by GDP per capita) increases (see Figure 1). Moreover, for any given level of affluence, TFR has generally dropped over time because of changes in technology, and societal attitudes shaped by the desire for economic development (see here). Most importantly, it is not, contrary to Neo-Malthusian fears, doomed to rise inexorably, absent coercive policies. Neo-Malthusians also overlook the fact that, in general, affluence, technology and human well-being reinforce each other in a Cycle of Progress (Goklany 2007a, pp. 79-97). If existing technologies are unable to reduce impacts or otherwise improve the quality of life, wealth and human capital can be harnessed to improve existing technologies or create new ones that will. HIV/AIDS is a case in point. The world was unprepared to deal with HIV/AIDS when it first appeared. For practical purposes, it was a death sentence for anyone who got it. It took the wealth of the most developed countries to harness the human capital to develop an understanding of the disease and devise therapies. From 1995 to 2004, age-adjusted death rates due to HIV declined by over 70 percent in the US (USBC 2008). Rich countries now cope with it, and developing countries are benefiting from the technologies that the former developed through the application of economic and human resources, and institutions at their disposal. Moreover, both technology and affluence are necessary because while technology provides the methods to reduce problems afflicting humanity, including environmental problems, affluence provides the means to research, develop and afford the necessary technologies. Not surprisingly, access to HIV therapies is greater in developed countries than in developing countries. And in many developing countries access would be even lower but for wealthy charities and governments from rich countries (Goklany 2007a, pp. 79–97). Because technology is largely based on accretion of knowledge, it ought to advance with time, independent of affluence — provided society is open to scientific and technological inquiry and does not squelch technological change for whatever reason. Consequently, indicators of human well-being improve not only with affluence but also with time (a surrogate for technology). This is evident in Figure 1, which shows TFR dropping with time for any specific level of GDP per capita. It is also illustrated in Figure 2 for life expectancy, which shows that wealthier societies have higher average life expectancies, and that the entire life expectancy curve has been raised upward with the passage of time, a surrogate for technological change (broadly defined). Other indicators of human well-being — e.g., crop yield, food supplies per capita, access to safe water and sanitation, literacy, mortality — also improve with affluence and, separately, with time/technology (see here and here). This indicates that secular technological change and economic development, rather than making matters worse, have actually enhanced society’s ability to solve its problems and advanced its quality of life. Moreover, population is not just a factor in consumption. It is the basis for “human capital.” No humans, no human capital. Humans are not just mouths, but also hands and brains. As famously noted by Julian Simon, they are the Ultimate Resource. This is something Neo-Malthusians have difficulty in comprehending. Notably, a World Bank study, Where is the Wealth of Nations?, indicated that “human capital and the value of institutions … constitute the largest share of wealth in virtually all countries.” A population that is poor, with low human capital, low affluence, and lacking in technological knowhow is more likely to have higher mortality rates, and lower life expectancy than a population that is well educated, affluent and technologically sophisticated, no matter what its size. These factors — human capital, affluence and technology — acting in concert over the long haul, have enabled technology for the most part to improve matters faster than any deterioration due to population, affluence (GDP per person) or their product (GDP). This has helped keep environmental damage in check, (e.g., for cropland, a measure of habitat converted to human uses) or even reverse it (e.g., for water pollution, and indoor and traditional outdoor air pollution), particularly in the richer countries. Note that since the product of population (P) and affluence (A or GDP per capita) is equivalent to the GDP then according to the IPAT identity, which specifies that I = P x A x T, the technology term (T) is by definition the impact (I) per GDP (see Part II in this series of posts). I’ll call this the impact intensity. If the impact is specified in terms of emissions, then the technology term is equivalent to the emissions intensity, that is, emissions per GDP. Therefore the change in impact intensity (or emissions intensity) over a specified period is a measure of technological change over that period. Since matters improve if impact/emissions intensity drops, a negative sign in front of the change in impact intensity denotes that technological change has reduced the impact. Table 1 shows estimates of the changes in impacts intensity, or technological change, over the long term for a sample of environmental indicators for various time periods and geographical aggregations. Additional results regarding technological change over different time periods and countries are available from the original source (here). These results indicate that in the long run, technological change has, more often than not, reduced impacts. The reduction in many cases is by an order of magnitude or more! Thus, notwithstanding plausible Neo-Malthusian arguments that technological change would eventually increase environmental impacts, historical data suggest that, in fact, technological change ultimately reduces impacts, provided technology is not rejected through an inappropriate exercise of the precautionary principle or compromised via subsidies (which usually flow from the general public to politically favored elements of society). To summarize, although population, affluence and technology can create some problems for humanity and the planet, they are also the agents for solving these very problems. In the IPAT equation, the dependence of the I term on the P, A and T terms is not fixed. It evolves over time. And the Neo-Malthusian mistake has been to assume that the relationship is fixed, or if it is not, then it changes for the worse. A corollary to this is that projections of future impacts spanning a few decades but which do not account for technological change as a function of time and affluence, more likely than not, will overestimate impacts, perhaps by orders of magnitude. In fact, this is one reason why many estimates of the future impacts of climate change are suspect, because most do not account for changes in adaptive capacity either due to secular technological change or increases in economic development (see here and here). Famously, Yogi Berra is supposed to have said, “It’s tough to make predictions, especially about the future.” Most analysts recognize this. They know that just because one can explain and hindcast the past, it does not guarantee that one can forecast the future. Neo-Malthusians, by contrast, cannot hindcast the past but are confident they can forecast the future. Finally, had the solutions they espouse been put into effect a couple of centuries ago, most of us alive today would be dead and those who were not would be living poorer, shorter, and unhealthier lives, constantly subject to the vagaries of nature, surviving from harvest to harvest, spending more of our time in darkness because lighting would be a luxury, and our days in the drudgery of menial tasks because under their skewed application of the precautionary principle (see here, here and here) fossil fuel consumption would be severely curtailed, if not banned. Nor would the rest of nature necessarily be better off. First, lower reliance on fossil fuels would mean greater demand for fuelwood, and the forests would be denuded. Second, less fossil fuels also means less fertilizer and pesticides and, therefore, lower agricultural productivity. To compensate for lost productivity,, more habitat would need to be converted to agricultural uses. But habitat conversion (including deforestation) — not climate change — is already the greatest threat to biodiversity!

#### Resource scarcity leads to cooperation, not war – empirically proven

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

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

#### No resource wars – empirics

Salehyan 7

[Idean, assistant professor of political science - University of North Texas, “The new myth about climate change,” http://www.foreignpolicy.com/story/cms.php?story\_id=3922]

First, aside from a few anecdotes, there is little systematic empirical evidence that resource scarcity and changing environmental conditions lead to conflict. In fact, several studies have shown that an abundance of natural resources is more likely to contribute to conflict. Moreover, even as the planet has warmed, the number of civil wars and insurgencies has decreased dramatically. Data collected by researchers at Uppsala University and the International Peace Research Institute, Oslo shows a steep decline in the number of armed conflicts around the world. Between 1989 and 2002, some 100 armed conflicts came to an end, including the wars in Mozambique, Nicaragua, and Cambodia. If global warming causes conflict, we should not be witnessing this downward trend.

#### Heg doesn’t solve war

Mastanduno, 9 – Professor of Government at Dartmouth

(Michael, World Politics 61, No. 1, Ebsco)

During the cold war the United States dictated the terms of adjustment. It derived the necessary leverage because it provided for the security of its economic partners and because there were no viable alter natives to an economic order centered on the United States. After the cold war the outcome of adjustment struggles is less certain because the United States is no longer in a position to dictate the terms. The United States, notwithstanding its preponderant power, no longer enjoys the same type of security leverage it once possessed, and the very success of the U.S.-centered world economy has afforded America’s supporters a greater range of international and domestic economic options. The claim that the United States is unipolar is a statement about its cumulative economic, military, and other capabilities.1 But preponderant capabilities across the board do not guarantee effective influence in any given arena. U.S. dominance in the international security arena no longer translates into effective leverage in the international economic arena. And although the United States remains a dominant international economic player in absolute terms, after the cold war it has found itself more vulnerable and constrained than it was during the golden economic era after World War II. It faces rising economic challengers with their own agendas and with greater discretion in international economic policy than America’s cold war allies had enjoyed. The United States may continue to act its own way, but it can no longer count on getting its own way.

## leadership

#### No motive for weaponization

Terry Devitt, Director of Research Communications for the University of Wisconsin-Madison, 2002, Hunting for nukes, whyfiles.org/167new\_nukes/index.html

With thermonuclear weapons now able to fit an artillery shell, many observers dismiss the threat. "It's hard see how any new thing would come to the level of things we've had for 40 years," says Ray Kidder, a veteran weapons designer who started working at Lawrence Livermore National Laboratory in 1956, and eventually directed work on theoretical aspects of weapons development and high-energy lasers.

"You hate to say the problem has been solved, but it's been oversolved, from my point of view," Kidder continues. "We have high-yield weapons that can create fires all over the place, and weapons that can blow cities down ... that you can put in a small suitcase. All these talked-about new things, it's not quite clear what improvement they would be."

Not only would there be little reason to search for new nuclear principles, Kidder says, but there is little prospect of success - at least in the near term. The ideas discussed in this article, he says, "do not present any kind of immediate risk, in terms of being put into practice in 10 years, if ever."

#### Taboo doesn’t solve anything and their authors are hacks

Colin S **Gray 99**, professor of international politics and strategic studies and the director of the Centre for Strategic Studies, University of Reading in England, “To Confuse Ourselves: Nuclear Fallacies”, <http://fds.oup.com/www.oup.co.uk/pdf/0-19-829624-X.pdf>

Reference has been made already to a nuclear taboo. Although the proposition of a nuclear taboo is both plausible and attractive, it is perilously flawed in a way that is likely to set damaging ambushes for those who have been imprudently optimistic. The idea of a nuclear taboo hovers somewhat uneasily between fact and value. Widespread endorsement of the desirability of social demotion and general denigration of all things nuclear work to hinder prudent thoughts and action on the subject of how best to cope with the permanence of nuclear facts. Commitment to the worthy idea of a nuclear taboo is wont to encourage effort devoted to strengthening the non-proliferation regime—activity that generally is sensible, praiseworthy, and often worthy of the energy expended—rather than planning to deal effectively with the enduring nuclear dimension to security. The case of a nuclear taboo is one of those instances where a sound idea, as well as a culturally inescapable, but not thoroughly effective, proscriptive norm, has the potential to function to unanticipated dangerous consequences (the law of unintended consequences). The proposition that the global nonproliferation regime has come to be supported and is to a degree propelled forward by a nuclear taboo, is an astrategic rationalization by generally unintentionally hypocritical Westerners. The fragility of Western theory about a nuclear taboo is easily demonstrated. Supported by the structurally discriminatory NPT regime, the majority of declared nuclear-weapon states simultaneously reaffirm the nationally vital security functions of their WMD, while condemning WMD in the hands of others: not all others, one must hasten to add. Israel's nuclear arsenal attracts little negative comment from the West, while the newly demonstrated and declared nuclear-weapon states of India and Pakistan have attracted more expressions of understanding than condemnation from other polities outside the West. It is only the third tier of would-be nuclear-weapon states, deemed irresponsible, not to say roguish, for their rejection of Western norms of civilized international (and domestic) behaviour, that falls under the heavy censure of spokespeople for a nuclear taboo. The policy inclinations fairly attributable to Iraq, Iran, North Korea, and Libya, hold no appeal for this author. However, that said, one should not risk gratuitous damage to international security by fooling oneself with parochial nostrums. While arguably it is true to claim that a nuclear taboo has grown which deglamorizes and delegitimizes nuclear arms, such a taboo has proved itself no reliable barrier to further nuclear proliferation. If there had ever been some danger that states capable of acquiring nuclear arms somehow would slip, as it were naturally, into actual nuclear capability, then the taboo argument would have much more force. But, for all its popularity, inherent attractiveness (at least to us in the West), and apparent political sophistication, the operation and significance of a nuclear taboo is not all that it may seem to be. One should not presume causal connection between the phenomenon of a very slow pace of nuclear proliferation and the international popularity of a nuclear taboo. The latter probably has some relevance to the former, but nowhere near as much as often is implied or claimed. Similarly, one should not presume a causal connection between nuclear non-use and a nuclear taboo. One of the major studies of weapon taboos, for example, inadvertently illustrates the weakness of the evidential base for taboo claims. Null hypotheses are notoriously difficult to prove. For example, Richard Price and Nina Tannenwald overreach severely when they claim that ([t]he strengths of the nuclear taboo and the odium attached to nuclear weapons as weapons of mass destruction renders unusable all nuclear weapons, even though certain kinds of nuclear weapons could, from the perspective of Just War theory, conceivably be justified'.55 This is just not so. The arguments for the historical functioning of a nuclear taboo advanced by Price and Tannenwald cannot bear the strategic traffic that is run over it. In their analysis, normative proscription—taboo-related injunctions—assumes a residual value that is methodologically unfeasible. The 'taboo' argument tends to degrade under pressure into a residual culturalist explanation that is advanced as an unduly pervasive explanation. The problem is that a taboo does exist, but its worth as an explanation for the non-occurrence of some undesired events is not at all powerful.

#### No impact to gas control—countermeasures empirically prevent Russian leverage

Stegen, professor of Renewable Energy and Environmental Politics – School of Humanities & Social Sciences @ Jacobs University, ‘11

(Karen Smith, “Deconstructing the “energy weapon”: Russia's threat to Europe as case study,” Energy Policy Vol. 39, Issue 10, p. 6505–6513)

In some cases, Russia does seem to have implemented its energy weapon successfully. Without control over natural gas and important energy transit routes, for example, Russia could well have lost control over the symbolically significant Black Sea Fleet. However, the evidence for the consistently successful implementation of the energy weapon by Russia is less than overwhelming. Client states, even weak and highly dependent states such as the Baltic countries and Georgia, were able to resist changing their policies to appease Russia, often through the use of strategic alliances. This raises the question: why would Germany and other European countries not be able to resist similar pressure?

This more sanguine reading of Russia–European energy relations is, of course, grounded in the present. Twenty-five years ago, few would have believed that the Soviet Union and Warsaw Bloc would one day voluntarily dissolve themselves; what worries some policy makers and others are the long-term scenarios of world events that, from today's perspective, seem improbable. In one such scenario, a Russia led by the Siloviki (the Kremlin's hardliners) engages the West in a hot war and diverts Europe's supplies to China or elsewhere (Hill, 2006). The assumptions underlying such scenarios, from an energy standpoint, are that Europe's current dependency on Russia will continue and that European states will remain “helpless”.

As the response of western states to the 1970s OPEC oil embargo—the first use of the energy weapon—demonstrated, consumer states can develop countermeasures to supplier state manipulation. In the 1970s, these measures included the establishment of the International Energy Agency, through which oil importers can coordinate and limit supply shocks; creation of 90-day strategic oil reserves; significant reductions in the oil intensity of Western economies as well as the emergence of a strategic alliance between the U.S. and Saudi Arabia, which further limited OPEC's effectiveness. Thanks to these protections, plus the rise of non-OPEC oil production, the Middle East oil weapon lost some of its leverage (Perovic, 2009).

Similar to the countermeasures of the 1970s, the EU—after the January 2009 Russia–Ukraine gas crisis—also implemented protective measures against gas disruptions. The EU now requires all Member States to adopt and regularly update preventive action plans (the first action plans should be adopted by December 3, 2012) and to identify energy security threats—for which the insights of this article are pertinent—and mitigation measures. Unsurprisingly, suggested measures in Annex II of this regulation include diversifying gas suppliers and gas routes; investing into network infrastructure; increasing the share of renewable gas as a supply side measure; and increasing energy efficiency and fuel-switching as demand side measures (EU, 2010).

Even prior to legislating the above protective measures, the EU was pursuing the establishment of a single European gas market, which is expected to significantly contribute to European energy security as it would increase gas flows within the entire European Union and moderate the consequences of disruptions, no matter what their cause (for example, natural hazard or political manipulation). The recent implementation of the “third energy package”—the unbundling of energy producers from the network—will further enhance energy security as suppliers such as Gazprom will have to relinquish their transportation infrastructure. As one would expect, Putin has vociferously protested the third energy package (Socor, 2011b). Unbundling could stop a producer from being able to enact the energy weapon, but many questions remain over how the regulation will actually be enforced. Moreover, a supplier with shared borders could still own its domestic infrastructure and could still cause a disruption on its side of the border.

#### 1. Science Diplomacy High - state department projects

Pellerin, 9

[Cheryl, February 14, 2009, “Foreign Policy's "Smart Power" Gives Science Diplomacy a New Role,” NewsBlaze, <http://newsblaze.com/story/20090214180016tsop.nb/topstory.html>]

Secretary of State Hillary Rodham Clinton has called for a change in the State Department's approach to carrying out its foreign policy duties. This reformation will strengthen the role of science cooperation in international relations.

"American leadership has been wanting but is still wanted," she told the Senate Foreign Relations Committee during her confirmation hearing January 13. "We must use what has been called smart power, the full range of tools at our disposal - diplomatic, economic, military, political, legal and cultural - picking the right tool or combination of tools for each situation. With smart power, diplomacy will be the vanguard of foreign policy."

Smart power is a balance of hard military power with the soft power of diplomacy, development, cultural exchanges, education and science. One of the most promising of the smart power tools is science diplomacy, the practice of supporting and promoting scientific exchanges, cooperation and research between the United States and other nations ? sometimes nations that have no other diplomatic relations with the United States.

Through its Bureau of Oceans, Environment and Science (OES), the State Department engages governments, private-sector businesses, universities, nongovernmental and international organizations and individuals from every region in the world to promote scientific cooperation and education.

"We have recently concluded S&T [science and technology] agreements with Algeria, Morocco, Libya and Jordan," Jeff Miotke, OES deputy assistant secretary for science, space and health, told the House Committee on Science and Technology in April 2008. An agreement with Saudi Arabia was finalized and signed in December 2008.

"We've raised our S&T relationship with Pakistan to a higher level," he added. "With Pakistan and Egypt, we have the only two government-to-government S&T funds still in existence."

STRENGTHENING RELATIONSHIPS

In July 2008, the American Association for the Advancement of Science (AAAS), an international nonprofit scientific organization based in Washington, announced the establishment of the Center for Science Diplomacy.

The center works with the science and foreign policy communities to communicate the value of science diplomacy and identify collaborative projects that could help strengthen civil society relationships among nations, especially when official relations are strained or do not exist.

"I view our activities as twofold," Vaughan Turekian, center director and AAAS chief international officer, told America.gov. "One is operational and the other is inspirational."

Operational activities include assembling delegations and working with international collaborators to visit other countries, and developing activities with countries bilaterally.

The center works with the Jerusalem-based, nonprofit and nonpolitical Israeli-Palestinian Science Organization, for example, to support its mission of fostering cooperation between Israelis and Palestinians and promoting dialogue and interaction among scholars and scientists in those communities.

"The inspirational piece, which is critically important," Turekian said, "is to bring together experts from the different communities to think about opportunities for the types of engagement that might initiate connections or establish connections over the long term."

BUILDING BRIDGES

In November 2008, the Association of American Universities organized a tour of Iran for the presidents of six leading U.S. universities as part of an effort to identify ways to enhance science and education links between the United States and Iran.

On January 22, Iranian and U.S. scientists and senior academics met at AAAS in Washington in the latest of a series of exchange visits that comes at a time when U.S. policy toward Iran is undergoing a comprehensive review.

Another example of science diplomacy is the Iraqi Virtual Science Library, launched in 2006 to help rebuild the educational and scientific infrastructure in Iraq.

The library is a digital portal that gives 80 percent of Iraqi universities and research institutes access to millions of articles from more than 17,000 scientific and engineering journals, plus technical content and educational resources, through an Internet platform developed with Sun Microsystems. (See "U.S. Officials Launch Iraqi Virtual Science Library ( http://www.america.gov/st/washfile-english/2006/May/20060504125222lcnirellep0.8066828.html ).")

A group of AAAS scientists began the project, which is now an interagency collaboration funded by the Defense Threat Reduction Agency, the State Department, the Civilian Research and Development Foundation, donations from publishing companies and professional societies, universities and private companies.

#### 2. Alt-Cause - Funding barriers

Redden, 8

[Elizabeth, writer, July 16, 2008, “ Science Knows No Borders. But Funders Do.,” Inside Higher Ed., <http://www.insidehighered.com/news/2008/07/16/science>]

 James A. Calvin, the interim vice president for research at Texas A&M University, referenced, by way of example, three different summits that brought together Chinese and U.S. scientists, each conference a site of vigorous discussion and debate.

And then what?

“Everyone’s excited, but then after three conferences we’re still at the same phase,” Calvin told the U.S. House of Representatives’ Subcommittee on Research and Science Education during a hearing Tuesday on the role of non-governmental organizations and universities in international science and technology cooperation

 What scientists have, Calvin explained, are “the international conferences to make the introductions. What they don’t have is the mechanism to take the next step.” When pressed by the committee chairman, Rep. Brian Baird (D-Wash.), to offer an example of what such a mechanism would look like, Calvin suggested that, in this context, a granting entity jointly funded by the Chinese and U.S. governments could promote scholarly collaboration (he cautioned, however, that he wouldn’t want to dilute existing research funds available through the National Science Foundation).

Calvin's suggestion got to the heart of two of the challenges to international scholarly cooperation highlighted during Tuesday’s hearing: the difficulty of coordinating research when partners have different governmental agencies to ask of and answer to, and, at least in the U.S. government’s case, the legal limitations on funding foreign collaborators. (“Although we do agree with the view that U.S. taxpayer funds should be used primarily to support American science, there are instances, such as in international science development activities, where we believe this limitation can impede the ability of the programs to achieve their goals,” said Alan I. Leshner, chief executive officer of the American Association for the Advancement of Science, which publishes Science.) Among the other barriers brought up were continuing challenges with visas, although, as Representative Baird pointed out, witnesses at a February subcommittee hearing reported progress on that front.

#### 3. Science Diplomacy fails – can’t overwhelm political conflict

Dickson, 9

[David, Director, SciDev.Net, 4 June 2009, “ The limits of science diplomacy,” SciDev, <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.

#### 4. Turn – alienates other countries - perceived as politicized science

Dickson, 9

[David, Director, SciDev.Net, June 2, 2009, “ Science diplomacy: the case for caution,” <http://scidevnet.wordpress.com/category/new-frontiers-in-science-diplomacy-2009/>]

 Finally, when it comes to promoting the use of science in developing countries, a terminology based historically on maximising self-interest – the ultimate goal of the diplomat – and on practices through which the rich have almost invariably ended up exploiting the poor, is likely to be counterproductive.

In other words, the discussion seemed to confirm that “science diplomacy” has a legitimate place in the formulation and implementation of policies for science (just as there is a time and place for exercising “soft power” in international relations).

 But the dangers of going beyond this – including the danger of distorting the integrity of science itself, and even alienating potential partners in collaborative projects, particularly in the developing world – were also clearly exposed.

#### No impact to failed states – star this card!

Patrick, senior fellow, director – program on international institutions and global governance @ CFR, 4/15/’11

(Stewart M, “Why Failed States Shouldn’t Be Our Biggest National Security Fear,” <http://www.cfr.org/international-peace-and-security/why-failed-states-shouldnt-our-biggest-national-security-fear/p24689>)

In truth, while failed states may be worthy of America's attention on humanitarian and development grounds, most of them are irrelevant to U.S. national security. The risks they pose are mainly to their own inhabitants. Sweeping claims to the contrary are not only inaccurate but distracting and unhelpful, providing little guidance to policymakers seeking to prioritize scarce attention and resources.

In 2008, I collaborated with Brookings Institution senior fellow Susan E. Rice, now President Obama's permanent representative to the United Nations, on an index of state weakness in developing countries. The study ranked all 141 developing nations on 20 indicators of state strength, such as the government's ability to provide basic services. More recently, I've examined whether these rankings reveal anything about each nation's role in major global threats: transnational terrorism, proliferation of weapons of mass destruction, international crime and infectious disease.

The findings are startlingly clear. Only a handful of the world's failed states pose security concerns to the United States. Far greater dangers emerge from stronger developing countries that may suffer from corruption and lack of government accountability but come nowhere near qualifying as failed states.

The link between failed states and transnational terrorism, for instance, is tenuous. Al-Qaeda franchises are concentrated in South Asia, North Africa, the Middle East and Southeast Asia but are markedly absent in most failed states, including in sub-Saharan Africa. Why? From a terrorist's perspective, the notion of finding haven in a failed state is an oxymoron. Al-Qaeda discovered this in the 1990s when seeking a foothold in anarchic Somalia. In intercepted cables, operatives bemoaned the insuperable difficulties of working under chaos, given their need for security and for access to the global financial and communications infrastructure. Al-Qaeda has generally found it easier to maneuver in corrupt but functional states, such as Kenya, where sovereignty provides some protection from outside interdiction.

Pakistan and Yemen became sanctuaries for terrorism not only because they are weak but because their governments lack the will to launch sustained counterterrorism operations against militants whom they value for other purposes. Terrorists also need support from local power brokers and populations. Along the Afghanistan-Pakistan border, al-Qaeda finds succor in the Pashtun code of pashtunwali, which requires hospitality to strangers, and in the severe brand of Sunni Islam practiced locally. Likewise in Yemen, al-Qaeda in the Arabian Peninsula has found sympathetic tribal hosts who have long welcomed mujaheddin back from jihadist struggles.

Al-Qaeda has met less success in northern Africa's Sahel region, where a moderate, Sufi version of Islam dominates. But as the organization evolves from a centrally directed network to a diffuse movement with autonomous cells in dozens of countries, it is as likely to find haven in the banlieues of Paris or high-rises of Minneapolis as in remote Pakistani valleys.

What about failed states and weapons of mass destruction? Many U.S. analysts worry that poorly governed countries will pursue nuclear, biological, chemical or radiological weapons; be unable to control existing weapons; or decide to share WMD materials.

These fears are misplaced. With two notable exceptions — North Korea and Pakistan — the world's weakest states pose minimal proliferation risks, since they have limited stocks of fissile or other WMD material and are unlikely to pursue them. Far more threatening are capable countries (say, Iran and Syria) intent on pursuing WMD, corrupt nations (such as Russia) that possess loosely secured nuclear arsenals and poorly policed nations (try Georgia) through which proliferators can smuggle illicit materials or weapons.

When it comes to crime, the story is more complex. Failed states do dominate production of some narcotics: Afghanistan cultivates the lion's share of global opium, and war-torn Colombia rules coca production. The tiny African failed state of Guinea-Bissau has become a transshipment point for cocaine bound for Europe. (At one point, the contraband transiting through the country each month was equal to the nation's gross domestic product.) And Somalia, of course, has seen an explosion of maritime piracy. Yet failed states have little or no connection with other categories of transnational crime, from human trafficking to money laundering, intellectual property theft, cyber-crime or counterfeiting of manufactured goods.

Criminal networks typically prefer operating in functional countries that provide baseline political order as well as opportunities to corrupt authorities. They also accept higher risks to work in nations straddling major commercial routes. Thus narco-trafficking has exploded in Mexico, which has far stronger institutions than many developing nations but borders the United States. South Africa presents its own advantages. It is a country where “the first and the developing worlds exist side by side,” author Misha Glenny writes. “The first world provides good roads, 728 airports . . . the largest cargo port in Africa, and an efficient banking system. . . . The developing world accounts for the low tax revenue, overstretched social services, high levels of corruption throughout the administration, and 7,600 kilometers of land and sea borders that have more holes than a second-hand dartboard.” Weak and failing African states, such as Niger, simply cannot compete.

Nor do failed states pose the greatest threats of pandemic disease. Over the past decade, outbreaks of SARS, avian influenza and swine flu have raised the specter that fast-moving pandemics could kill tens of millions worldwide. Failed states, in this regard, might seem easy incubators of deadly viruses. In fact, recent fast-onset pandemics have bypassed most failed states, which are relatively isolated from the global trade and transportation links needed to spread disease rapidly.

Certainly, the world's weakest states — particularly in sub-Saharan Africa — suffer disproportionately from disease, with infection rates higher than in the rest of the world. But their principal health challenges are endemic diseases with local effects, such as malaria, measles and tuberculosis. While U.S. national security officials and Hollywood screenwriters obsess over the gruesome Ebola and Marburg viruses, outbreaks of these hemorrhagic fevers are rare and self-contained.

I do not counsel complacency. The world's richest nations have a moral obligation to bolster health systems in Africa, as the Obama administration is doing through its Global Health Initiative. And they have a duty to ameliorate the challenges posed by HIV/AIDS, which continues to ravage many of the world's weakest states. But poor performance by developing countries in preventing, detecting and responding to infectious disease is often shaped less by budgetary and infrastructure constraints than by conscious decisions by unaccountable or unresponsive regimes. Such deliberate inaction has occurred not only in the world's weakest states but also in stronger developing countries, even in promising democracies. The list is long. It includes Nigeria's feckless response to a 2003-05 polio epidemic, China's lack of candor about the 2003 SARS outbreak, Indonesia's obstructionist attitude to addressing bird flu in 2008 and South Africa's denial for many years about the causes of HIV/AIDS.

Unfortunately, misperceptions about the dangers of failed states have transformed budgets and bureaucracies. U.S. intelligence agencies are mapping the world's “ungoverned spaces.” The Pentagon has turned its regional Combatant Commands into platforms to head off state failure and address its spillover effects. The new Quadrennial Diplomacy and Development Review completed by the State Department and the U.S. Agency for International Development depicts fragile and conflict-riddled states as epicenters of terrorism, proliferation, crime and disease.

Yet such preoccupations reflect more hype than analysis. U.S. national security officials would be better served — and would serve all of us better — if they turned their strategic lens toward stronger developing countries, from which transnational threats are more likely to emanate.

#### No extinction

Malcolm **Gladwell**, writer for The New Yorker and best-selling author The New Republic, July 17 and 24, 19**95**, excerpted in Epidemics: Opposing Viewpoints, 1999, p. 31-32

Every infectious agent that has ever plagued humanity has had to adapt a specific strategy but every strategy carries a corresponding cost and this makes human counterattack possible. Malaria is vicious and deadly but it relies on mosquitoes to spread from one human to the next, which means that draining swamps and putting up mosquito netting can all hut halt endemic malaria. Smallpox is extraordinarily durable remaining infectious in the environment for years, but its very durability its essential rigidity is what makes it one of the easiest microbes to create a vaccine against. AIDS is almost invariably lethal because it attacks the body at its point of great vulnerability, that is, the immune system, but the fact that it targets blood cells is what makes it so relatively uninfectious. Viruses are not superhuman. I could go on, but the point is obvious. Any microbe capable of wiping us all out would have to be everything at once: as contagious as flue, as durable as the cold, as lethal as Ebola, as stealthy as HIV and so doggedly resistant to mutation that it would stay deadly over the course of a long epidemic. But viruses are not, well, superhuman. They cannot do everything at once. It is one of the ironies of the analysis of alarmists such as Preston that they are all too willing to point out the limitations of human beings, but they neglect to point out the limitations of microscopic life forms.

# 2nc

## 2nc

#### That would blow open limits

EIA, Energy Information Administration, Office of Energy Markets and End Use, U.S. DOE, ‘92

(“Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets,” ftp://tonto.eia.doe.gov/service/emeu9202.pdf)

In some sense, most Federal policies have the potential to affect energy markets. Policies supporting economic stability or economic growth have energy market consequences; so also do Government policies supporting highway development or affordable housing. The interaction between any of these policies and energy market outcomes may be worthy of study. However, energy impacts of such policies would be incidental to their primary purpose and are not examined here. Instead, this report focuses on Government actions whose prima facie purpose is to affect energy market outcomes, whether through financial incentives, regulation, public enterprise, or research and development.

#### Presumption is meaningful in this instance—energy production debates need to be focused on precise phrasing for policies

Brown, judge – Court of Appeals for the Fifth Circuit, ‘59

(John R., “CONTINENTAL OIL COMPANY, Petitioner, v. FEDERAL POWER COMMISSION,” Dissenting Opinion, 266 F.2d 208; 1959 U.S. App. LEXIS 5196; 10 Oil & Gas Rep. 601)

 Indeed, I do not think that my cautious Brothers would have undertaken this excursion had they not first have found (or assumed) a basis for considering production in its ordinary, common usage. For clearly, what the Court says does not follow if the term is used in the sense of the oil and gas field. For example, the Court states, 'In the ordinary language of purchase and sale of a product where it is in deliverable form the stream of gas is, in a sense, 'produced' at the latest after it has passed through the first master valve. \* \* \*.' Again, it states, 'but this does not change the fact that in the ordinary sense of the terms production of the gas has been completed at or just above the surface of the ground where it is physically deliverable but then is shut in until delivery commences.'To support this approach, the Court frankly states that 'our duty here is not to determine what is generally understood in the industry, in the resolution of other relationships, is meant by 'production." It is, rather, the Court goes on to say 'to determine what Congress meant by the term.' Reading § 1(b) as though it contained only the first part of the sentence and disregarding [\*\*35] altogether the exclusionary phrases at its end, the Court then proceeds to find that the sole Congressional purpose was 'to regulate these interstate sales.' This causes the Court then to reject the industry context and adopt a construction of 'production' which 'is in line with ordinary non-technical usage' so that it will 'effectuate and not \* \* \* frustrate the purpose of the law.'.' The abundant legislative history canvassed by the many Supreme Court cases But Congress was not legislating in an atmosphere of 'ordinary non-technical usage reveals an articulate awareness of the complexities of this whole business. The object of § 1(b) was clearly to define the purpose to regulate [\*220] transportation and sale and companies engaged in such transportation or sale. This was done against the background fully known to Congress that at one end of the process was the production of the natural gas, that at the other end was the consumer, and in between were those who transported and distributed it. As pointed out in Part I above, the Court has been emphatic in ascribing an intention to Congress to exclude those matters which relate to the local production activities [\*\*36] traditionally reserved to states for their exclusive control.We are told that § 1(b) exclusion is a provision '\* \* \* that \* \* \* precludes the Commission from and control over the activity of producing or gathering natural gas. \* \* \*.' Colorado Interstate Gas Co. v. FPC, 1945, 324 U.S. 581, 603, 65 S.Ct. 829, 839, 89 L.Ed. 1206. Two years later this was reiterated in Interstate Natural Gas Company v. FPC, 1947, 331 U.S. 682, 690, 67 S.Ct. 1482, 1487, 91 L.Ed. 1742. 'Clearly, among the powers thus reserved to the States is the power to regulate the physical production and gathering of natural gas in the interests of conservation or of any other consideration of legitimate local concern. It was the intention of Congress to give the States full freedom in these matters.'Within another two years this was reemphasized in FPC v. Panhandle Eastern Pipe Line Co., 1949, 337 U.S. 498, 509-13, 69 S.Ct. 1251, 1258, 93 L.Ed. 1499. 'To accept these arguments springing from power to allow interstate service, fix rates and control abandonment would establish wide control by the Federal Power Commission over the production and gathering [\*\*37] of gas. It would invite expansion of power into other phases of the forbidden area. It would be an assumption of powers specifically denied the Commission by the words of the Act as explained in the report and on the floor of both Houses of Congress. The legislative history of this Act is replete with evidence of the care taken by Congress to keep the power over the production and gathering of gas within the states.'How Congress expected to preserve the absolute freedom of the States in matters concerning production unless that term was used in the context of that industry is nowhere made clear by my Brothers. If Congress were to adhere to its purpose, carefully to regulate some but not all of the natural gas moving of dedicated to move in interstate commerce, it was required to prescribe the boundary limits of each in terms of the business and industry to be regulated. That is the usual, not the extraordinary, principle of statutory construction long ago set forth in Unwin v. Hanson, (1891) 2 Q.B. 115, 119, approved in O'Hara v. Luckenback Steamship Co., 1926, 269 U.S. 364, 370-371, 46 S.Ct. 157, 160, 70 L.Ed. 313:'If the act is one [\*\*38] passed with reference to a particular trade, business, or transaction, and words are used which everybody conversant with that trade, business, or transaction, knows and understands to have a particular meaning in it, then the words are to be construed as having that particular meaning, though it may differ from the common or ordinary meaning of the words.'And see 50 Am.Jur., Statutes § 277 (1944).What is 'production of natural gas' is to be determined in the light of the actual substantive conditions and engineering-business requirements of that great field of scientific mechanical activity. Such activity is not to be assayed by Judges who, learned in the law, have naught but the limited technical experience and cumulative knowledge of the ordinary person.Judged by the standards of the industry, not only by what was said and uncontradicted, but by what was done on a large scale in this very field, the Commission could only find that all of Continental's facilities were essential to and a part of the production of gas. [\*221] IV.The Court's action and opinion is portentous. It is so precisely because it is based on an erroneous assumption and an equally [\*\*39] erroneous construction. It assumes that we are fact finders to supplant or supplement the expert agency. It finds the capacity to cope with this problem by relieving it of all technical complexities and casting it in the mold of the ordinary meaning of production.The Court finds 'that in the ordinary sense of the term production of the gas has been completed at or just above the surface of the ground where it is physically deliverable \* \* \*.' (emphasis in the original) Tying this in to the point of delivery (at the very extreme end of Continental's 4-inch master value and at the very beginning of El Paso's swage), the Court has necessarily adopted the approach of the Commission that facilities for the sale of natural gas subject to the jurisdiction of the Commission are those 'serving to contain the gas at the point of delivery.' That it means to champion this construction is likewise established by the Court's unqualified approval, both here and in Sun Oil Company v. FPC, 5 Cir., 1959, 266 F.2d 222, of J. M. Huber Corp. v. FPC, 3 Cir., 1956, 236 F.2d 550, 556 and Saturn Oil & Gas Co. v. FPC, 10 Cir., 1957, 250 F.2d 61, 69, [\*\*40] the latter of which states: 'To us it is clear that facilities necessary to effect a sale of gas in interstate commerce are facilities used in interstate commerce and are within the jurisdiction of the Commission. This would seem to be the plain intent of section 7(c). The Third Circuit has so held in J. M. Huber Corp. v. Federal Power Commission, 3 Cir., 236 F.2d 550, 556.'The vice of this rationale is compounded by the Court's interpretation of 'production' or 'production facilities' in terms of ordinary non-industry connotation. But even without this, if the test is to be stated in terms of that piece of equipment which is needed to effectuate the sale or contain the gas at the point of sale delivery, then there is in fact no physical limitation. In those terms the master valve (whether upper or lower, or both) does not alone contain the gas. The master valves are ineffective without the continuation of the leakproof surface casing, the production casing or many other parts of the well, all of which operate simultaneously and indispensably to bring and hold the gas under effective control.That is critical since § 7(c) requires certification [\*\*41] of facilities which are to be constructed or extended. And once a little intrusion is made into the forbidden 1(b) area of production, it is only logical to expect (and justify) application of the full reach of this concept. It stops in a given well where, but only where, the particular piece of equipment may be said to directly assist in the containment of the gas at delivery point. Worse, it means that by the force of § 7(c), the drilling and equipping of a new well could only be done by express approval of the Commission.We and all others have now firmly held that on the commencement of the first jurisdictional sale, the Commission's power attaches at least to the sale. The Court by our present opinion holds that simultaneously power attaches to some piece of gas well equipment. If the jurisdictional sale setting all of this Federal control in motion is in the common form of a long-term dedication-of-reserves- contract by which the mineral owner undertakes to develop a field and deliver all production to the long line pipe line purchaser, the result will be that the drilling of additional wells may not be done except on Commission terms and approval. In such [\*\*42] a situation the 'new' well would, of course, be the means by which to effectuate the sale of the gas. Since this would constitute 'the construction or extension of any facilities' for the sale of natural gas subject to the jurisdiction of the Commission, and would result in the acquisition and operation of 'such facilities or extensions thereof,' it would, as § 7(c) demands, positively require that the Commission issue a certificate of public [\*222] convenience and necessity 'authorizing such acts or operation.'Combining this opinion and Sun Oil, this day decided, this Court binds a gas well owner to produce gas for as long as the Commission prescribes. Neither the length of the contract nor the production-nature of the facility by which the 'service' (sale) is performed are an effective limitation. Until nature shuts off the gas the Commission is the perpetual regulator from whose power the Commission's own brief says, '\* \* \* there is no \* \* \* hiding place.'Congress did not mean to invest its creature with these scriptural powers (Psalms 139:7, 8). Section 1(b) draws the line at production.

## 2nc overview \*\*\*

#### The fundamental issue is one of funding, which the CP provides.

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http://energy.aol.com/2012/08/03/through-innovation-and-investment-the-u-s-can-lead-in-next-gen/?icid=apb2#page2

We know that fusion works, it is already being done in labs around the world. Here in the United States, the three major experiments for research into magnetically-confined fusion (which uses powerful magnets to confine the superheated plasma) **are the Princeton Plasma Physics Laboratory**, **the Plasma Science and Fusion Center at** the Massachusetts Institute for Technology (**MIT**), and the DIII-D Research Program at General Atomics' **Fusion Energy Research Lab in San Diego**. **These experiments are supported by major scientific research institutions** like Oak Ridge National Laboratory in Tennessee **and by a range of businesses**, **contractors**, **and researchers in every corner of the country**.

Up to now, the problem with fusion has been crafting new materials that are strong enough to withstand the heat of a fusion reaction, which needs to reach 100 million degrees, more than six times hotter than the surface of the sun. The other challenge is confining the hot plasma long enough for the reaction to take place; a process that scientists are experimenting with either magnets or lasers. But scientists, together with the private sector, are making progress in these areas. The next step is to build a fusion reactor that will produce net energy power (get more power out than is put in); one is currently under construction in France, with American support. Known as ITER, the facility is backed by seven nations including the United States, and should be completed by 2020.

Scientists are confident that the limitations to full commercialization of fusion reactors are not scientific, but budgetary. Exponential increases in power generation were achieved for twenty years leading up to the mid 1990s, but since then, budget cuts have caused delays. A program that had suffered years of atrophy was further harmed when President Obama's fiscal year 2013 budget request called for a $45 million cut from the domestic fusion program, a drastic reduction of 16%.

**The budget cuts will force MIT's** Plasma Science and **Fusion Center to shut down**. This facility's "Alcator C-Mod" is a critical component of our national research program.

Cuts like this would prevent American fusion labs and companies from capitalizing on the lessons learned from the ITER experiment. MIT is doubly important because it houses the largest collection of plasma science graduate students in the country; **our next generation of scientists would be trained here**. Unfortunately, the prospect of the budget cut has already caused the University to delay acceptances of the incoming 2012 graduate students.

Cutting the program will start to dismantle a world class scientific workforce and send the message to our brightest science students that their best chance for career advancement will come from working abroad in France, Japan, or China.

The U.S. has a remarkable track record in developing transformational technologies that revolutionize our way of life. With much needed investment, fusion energy can transform our energy system for the next generation.

## AT: State Fiat Bad

The States CP is the topic---jurisdictional questions are key to energy production debates

Kay, 12

(Senior Extension Associate with the Community & Regional Development Institute-Cornell Dept. of Sociology, “Energy Federalism: Who Decides?,” http://devsoc.cals.cornell.edu/cals/devsoc/outreach/cardi/programs/loader.cfm?csModule=security/getfile&PageID=1071714)

**Questions about energy production** and consumption are acquiring renewed urgency in the 21st Century. Some **go to the heart of our nation’s system of federalism,** as an underlying but ever-present friction mounts over the way in which decision making power has been divided between central and more locally distributed political units. What is at stake? According to one author, “**the choice of regulatory forum often seems to determine the outcome of the controversy**. That may explain why Americans have traditionally **shed so much** metaphorical and genuine **blood deciding what are essentially jurisdictional disputes between governmental institutions.”**

A number of factors have raised these issues into greater prominence. Energy specific influences include the depletion of low cost oil, advances in energy extraction technology, and increased awareness of the link between climate change and energy consumption and production. Another element is the long standing but increasingly hardened absence of a broad based consensus over energy policy at the federal level, despite calls for such a policy that date back to at least the Nixon administration. These have been superimposed on shifting political trends in other areas, including the expanding national political divide. After the crest of federal adoption of new environmental legislation in the 1960’s and 1970’s, powerful and complex cross currents arose. Mostly “conservative” and anti- (or anti-“big”) government forces mobilized in the devolution, deregulation, privatization, and property rights movements.

In contrast, “progressive” movements evolved in response to increased globalization (of economic and environmental issues) and personalization (eg. of communications/information technology) by promoting global governance in some arenas and relocalization or local empowerment in others. Several energy examples being played out in New York State, as well as in other states and on the national stage, serve as useful and representative illustrations of the fundamental but insufficiently appreciated tensions raised. The first involves the spread of the controversial hydraulic fracturing technology that is used to extract oil and gas from “unconventional” reserves of shale and other rocks. The second and third involve the generation and distribution of electricity: where the authority to site electricity generating stations is vested, and who has the authority to site transmission lines that move electricity from their mostly rural points of extraction or generation to their mostly urban points of consumption. These are but a few among many examples that highlight the extent to which the proliferating threads of debate about energy federalism are being cinched into an increasingly dense tangle.

The judge should be an independent policy analyst.

Their interpretation is incoherent – no one person is the federal government.

Sole decision maker is wrong and kills education

Rabe, 8

(Prof of Public Policy-Ford School at Michigan, “States on Steroids: The Intergovernmental Odyssey of American Climate Policy,” Review of Policy Research, Vol. 25, Issue 2, March)

Climate change has conventionally been framed as an issue that would be addressed by an international regime established through negotiation among nation-states. The experience of policy development in the decade following the signing of the Kyoto Protocol indicates that climate change also **needs to be examined as a challenge of multilevel governance. The increasingly central role of state governments** in American climate policy formation squares with recent experience in other Western democracies that share authority across governmental levels. This paper examines the American experience, considering factors that have contributed to a state-centric policy process and using that body of experience to assess competing strategic choices faced by individual states based on their mix of emission trends and policy adoption rates. In turn, the collective state experience allows for consideration of the varied political feasibility of competing climate policy tools that remain under active review in subnational, national, and international contexts. The paper concludes with a set of scenarios that explore different ways in which a state-centric system may be integrated with expanding involvement at the national level. Most scholarly and journalistic analysis presents the odyssey of climate change policy in the United States as if America was a unitary system of government. This leads to a familiar tale, whereby the federal government signed the Kyoto Protocol in 1997, spurned ratification four years later, and neither the Clinton nor subsequent Bush Administration and respective Congresses have been able to agree to anything beyond climate research funding and voluntary reduction programs. At the same time, conventional analysis has assumed that climate policy would entail bargaining and implementation among nations, culminating in a world climate regime. More than a decade after the signing of Kyoto, it is increasingly evident that climate policy is proving far messier than prevailing depictions had anticipated. The Kyoto process is in tatters, attributable not only to American disengagement but also to an inability of many ratifying nations to honor their commitments. This is reflected in numerous failures to approach pledged emissions reductions, as in the Canadian and Japanese cases, or to successfully implement national or multinational policies, as in the stumbles of the Emissions Trading Scheme in the European Union. There also continues to be enormous uncertainty about engagement by developing nations, at the very point where China is primed to eclipse the United States as the world's leading national source of greenhouse gases. But perhaps the biggest single surprise as climate policy continues to evolve is that in the American case and many others, it is becoming increasingly evident that **climate policy constitutes an issue of federalism** or multilevel governance. As the recent emergence of California Governor Arnold Schwarzenegger as a claimant to the title of “world leader” in the development of far-reaching climate policy attests, individual units across different federal or multilevel governance systems may have more in common with one another in climate policy than they have with the neighboring units of their overall federation. Indeed, one can see stronger parallels between such jurisdictions as Connecticut and Sweden, Pennsylvania and Germany, New York and New South Wales, and North Carolina and Ontario than exists across many members of the same federation. This paper will focus primarily on the American case, considering more than a decade of state and federal policy experience and attempting to distill lessons that could guide future policy development. First, it will offer an overview of American subnational policy development, attempting to provide a review of the tapestry of policies that have been enacted over the past decade and some of the key factors that have led to such a robust state response in the absence of federal mandates or incentives. Second, this will lead to a consideration of the divergent paths taken by the 50 states, reflected in their carbon dioxide emission trends since 1990 and varied levels of climate policy development. This section will explore the unique contexts facing various states, particularly the differing strategic considerations for them (and for their representatives in Congress) as they consider unilateral policy steps or the possibility of federal policy in the 110th Congress and beyond. Third, the collective state experience offers some possible lessons for future policy development at either subnational or national levels. In particular, we will see that there appears to be a nearly inverse relationship between those policies that policy analysts tend to endorse as holding the greatest promise to reduce emissions in a cost-effective manner and the political feasibility of respective policy options. These patterns could offer significant lessons for the future of climate policy development, outlining both challenges and opportunities for future policy whether enacted at the single-state, multistate, or federal levels. Finally, we look ahead and consider alternative scenarios for future development of American climate policy, building on recent experience to anticipate possible next directions (Selin & VanDeveer, 2007).

CP is real world---NGA acts together on energy issues

ENN, 1

(Environmental News Network, 8/17, Governors Want State, Local Input into National Energy Plans, Lexis)

The governors of the 50 states, 3 territories, and 2 commonwealths have adopted a comprehensive national energy policy emphasizing conservation.

At the closing session of the 93rd Annual Meeting of the National Governors Association last week in Providence, R.I., the governors sent a message to the White House that state and local authorities must have input into the nation's energy plans. "The policy sends a clear message that solving our nation's energy problems demand more conservation, especially utilizing renewable fuels like ethanol," said Iowa Gov. Thomas Vilsack, chairman of the association's Committee on Natural Resources. Ensuring "environmental quality" comes second in the list of 10 principles

## at: linkage (they extend miller / read randall)

#### They cite the 1AC Miller card to say the sponsoring agency gets the tech, but it doesn’t say that only the sponsor gets it. The sponsor benefits from the new research, but so does everyone else!!

Miller 7

(Warren, Research Professor and Associate Director of the Nuclear Security Science and Policy Institute – Texas A%26M University, "Nuclear’s Human Element", A Report By the American Nuclear Society Special Committee on Federal Investment in Nuclear Education, February, http://www.ans.org/pi/fine/docs/finereport.pdf)

DOE support of graduate programs in NSE is particularly important. Because NSE is so complex and applicable in so many fields, today’s undergraduate nuclear engineering program must cover a broad range of technical material. It is only in graduate school that an NSE student can focus on a particular application, e.g., design of new nuclear power plants, development of instruments to detect nuclear materials in shipping containers, new techniques for radiation treatment of cancer, etc. Many of the NSE positions in government agencies, national laboratories, universities, and medical facilities can be filled only by people holding graduate degrees. **A graduate degree** in NSE **requires** both study of advanced theory and **research** that involves practical application of theory in the student’s area of specialization. **That** research, which is guided by a professor, typically **requires** specialized equipment and significant **financial support**. However, it serves two purposes. **It is part of the student’s training**, **but** it **also provides information of value to the sponsoring agency**. Thus, DOE funding of NSE programs is important not only because it provides training for future essential NSE professionals but also because **the results of the research can be immediately useful**.

#### The knowledge goes to everyone

Miller 7

(Warren, Research Professor and Associate Director of the Nuclear Security Science and Policy Institute – Texas A%26M University, "Nuclear’s Human Element", A Report By the American Nuclear Society Special Committee on Federal Investment in Nuclear Education, February, http://www.ans.org/pi/fine/docs/finereport.pdf)

The pioneering studies of nuclear physics in the late 19th and early to middle 20th centuries led to the birth of a new discipline: nuclear science and engineering. Since its beginning more than 50 years ago, NSE has enjoyed a special status in the United States and in the world as a field of study, owing to the consequential purposes for which the attained knowledge can be used. **No other specific technical field of study provides its graduates with a body of knowledge that can be used for great benefit to the world** in providing safe, reliable, environmentally benign power production and in advancing medical diagnoses or treatments, as well as providing the basic education that is used for security‐related activities that can affect world peace and stability. Indeed, NSE is unique.

#### And if DOE keeps the tech to itself, they don’t solve their advantages.

#### The only link is funding – CP solves that

Miller 7

(Warren, Research Professor and Associate Director of the Nuclear Security Science and Policy Institute – Texas A%26M University, "Nuclear’s Human Element", A Report By the American Nuclear Society Special Committee on Federal Investment in Nuclear Education, February, http://www.ans.org/pi/fine/docs/finereport.pdf)

In short, no other engineering discipline is as reliant on DOE research support as nuclear engineering. As such, **fluctuations in DOE funding** inevitably **have a tangible**, even disproportionate, **impact** on both university‐based NSE education and research programs in the U.S. nuclear education enterprise as a whole. **These** university‐based **research programs provide new science** and engineering results as well as provide the technical human resources so critical **to the nation**.

#### And their part of the article is not about fusion. In fact, this thirty page article uses the word fusion 3 times.

#### First is in a definition of nuclear education.

#### The second says that even one reactor will take decades:

Miller 7

(Warren, Research Professor and Associate Director of the Nuclear Security Science and Policy Institute – Texas A%26M University, "Nuclear’s Human Element", A Report By the American Nuclear Society Special Committee on Federal Investment in Nuclear Education, February, http://www.ans.org/pi/fine/docs/finereport.pdf)

University‐based NSE activities lead to R&D results, as well as to graduates for government, national laboratories, and industry. In the R&D realm, there are challenges in energy security, nuclear security, and other fields. In the area of nuclear energy, there are new, **DOE‐funded initiatives** in advanced reactors, in nuclear energy for hydrogen production, and in spent‐fuel management. Advanced reactor programs include novel ideas in water‐cooled, gas‐cooled, and liquid‐metal‐cooled reactors. Research programs are directed toward fielding Generation IV reactors in the first half of the 21st century. In addition, there continue to be R&D efforts to demonstrate the tokamak and other plasma confinement concepts that **could lead to a demonstration fusion reactor in the middle of the century**. Nuclear energy can potentially be used to produce hydrogen for transportation applications in an economically feasible manner and there is a vigorous research program to develop high‐temperature reactors for this purpose. A newly announced DOE program, the Global Nuclear Energy Partnership (GNEP), is intended to develop the systems, technologies, and policy regimes to allow recycling of used light water reactor fuel and, to a large extent, eliminate the actinides in fast‐spectrum reactors in a way that enhances proliferation resistance. The resulting waste streams are envisioned to have characteristics that would lessen the demand for geologic repository assets. These and other DOE‐funded research efforts will need to make great use of university‐based NSE capabilities.

#### The third is about educational oversight, which they don’t do – and it says there’s no reason DOE is key

Miller 7

(Warren, Research Professor and Associate Director of the Nuclear Security Science and Policy Institute – Texas A%26M University, "Nuclear’s Human Element", A Report By the American Nuclear Society Special Committee on Federal Investment in Nuclear Education, February, http://www.ans.org/pi/fine/docs/finereport.pdf)

The need to monitor and support university‐based NSE research and education efforts, consistent with the Atomic Energy Act, requires a continuous federal government stewardship effort. Given the fact that NSE research and education serve a wide variety of government agencies including DOE, DOE/NNSA, DOE/SC (especially the fusion program), NRC, DHS, NASA, DOD, and others, it does not necessarily have to be resident within DOE/NE. **The principal argument for keeping the program in DOE/NE is historical**. In recent years, the effort has been quite effectively conducted from that office. On the other hand, given the breadth of needs for research products and graduates, to include nuclear security, an argument can be made to place the program in NNSA. Another point of view is to place the program in DOE/SC, which is charged with serving all the DOE mission agencies.

#### The 2AC reads the Randall internal link to leadership, but:

#### It says U.S. researchers must do the work – the CP also funds U.S. scientists!

Randall 1 (Don M., President – University of Chicago, with other University Presidents, "Revitalizing Science in the Department of Energy", American Physics Society White Paper, December, http://www.aps.org/policy/tools/-http://www.aps.org/policy/tools/ coalitions/esc/upload/Grassroots\_2001\_ESC\_WhitePaperRevitalizingScienceDOE.pdf)

New and Creative Ideas and Innovation

One of the most significant casualties of declining federal investment in the physical sciences and engineering is **the loss of U.S. intellectual leadership in essential fields because U.S. researchers account for fewer advances**. While it is hard to measure increases or decreases in national “brainpower” by field, one possible measuring tool is the number of articles submitted to and published in peer reviewed scientific publications. While the U.S. has historically led the world in this area, **U.S. scientific and technical publications appear to be on a downward trajectory** while increasing in many other countries (Council on Competitiveness, U.S. Competitiveness 2001). For instance, submissions to Physical Review and Physical Review Letters from Western European researchers and those from other parts of the world combined have significantly outpaced submissions by U.S. authors in recent years (figure 7). In some areas, choices have been made which have significantly weakened our scientific position with regard to other countries. For example, **the U.S. once led the world in fusion research; that is no longer so**. Similarly, our scientific position relative to other countries in High Energy Physics and Nuclear Fission Research has declined.0

#### The only link is money – which the CP also provides

Randall 1 (Don M., President – University of Chicago, with other University Presidents, "Revitalizing Science in the Department of Energy", American Physics Society White Paper, December, http://www.aps.org/policy/tools/-http://www.aps.org/policy/tools/ coalitions/esc/upload/Grassroots\_2001\_ESC\_WhitePaperRevitalizingScienceDOE.pdf)

New and Creative Ideas and Innovation

**The Department of Energy plays a critical role** in sustaining U.S. world leadership in science. **It is the leading source of federal funds** for R&D facilities and for fundamental research in the physical sciences (providing over 40% of the federal investment in these disciplines). It ranks second among federal agencies in its support for computer science and mathematics behind DOD, and third for engineering research behind DOD and NASA (figure 8). DOE’s scientific facilities at national laboratories and universities are essential tools for U.S. researchers in a variety of fields. Since its inception as the Atomic Energy Commission, DOE has supported the work of 74 Nobel Prize winners. **The DOE invests in cutting-edge research** at universities and national laboratories in such diverse fields as fusion research, high energy and nuclear physics, advanced scientific computing, nanotechnology, and molecular biology.

#### Their card also says DOE has useful facilities – but the plan is only financial transfers, and scientists can use those facilities anyway… even if their research grant is from the states

#### Finally, the article is recommending broader DOE investments, not the pla—not about fusion – this is the conclusion:

Randall 1 (Don M., President – University of Chicago, with other University Presidents, "Revitalizing Science in the Department of Energy", American Physics Society White Paper, December, http://www.aps.org/policy/tools/-http://www.aps.org/policy/tools/ coalitions/esc/upload/Grassroots\_2001\_ESC\_WhitePaperRevitalizingScienceDOE.pdf)

An Initiative to Revitalize DOE Science

The DOE role in science must be revitalized and strengthened if the nation is to continue to receive the essential benefits of science and engineering research. DOE must step up to its important responsibility as the largest single U.S. investor in research in the physical sciences, third largest investor in engineering, and the third largest investor in basic research. The growing interdependence between the physical sciences and engineering, the life and biomedical sciences and other key areas of science, requires that investments in the Office of Science keep pace with the investment commitments of NIH and NSF.

To revitalize the Nation’s research portfolio in the physical and engineering sciences, a new $300 million initiative is proposed for the Office of Science **in FY 2003** with equal additional increments in each of **the next five years**:

$100 million to strengthen the base of research and education in the physical sciences and engineering at universities and national laboratories. These funds should be targeted to achieve the following objectives:

ÿ Rebuild lost infrastructure of research groups at universities and national laboratories by allowing them to upgrade their equipment and hire needed technical support staff;

ÿ Address the emerging human resource crisis by creating new graduate and post-graduate research assistantships at more attractive salaries;

ÿ Increase the size and duration of grant awards to DOE individual investigators;

ÿ Create or upgrade university-based laboratories and equip them with cutting edge technology to attract the Nation’s best minds into research careers;

ÿ Support undergraduate and K-12 programs that encourage young people to pursue training and advanced degrees in physical science and engineering fields;

ÿ Fund outreach programs at both universities and national laboratories that enhance the scientific literacy of the public.

$100 million to increase effective utilization of world class facilities at national laboratories and universities. These funds should be targeted to:

ÿ Properly operate our forefront user facilities to ensure an appropriate scientific return on recent investments. In recent years, budgetary constraints have forced many of the Nation’s user facilities to operate much below their design capacity. Modest increases of 10-20 percent can double the research productivity of many forefront facilities. Increases in operating funds will be allocated on a case-by-case basis and after an in-depth review of a facility’s cost-savings and efficiency measures.

ÿ Increase the level of funding available for individual investigators and research teams wishing to conduct research using national user facilities. $50 million to develop the next generation of scientific tools and capabilities. These funds should be used to:

ÿ Fund R&D and the conceptual design reports for a new generation of user facilities and equipment to ensure the long-term competitiveness of the U.S. research enterprise.

$50 million to advance research and innovation related specifically to DOE’s Energy mission. These funds should secure the following targeted objectives:

ÿ Revitalize nuclear and fusion energy research programs at universities and national laboratories,

ÿ Increase basic research to advance energy efficiency and renewable sources of energy,

ÿ Modernize selected university-based research reactors,

ÿ Address the technical, policy, and educational issues important for the Nation’s energy needs,

ÿ Evaluate and explain to the public the benefits and risks associated with reprocessing nuclear fuels to reduce or eliminate the need for safely storing nuclear waste for tens to hundreds of millennia.

## AT: Preemption

No preemption risk

Montalvo, 10

(JD-Fordham Law School, “Cracks on the Wall: Why States Should be Allowed to Lead on Climate Change,” 21 Fordham Envtl. Law Rev. 383)

Another problem that arises when states choose to act before the federal government is that preemption issues arise. n102 What happens [\*403] if and when the federal government enacts legislation that deals with climate change after states have already adopted their own policies? The issue of preemption between federal and state regulation is extremely broad. There are solutions to this problem, however, because the majority of federal environmental laws do not "invoke explicit preemption" n103; state regulations can be designed to address preemption before it becomes an issue. n104 Congress often encourages states to enact their own, stricter legislation. n105 In addition, there are often savings clauses in federal environmental law which preserve certain areas of regulation to the states or leave states free to regulate beyond what the federal government would be able to do on its own. n106

RGGI provides in its Memorandum of Understanding for what to do in the event of friction between the states and the federal government. n107 RGGI determines questions of federal preemption based on "(1) whether or not the federal bill allows for established state programs to remain in existence; and (2) the degree to which a federal program is comparable to RGGI." n108 The issue of preemption was raised, and ultimately decided, in the discussion draft of the Waxman-Markey bill. The bill allows states to implement tougher standards on GHG emissions, but state programs will be suspended for the period between 2012-2017 so that federal carbon markets have time to develop. n109 Additionally, the Clean Air [\*404] Act, as noted earlier, specifically designated certain areas where the state of California would be allowed to regulate vehicle emissions. n110 Thus, preemption issues can be anticipated and prevented through creative language in the legislation. All that is required for state regulations to avoid preemption issues is insertion of provisions similar to those included in RGGI. n111 With regards to federal legislation, it must account for the existence of prior state regulation, as was done in the Waxman-Markey bill. n112 Despite this, there is some doubt as to whether the design of the RGGI will be enough to avoid problems with preemption when it comes to due process claims. n113

## Compliance Fees 1NC

RPS compliance fees and electricity charges are able to fund state energy incentives

Milford, 12

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

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

In sum, the need of the hour is for smarter strategies and greater funding for clean energy economic development that will enable states to innovate, manufacture, and export in the clean energy space. Too few states are engaged in rigorous and robust efforts to bolster this dynamic source of growth. And yet, state clean energy funds—by redirecting portions of their funds towards economic development activities—can play an important role in filling this gap and contributing to economic transformation and job-creation in U.S. states and metropolitan areas. III. Toward A New State Approach

And so U.S. states, as classic “laboratories of experimentation,” should build on leading-edge CEFs’ recent experiments with economic development and move more expansively to spur economic growth in clean energy. To that end, this paper suggests a number of strategies for best utilizing CEFs that states can explore in pursuit of clean energy economic development. In this regard, it is worth noting that state CEFs are public entities with a unique history of success in financing clean energy projects that can now be brought to bear on the need in many states for more aggressive clean energy economic development. In a time of tough fiscal austerity and reluctance to dedicate new funds, then, state public CEFs are in **a perfect position to institute** a new set of economic development **strategies to create thriving clean energy industries**. To act on this promise, states without clean energy funds should consider establishing dedicated clean energy revenue streams to engage in project finance and smart industry support. These states typically do not have dedicated support for either clean energy projects or clean energy-related economic development activities. **A range of sources for these funds exists** and includes general revenue bonds, tax or lottery revenues, pollution charges, and renewable portfolio standard (**RPS) compliance fees.** However, experience has shown that electricity surcharges set on electricity consumption or “wires charges” tend to be the most stable and reliable revenue source, as well as the most fair as they internalize the environmental consequences of electricity purchases. States should examine these sources as potential bases for the establishment of new clean energy funds. In those states where CEFs already exist, fund administrators should seek to expand the funds’ economic development role. Specifically, states with funds should pursue four major agendas:

➤ Reorient a significant portion of state CEF money to clean energy-related economic development

➤ Develop detailed state-specific clean energy market data

➤ Link clean energy funds with economic development entities, development finance organizations and other stakeholders in the emerging industry

➤ Collaborate with other state, regional, and federal efforts to best leverage public and private dollars and to learn from each other’s experiences

Along these lines state clean energy leaders should: Reorient a significant portion (at least 10 percent of the total portfolio) of state CEF money to clean energy-related economic development. Over the last decade, states with clean energy funds have dedicated almost $3 billion to individual project support. That has made it possible to create thousands of clean energy projects across the country. But only a small fraction of this funding has been dedicated to activities and investments aimed at bolstering clean energy economic development. Given that, it is time to increase state budgets for economic development activities. For that reason, state clean energy fund administrators should consider reorienting a portion of their existing program funding to economic development programs. In addition, this expansion of funding sources should also tap financing from existing economic development and CDFI resources as well as matching funding from federal programs to incentivize states to invest more in clean energy-related economic development strategies. What is required from a technical perspective to enable this transition? In most cases, existing enabling legislation or regulatory authority will allow states to reorient their CEFs to include a significant economic development agenda. For states that have existing CEF legislative authorization, those laws generally give the agencies managing the funds the authority to not only fund clean energy projects but also related economic development and innovation activities. In these cases, an internal administrative decision should allow CEF administrators to develop and fund clean energy-related economic development programs. In fact, many of the CEFs mentioned in this report have already made this turn and are already engaged in some sort of economic development activities.

## AT: Uncertainty/Invest

States are crucial to the signal of permanence---partisanship undermines federal signal

Muro, 12

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

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

## follow-on

States energy policies cause federal follow-on—empirics

McKinstry, 4

(Prof-Forestry & Environmental Resources Conservation-Penn State, Laboratories for Local Solutions for Global Problems: State, Local and Private Leadership in Developing Strategies to Mitigate the Causes and Effects of Climate Change, 12 Penn St. Envtl. L. Rev. 15)

Although the United States joined with the rest of the world in signing and ratifying the Framework Convention on Climate Change n1 and in signing the Kyoto Protocol to the Framework Convention, n2 concerns about possible, adverse short-term economic impacts from control of greenhouse gases has stymied further participation by the federal government in global efforts. These concerns have generated pressures that have prevented the United States from ratifying the Kyoto Protocol, participating in the Bonn, Germany in 2001 negotiations, or meeting some of its obligations under the Framework Convention. The federal government's withdrawal from active engagement in the global response to climate change has not, however, eliminated all response to climate change in the United States. It has simply moved the locus of the response from the federal government to state and local governments and the private sector.

State leadership in environmental issues has not been uncommon historically. In a frequently quoted dissent, Justice Brandeis observed [\*16] that "it is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country." n3 Results from state "laboratories" have often **generated the models for federal legislation** governing the United States' national response to environmental problems. For example, California state air regulation provided a model for the Clean Air Act. n4 Regulation of water quality by the interstate Delaware River Basin Commission ("DRBC") n5 provided the model for the system of federal regulation implemented by the Clean Water Act. n6 Pennsylvania's system of surface mining regulation served as the model for the federal Surface Mining Control and Reclamation Act. n7 The hazardous site remediation program established by New Jersey pursuant to the New Jersey Spill Compensation and Control Act n8 was copied by Congress in enacting the federal Comprehensive Environmental Response Compensation and Liability Act. n9

This is offense—feds will model the best parts of the counterplan

Yee, 8

(JD-Notre Dame, “A Period of Consequences": Global Warming Legislation, Cooperative Federalism, and the Fight Between the EPA and the State of California,” 32 Environs Envtl. L. & Pol'y J. 183, Fall)

In addition, the federal government has embraced state action in the field of environmental legislation and policy. When Congress enacts environmental legislation, it **often adopts state plans, demonstrating how states effectively serve as laboratories for national legislation**. n19 Other states and the federal government can learn from the successes and failures of varying approaches, incorporating the **most successful components into new legislation**. When the government limits states to only one federal approach, the United States **loses the opportunity to learn from different methods and, arguably, will enact less effective legislation.**

## at: monitoring (EDACafe)

#### And this article isn’t about any energy policy, let alone the plan. Here’s the opening paragraph:

EDA 10 (EDA Magazine, "State of Basic Research Funding", EDACafe, http://www10.edacafe.com/nbc/articles/view\_article.php?articleid=209174%26page\_no=1)

On March 16, 2005 the Semiconductor Industry Association (SIA) issued a press release warning that the coming transition to nano-scale semiconductor devices means that leadership in information technology is up for grabs. SIA called for stepped up support for basic research in the physical sciences to assure continued U.S. technology leadership. Experts believe current semiconductor technology could run up against physical, technological, and economic limits around 2020.

## at: nm

#### Impact author says fusion development makes weaponization inevitable

IEER, Institute for Energy and Environmental Research, 1998, Thermonuclear Fusion Research Could Result in New Weapons and Greater Proliferation Dangers, ieer.org/resource/reports/dangerous-thermonuclear-quest/

Makhijani pointed out that once the scientific feasibility of pure fusion weapons is proven there would be inexorable pressures to actually develop them. “The time to stop is now, before the feasibility is established. Once feasibility is demonstrated, the pressures from the nuclear weapons laboratories as well as the military establishment to actually design and build weapons would be immense,” he said.

## 2NC Must Read

#### Commercialization impossible—the research is so far off and their authors are insane, you should discount try or die in the case of futuristic utopian tech

Keith Yost, MIT engineering student, 3/6/12, Opinion: Good riddance, Alcator C-Mod, tech.mit.edu/V132/N9/yost.html]

No one likes to hear that their work is a waste of time and money. But the job of government is not to assuage the egos of research scientists — the public welfare, writ large, comes first. In a guest column last week, Derek Sutherland ’12 bemoaned a proposed cut to state funding of the Alcator C-Mod reactor at MIT. I’m sorry Derek, but it needed to be said: your research was not worthy of the public’s money, and to be frank, was also not worth your time and attention as a researcher.

The reason why is simple: there is no future in magnetically confined fusion power. It will never be economical. We know how large the various layers of a commercial fusion reactor would have to be, and we can estimate the construction materials one would need to create such a reactor. Even if the very sizable technical hurdles were surmounted — magnetics, plasma physics, materials, and tritium availability to name a few — the capital cost of fusion’s heat island (the reactor sans turbines and other accouterments), would still be two to three times greater than that of a conventional fission reactor, on a per-MW basis. There is no pot of gold at the end of the long, long fusion research tunnel, and accordingly, little rational motivation to expend the time of Sutherland and his colleagues (and the money of the public) on such a fruitless venture.

One could argue that the other features of fusion power — its lack of a waste product, its sustainability, its steady energy generation rate, its relative safety — are compelling enough features to warrant a roll of the dice. I suppose that if one thought the safety issues of nuclear waste could never be resolved, or that the peakiness of wind power might never find an answer, such arguments could be justified. These assumptions, however, are overly pessimistic — if Derek were to ask his colleagues in Course 22 whether the kinks in fission power (safety, waste, uranium availability) could ever be solved, I think he would hear a chorus of resounding “Yes.” Nuclear reactors are already quite safe, and next generation plants are even safer. The waste is more a political issue than a technological one. And uranium is exceedingly abundant — if supplies seem short, that’s only because the price has not gone high enough to motivate fresh exploration. Certainly, the prospects of mending our existing technologies seem much brighter than the “just give us another 30 years” hope of fusion power.

Research like Derek’s is regularly billed as an investment in our future, but the more apt analogy is buying a Powerball ticket. This is not a sound roll of the dice, this is a move born out of frustration, desperation, and self-deception. It stems from a lack of political will to tackle the policy problems of today’s technology. Instead of bringing disparate stakeholders together to settle energy policy issues, we’d much rather cross our fingers and hope for a technological savior to deliver us from the need for political courage.

## No Commercialization

#### Pro-fusion folks (their 2AC yes-feasible ev) agree

Jeff Forshaw, The Guardian, 9/15/12, Nuclear fusion – your time has come, www.guardian.co.uk/science/2012/sep/16/nuclear-fusion-iter-jet-forshaw

For a good few years now, nuclear fusion has looked like offering a solution to the problem. For every 100 tonnes of coal we burn, fusion has the potential to deliver the same amount of energy, without any carbon dioxide emission, using a small bath of water and the lithium contained in a single laptop battery. Moreover, it would be inherently very safe and would not produce any significant radioactive waste. Lest there be any confusion, the science behind this way of harnessing the energy locked away inside the atomic nucleus is entirely different from that used in current nuclear fission reactors. It almost seems too good to be true … but it isn't.

A fusion reactor called Iter is currently under construction in France and is due to start operation in 2020. Its principal goal is to determine the viability of fusion at the scale of a power station. Success is widely anticipated and there are already plans afoot to build a "demonstration power plant" to start operating in the 2030s.

Fusion is the reason that our sun keeps shining. Deep in the sun's core is a hot, dense sea of electrons and protons – the remnants of hydrogen atoms that have been torn apart by the high temperature created as a huge mass of hydrogen falls in on itself under the action of gravity. Under these extreme conditions two protons can fuse together, releasing energy in the process. Without this, the sun would stop burning and collapse under the weight of its own gravity.

The goal is to exploit the same basic physics to generate energy here on Earth. In fact, we are trying to do much better than the sun, which kilo for kilo is several thousand times less efficient than the human body at generating energy. Crucially, that is not because the energy released when two protons fuse is small. In fact a fusion reaction generates around a million times more energy than is released in a typical chemical reaction, like those that take place in the human body or when we burn a lump of coal. Instead, the inefficiency is due to the fact that proton-proton fusion within the sun is very rare: it takes a proton in the sun around 5bn years to fuse.

For that reason Iter will not fuse protons; instead it will fuse deuterium and tritium. These are heavy partners to the proton (deuterium has an extra neutron and tritium has two extra neutrons). The extra mass helps to ensure that fusion is far easier to achieve and, combined with the fact that Iter will operate at a temperature 10 times that in the sun's core, it should be possible for Iter to generate energy at a rate of 500m watts – the level of a small power station. Unlike the sun, Iter cannot exploit gravity to compress the plasma (the name for the hot fuel mix): instead the idea is to squeeze it inside a doughnut-shaped container using magnets. The energy from a single deuterium-tritium fusion reaction is carried away by a neutron and a helium nucleus. The latter is used to heat the plasma, thereby reducing the need to heat it from an external source, while the neutron can be absorbed in the walls, heating them up. In a reactor, that heat can then be extracted and delivered to the grid.

The fuel is not too hard to come by either, and it won't run out in the next few million years at least: deuterium is plentiful in seawater and tritium can be manufactured by reacting those outgoing neutrons with lithium.

It used to be joked that fusion is always the fuel of the future, but that is no longer fair. In the words of Professor Chris Llewellyn Smith, director of energy research at Oxford University, "with enough money we could probably build a fusion reactor now but it would not be economical. The challenge is to make it reliable and competitive." This confidence is built upon the fact that fusion is now a routine event at the Joint European Torus (Jet) in Culham, Oxfordshire.

## fusion weapons

#### Their impact’s overstated

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

But states and policymakers habitually overestimate the impact of nuclear weapons. This happens among both proliferators and anti-proliferators. Would-be proliferators seem to expect that possessing a nuclear weapon will confer “a seat at the table” as well as solve a host of minor and major foreign policy problems. Existing nuclear powers fear that new entrants will act unpredictably, destabilize regions and throw existing diplomatic arrangements into flux. These predictions almost invariably turn out wrong; nuclear weapons consistently fail to undo the existing power relationships of the international system.

The North Korean example is instructive. In spite of the dire warnings about the dangers of a North Korean nuclear weapon, the region has weathered Pyongyang’s nuclear proliferation in altogether sound fashion. Though some might argue that nukes have “enabled” North Korea to engage in a variety of bad behaviors, that was already the case prior to its nuclear test. The crucial deterrent to U.S. or South Korean action continues to be North Korea’s conventional capabilities, as well as the incalculable costs of governing North Korea after a war. Moreover, despite the usual dire predictions of nonproliferation professionals, the North Korean nuclear program has yet to inspire Tokyo or Seoul to follow suit. The DPRK’s program represents a tremendous waste of resources and human capital for a poor state, and it may prove a problem if North Korea endures a messy collapse. Thus far, however, the effects of the arsenal have been minimal.

Israel represents another case in which the benefits of nuclear weapons remain unclear. Although Israel adopted a policy of ambiguity about its nuclear program, most in the region understood that Israel possessed nuclear weapons by the late-1960s. These weapons did not deter Syria or Egypt from launching a large-scale conventional assault in 1973, however. Nor did they help the Israeli Defense Force compel acquiescence in Lebanon in 1982 or 2006. Nuclear weapons have not resolved the Palestinian question, and when it came to removing the Saddam Hussein regime in Iraq, Israel relied not on its nuclear arsenal but on the United States to do so -- through conventional means -- in 2003. Israeli nukes have thus far failed to intimidate the Iranians into freezing their nuclear program. Moreover, Israel has pursued a defense policy designed around the goal of maintaining superiority at every level of military escalation, from asymmetrical anti-terror efforts to high-intensity conventional combat. Thus, it is unclear whether the nuclear program has even saved Israel any money.

The problem with nukes is that there are strong material and normative pressures against their use, not least because states that use nukes risk incurring nuclear retaliation. Part of the appeal of nuclear weapons is their bluntness, but for foreign policy objectives requiring a scalpel rather than a sledgehammer, they are useless. As a result, states with nuclear neighbors quickly find that they can engage in all manner of harassment and escalation without risking nuclear retaliation. The weapons themselves are often more expensive than the foreign policy objectives that they would be used to attain. Moreover, normative pressures do matter. Even “outlaw” nations recognize that the world views the use of nuclear -- not to mention chemical or biological -- weapons differently than other expressions of force. And almost without exception, even outlaw nations require the goodwill of at least some segments of the international community.

Given all this, it is not at all surprising that many countries eschew nuclear programs, even when they could easily attain nuclear status. Setting aside the legal problems, nuclear programs tend to be expensive, and they provide relatively little in terms of foreign policy return on investment. Brazil, for example, does not need nuclear weapons to exercise influence in Latin America or deter its rivals. Turkey, like Germany, Japan and South Korea, decided a long time ago that the nuclear “problem” could be solved most efficiently through alignment with an existing nuclear power.

Why do policymakers, analysts and journalists so consistently overrate the importance of nuclear weapons? The answer is that everyone has a strong incentive to lie about their importance. The Iranians will lie to the world about the extent of their program and to their people about the fruits of going nuclear. The various U.S. client states in the region will lie to Washington about how terrified they are of a nuclear Iran, warning of the need for “strategic re-evaluation,” while also using the Iranian menace as an excuse for brutality against their own populations. Nonproliferation advocates will lie about the terrors of unrestrained proliferation because they do not want anyone to shift focus to the manageability of a post-nuclear Iran. The United States will lie to everyone in order to reassure its clients and maintain the cohesion of the anti-Iran block.

None of these lies are particularly dishonorable; they represent the normal course of diplomacy. But they are lies nevertheless, and serious analysts of foreign policy and international relations need to be wary of them.

Nonproliferation is a good idea, if only because states should not waste tremendous resources on weapons of limited utility. Nuclear weapons also represent a genuine risk of accidents, especially for states that have not yet developed appropriately robust security precautions. Instability and collapse in nuclear states has been harrowing in the past and will undoubtedly be harrowing in the future. All of these threats should be taken seriously by policymakers. Unfortunately, as long as deception remains the rule in the practice of nuclear diplomacy, exaggerated alarmism will substitute for a realistic appraisal of the policy landscape.

## impacts

#### No extinction

Malcolm **Gladwell**, writer for The New Yorker and best-selling author The New Republic, July 17 and 24, 19**95**, excerpted in Epidemics: Opposing Viewpoints, 1999, p. 31-32

Every infectious agent that has ever plagued humanity has had to adapt a specific strategy but every strategy carries a corresponding cost and this makes human counterattack possible. Malaria is vicious and deadly but it relies on mosquitoes to spread from one human to the next, which means that draining swamps and putting up mosquito netting can all hut halt endemic malaria. Smallpox is extraordinarily durable remaining infectious in the environment for years, but its very durability its essential rigidity is what makes it one of the easiest microbes to create a vaccine against. AIDS is almost invariably lethal because it attacks the body at its point of great vulnerability, that is, the immune system, but the fact that it targets blood cells is what makes it so relatively uninfectious. Viruses are not superhuman. I could go on, but the point is obvious. Any microbe capable of wiping us all out would have to be everything at once: as contagious as flue, as durable as the cold, as lethal as Ebola, as stealthy as HIV and so doggedly resistant to mutation that it would stay deadly over the course of a long epidemic. But viruses are not, well, superhuman. They cannot do everything at once. It is one of the ironies of the analysis of alarmists such as Preston that they are all too willing to point out the limitations of human beings, but they neglect to point out the limitations of microscopic life forms.

## other adv

#### Their laundry list of vague impacts is academic junk – conflicts can’t just emerge

Fettweis, 11

Christopher J. Fettweis, Department of Political Science, Tulane University, 9/26/11, Free Riding or Restraint? Examining European Grand Strategy, Comparative Strategy, 30:316–332, EBSCO

Assertions that without the combination of U.S. capabilities, presence and commitments instability would return to Europe and the Pacific Rim are usually rendered in rather vague language. If the United States were to decrease its commitments abroad, argued Robert Art, “the world will become a more dangerous place and, sooner or later, that will redound to America’s detriment.”53 From where would this danger arise? Who precisely would do the fighting, and over what issues? Without the United States, would Europe really descend into Hobbesian anarchy? Would the Japanese attack mainland China again, to see if they could fare better this time around? Would the Germans and French have another go at it? In other words, where exactly is hegemony is keeping the peace? With one exception, these questions are rarely addressed.

That exception is in the Pacific Rim. Some analysts fear that a de facto surrender of U.S. hegemony would lead to a rise of Chinese influence. Bradley Thayer worries that Chinese would become “the language of diplomacy, trade and commerce, transportation and navigation, the internet, world sport, and global culture,” and that Beijing would come to “dominate science and technology, in all its forms” to the extent that soon the world would witness a Chinese astronaut who not only travels to the Moon, but “plants the communist flag on Mars, and perhaps other planets in the future.”54 Indeed China is the only other major power that has increased its military spending since the end of the Cold War, even if it still is only about 2 percent of its GDP. Such levels of effort do not suggest a desire to compete with, much less supplant, the United States. The much-ballyhooed, decade-long military buildup has brought Chinese spending up to somewhere between one-tenth and one-fifth of the U.S. level. It is hardly clear that a restrained United States would invite Chinese regional, must less global, political expansion. Fortunately one need not ponder for too long the horrible specter of a red flag on Venus, since on the planet Earth, where war is no longer the dominant form of conflict resolution, the threats posed by even a rising China would not be terribly dire. The dangers contained in the terrestrial security environment are less severe than ever before.

Believers in the pacifying power of hegemony ought to keep in mind a rather basic tenet: When it comes to policymaking, specific threats are more significant than vague, unnamed dangers. Without specific risks, it is just as plausible to interpret U.S. presence as redundant, as overseeing a peace that has already arrived. Strategy should not be based upon vague images emerging from the dark reaches of the neoconservative imagination.

Overestimating Our Importance

One of the most basic insights of cognitive psychology provides the final reason to doubt the power of hegemonic stability: Rarely are our actions as consequential upon their behavior as we perceive them to be. A great deal of experimental evidence exists to support the notion that people (and therefore states) tend to overrate the degree to which their behavior is responsible for the actions of others. Robert Jervis has argued that two processes account for this overestimation, both of which would seem to be especially relevant in the U.S. case.55 First, believing that we are responsible for their actions gratifies our national ego (which is not small to begin with; the United States is exceptional in its exceptionalism). The hubris of the United States, long appreciated and noted, has only grown with the collapse of the Soviet Union.56 U.S. policymakers famously have comparatively little knowledge of—or interest in—events that occur outside of their own borders. If there is any state vulnerable to the overestimation of its importance due to the fundamental misunderstanding of the motivation of others, it would have to be the United States. Second, policymakers in the United States are far more familiar with our actions than they are with the decision-making processes of our allies. Try as we might, it is not possible to fully understand the threats, challenges, and opportunities that our allies see from their perspective. The European great powers have domestic politics as complex as ours, and they also have competent, capable strategists to chart their way forward. They react to many international forces, of which U.S. behavior is only one. Therefore, for any actor trying to make sense of the action of others, Jervis notes, “in the absence of strong evidence to the contrary, the most obvious and parsimonious explanation is that he was responsible.”57

It is natural, therefore, for U.S. policymakers and strategists to believe that the behavior of our allies (and rivals) is shaped largely by what Washington does. Presumably Americans are at least as susceptible to the overestimation of their ability as any other people, and perhaps more so. At the very least, political psychologists tell us, we are probably not as important to them as we think. The importance of U.S. hegemony in contributing to international stability is therefore almost certainly overrated.

In the end, one can never be sure why our major allies have not gone to, and do not even plan for, war. Like deterrence, the hegemonic stability theory rests on faith; it can only be falsified, never proven. It does not seem likely, however, that hegemony could fully account for twenty years of strategic decisions made in allied capitals if the international system were not already a remarkably peaceful place. Perhaps these states have no intention of fighting one another to begin with, and our commitments are redundant. European great powers may well have chosen strategic restraint because they feel that their security is all but assured, with or without the United States.

# 1nr

## Impact ov

#### Relations turn heg and disease

Hachigian, senior fellow – Center for American Progress, ‘10

(Nina, “The US-China Expectations Gap: An Exchange,” *Survival*, Volume 52, Issue 4, August, p. 67 – 86)

We find ourselves at a transitional moment in the global order. China, long a rising power, has now arrived on the world stage. The United States, for two decades the sole global superpower, is reeling from the global economic downturn and entangled in two difficult wars. Meanwhile, global threats like the economic crisis, global warming and nuclear proliferation only grow more intense.

These shifts in the international environment raise some major questions. To what extent do shared global challenges push the United States and China toward shared responsibility? What considerations will spur them to join or lead other nations in collective action? What are the signs that China is ready to help solve global problems? What are the signs that the United States is genuinely ready to share leadership? What will be the consequences if US and Chinese foreign policies fail to coordinate on matters of shared concern?

The White House under President Barack Obama has outlined the contours of a national security paradigm that differs substantially from its predecessor. It is clear to the president's political allies and detractors alike that he approaches foreign policy not in terms of asserting America's unparalleled might, but of seeking common cause on shared global challenges. In our age of security interdependence, the White House realises that cooperation with pivotal powers like China is vital to resist threats - terrorism, nuclear proliferation, pandemics, economic crises, global warming - that can harm Americans where they live. In other words, the extent to which China helps solve global problems has very tangible consequences for ordinary Americans, affecting the frequency and severity of hurricanes they experience, the quality of their jobs, or the degree of protection they enjoy against avian flu and rogue nuclear states such as North Korea.

Washington and Beijing have framed US-China relations as a positive, constructive and comprehensive relationship that provides a basis for partnership and shared responsibility on the key global issues of our time. For this approach to truly contribute toward international peace and prosperity, however, China has to become more active in forging collective responses to global challenges, and the United States has to accept China's greater influence over those responses. The stakes are high; if Beijing and Washington fail to cooperate, progress will falter and the consequences could be disastrous.

#### Relations are stable now—new pressure undermines cooperation—triggers a laundry list of impacts

Stokes, policy analyst – National Security Network, and Hachigian, senior fellow – Center for American Progress, 3/13/’12

(Jacob and Nina, “U.S.-China Relations in an Election Year,” http://www.americanprogressaction.org/issues/2012/03/pdf/us\_china\_relations.pdf)

In contrast, the Obama administration’s approach is steady, clear-eyed, and focused on results. The administration has pushed back on China multiple times—taking China to task on unfair trade, forming a united front to get China to back down from aggressive actions in the South China Sea, and selling arms to Taiwan over furious protests from Beijing. President Obama’s Asia strategy, which is deepening partnerships and engagement in the region, is designed to ensure that as China grows it contributes to peace and stability and follows the rules of the international system. At the same time the administration does not let differences prevent the United States from working with Beijing on important joint challenges such as North Korea’s nuclear program and clean energy.

This progressive approach offers the best tactic for dealing with China because for the foreseeable future China will be both a rival and a partner. Our policymakers have to play the long game, ensuring our strategies for China make sense not just during campaign seasons but for this year, this decade, and beyond. Fostering successful policies toward China requires a steady hand and a concerted effort to refrain from overheated tirades and knee-jerk responses.

But reflexive belligerence toward China plays well on the conservative campaign trail. Already the election has seen the two top candidates for the Republican nomination fighting over who could be more confrontational toward China “on Day 1,” and a conservative candidate for the U.S. Senate using racially tinged advertisements to stoke fears about Chinese ownership of U.S. debt. In *The Wall Street Journal*, Mitt Romney offered a plainly zero-sum view of the U.S.-China relationship.

China policy via short-term political point scoring may help campaigns but it does not help the United States. In fact, a fair and mature relationship with China will serve U.S. interests in creating jobs and sustainable economic growth. Steady U.S.- China relations will promote stability in the Asia-Pacific region and security for the global commons. And it will enable both nations to help address transnational problems such as climate change, pandemic disease, energy security, and terrorism.

## at impact d

#### Causes a trade war

Palmer 12

(Doug, Romney would squeeze China on currency manipulation-adviser, , 3/27/2012 p. http://www.reuters.com/article/2012/03/28/us-usa-romney-china-idUSBRE82Q0ZS20120328)

Republican presidential candidate Mitt Romney is looking at ways to increase pressure on China over what he sees as currency manipulation and unfair subsidy practices, a Romney campaign adviser said on Tuesday. "I think he wants to maximize the pressure," Grant Aldonas, a former undersecretary of commerce for international trade, said at a symposium on the future of U.S. manufacturing. Aldonas served at the Commerce Department under Republican President George W. Bush. Romney, the front-runner in the Republican race to challenge President Barack Obama for the White House in November, has promised if elected he would quickly label China a currency manipulator, something the Obama administration has six times declined to do. That would set the stage, under Romney's plan, for the United States to impose countervailing duties on Chinese goods to offset the advantage of what many consider to be China's undervalued currency. Last year, the Democratic-controlled Senate passed legislation to do essentially the same thing. However, the measure has stalled in the Republican-controlled House of Representatives, where leaders say they fear it could start a trade war, and the Obama administration has not pushed for a House vote on the currency bill. The U.S. Treasury Department on April 15 faces a semi-annual deadline to declare whether any country is manipulating its currency for an unfair trade advantage. The department, under both Democratic and Republican administrations, has not cited any country since 1994, when China was last named. Asked if Romney was serious about declaring China a currency manipulator, Aldonas answered: "He is."

#### Worst trade war ever!

Shedlock 12

(Mish, a registered investment advisor representative for SitkaPacific Capital Management. Sitka Pacific is an asset management firm whose goal is strong performance and low volatility, regardless of market direction, interviewed by James Stafford @ OilPrice, “Is Global Trade About To Collapse? Where are Oil Prices Headed? A Chat with Mish” Wed, 25 July 2012, http://oilprice.com/Interviews/Global-Trade-Likely-to-Collapse-if-Romney-Wins-Interview-with-Mike-Shedlock.html)

Oilprice.com: In regards to presidential elections, how do you think energy will fare under Obama and under Romney? Which sectors will benefit, and which will suffer?

Mish: Mitt Romney has declared that if he’s elected he is going to label China a currency manipulator and increase tariffs on China across the board. That's something that I believe he might be able to do by mandate. If he's elected and he does follow through, I think the result will be a global trade war the likes of which we have not seen since the infamous Smoot-Hawley Tariff Act compounded problems during the Great Depression. Simply put, I think that global trade will collapse if Romney wins and he follows through on his campaign promises.

#### Vowed for the first day in office

Hon 12

(Chua Chin – US Bureau Chief, “No repeat of Nixon's audacious state visit; Few believe US, Chinese leaders have latitude to stage similar move today” February 20, 2012, The Straits Times)

In the US, the growing partisan rancour over China policy was captured in a perfect 'split-screen moment' when Mr Xi was feted last Tuesday by the Obama administration, only to be attacked the next day by a ferocious broadside from Republican presidential hopeful Mitt Romney. 'We must forthrightly confront the fact that the Chinese government continues to deny its people basic political freedoms and human rights... A nation that represses its own people cannot ultimately be a trusted partner in an international system based on economic and political freedom,' Mr Romney wrote in an op-ed that appeared on the Wall Street Journal's website last Wednesday night. The article came just hours after the Chinese leader addressed top lawmakers and businessmen in Washington. A day earlier, Mr Xi had also met President Barack Obama and his top Cabinet officials in the White House. Mr Romney went as far as to call Mr Obama 'a near supplicant to Beijing' and warned that a China 'that is a prosperous tyranny will increasingly pose problems'. Over-the-top rhetoric on China is nothing new in American politics. What is striking about the latest criticisms is that they did not emerge from the political fringe but came instead from a mainstream political figure like Mr Romney, whose background as a highly successful venture capitalist and former governor of Massachusetts puts him firmly in the centre of the American establishment. The Obama administration was much more restrained, but did not shy away from publicly criticising China amid the diplomatic niceties either. As the cameras rolled to record their first-ever meeting in the Oval Office last Tuesday, Mr Obama pointedly reminded Mr Xi that Beijing must play by the rules of the road in global trade and economics. Hours later at a formal luncheon held at the State Department in Mr Xi's honour, US Vice-President Joe Biden raised eyebrows by launching into a strongly worded critique of China's 'deteriorating' human rights record and its recent decision to veto a United Nations resolution against Syria. 'If an American vice-president went to China and had been treated to that kind of lecture, the White House press corps would have forced him to say something in response and it would have been a spiral downward,' said Mr Douglas Paal, a veteran Asia hand who has served in several US administrations. Mr Xi chose to bite his tongue, with conventional wisdom here suggesting that the Chinese leaders are sufficiently familiar with the election-year demands on American politicians to know when to ignore the heated rhetoric. While there is an element of truth to that, such reasoning runs the risk of underestimating the genuine anger and frustration with China that has been brewing in the US political and business establishment in recent years. For instance, US legislation aimed at punishing China for its currency policy - long dismissed as political theatre - has been clearing one notable threshold after another. Last October, the Senate passed such a currency Bill with a 63-35 margin, marking the first time such legislation has cleared the upper Chamber. Though the Bill has since languished in the lower legislative Chamber, a Romney victory in November could well revive it**. The Republican presidential front runner has vowed to label China a currency manipulator on** his first day in office **if he wins the White House.** 'There are some US-China issues in the campaign rhetoric **that are real.** This is not just people trying to get votes,' noted Mr Richard Bush, director of the Centre for North-east Asian Policy Studies at the Brookings Institution. 'There is a dimension of it where candidates **are raising serious** concerns about China's behaviour.' For now, there is no way to tell how Mr Xi feels about his treatment in the US, or how it might affect the way he handles bilateral ties in the future when he has fully assumed power. In fact, little is known about his personal views on the broad range of issues surrounding US-China ties. In his public comments in the US, he has mostly stuck to Beijing's standard talking points. He also steered well clear of the American media, avoiding even the established public affairs programmes that would have given him a serious platform to talk about the state of bilateral relations and where things are headed. The few occasions where he tried to show a personal side occurred at tightly scripted events that were unlikely to register with a general audience. For instance, his attempt at recounting a story about how he helped an elderly American widow reconnect with the Chinese childhood home of her late husband took place in the staid surroundings of a hotel ballroom filled with businessmen and officials. The tight leash on Mr Xi stems from the murky rules surrounding elite Chinese Communist Party politics, where the uncertainties surrounding leadership succession and the obsession with political precedence keep younger leaders like him under wraps for impractically long periods of time. For instance, it has been apparent to political observers since late 2007 that Mr Xi will be the one to eventually succeed current Chinese President Hu Jintao at a major party congress later this year. But the lack of official recognition of this impending change, plus the constant chatter about ongoing power struggles, meant that the younger leader could not be put on a plane to Washington in the intervening years. By all accounts, Mr Xi's visit was strictly bound by the precedence set by Mr Hu a decade ago when a similar leadership transition was percolating in Beijing. Back in 2002, months before Mr Hu was due to take over from outgoing leader Jiang Zemin, he made a trip to the US that outsiders saw as a 'final confirmation' of his imminent ascension. Mr Xi appears to be following in the exact same steps, even though the demands on US-China relations and the stakes involved have vastly grown. As Dr Henry Kissinger, the elder US statesman who played a pivotal role in opening relations with China, put it in a recent speech: 'If we work together, common solutions will emerge. If we differ, the world will be forced to choose between conflicting approaches, **which can only undermine the need for a cooperative relationship**.' Experts like Mr Bush of Brookings say Beijing has to find a way to get younger leaders like Mr Xi to engage with the US and other powers at an earlier stage. But there are no signs that such changes are on the cards any time soon, to say nothing of a repeat of the audacious move 40 years ago that shook the world.

#### Mexico city and one child cause collapse

Drezner 12

(Daniel, professor of international politics at the Fletcher School of Law and Diplomacy at Tufts University, “Romney: Year One” MAY 25, 2012, http://www.foreignpolicy.com/articles/2012/05/25/romney\_year\_one?page=full)

Just for fun, however, what if all those campaign words did matter? What if President Romney had to implement every foreign policy campaign promise he's ever made in every foreign-policy white paper, op-ed, campaign statement, or random utterance that came from his campaign? What would the first year of a Romney presidency look like when it met the real world?

The editors of Foreign Policy thought that would be a fun little thought experiment, and they've been keenly aware that I have paid close attention to Romney's foreign policy musings. So, at their request, here's what the first year of a Romney administration would look like for world affairs.

DAY 1: The first day of a Romney presidency brings two major shifts in foreign policy. First, Romney announces that he has "designated [China] as a currency manipulator" and demands that China play by the trade rules. Second, he reinstates the Mexico City policy. Combining these two policies, he also "cut[s] off funding for the United Nations Population Fund, which supports China's barbaric One Child Policy."

## uq

#### Models – it could still flip

Nate Silver, 10/1/12, Sept. 30: Romney Down a Touchdown?, fivethirtyeight.blogs.nytimes.com/2012/10/01/sept-30-romney-down-a-touchdown/

We’ve probably already been in the fourth quarter for a week or so, because we’ve already passed the point when a convention bounce (if it was indeed a bounce and not a permanent shift in the conditions) might be expected to wear off. And we’ll reach a fourth-quarter landmark on Wednesday, when President Obama and Mitt Romney hold their first of three debates. Every now and then, the game goes into overtime — in which case things like turnout and the Electoral College math suddenly begin to matter a great deal. But let’s not get ahead of ourselves: it’s early in the fourth quarter and Mitt Romney finds himself down in the race. The question is how far behind he is, and what he’ll have to do to make up his deficit with Mr. Obama. According to the win probability calculator at AdvancedNFLStats.com, an N.F.L. team down by field goal with 10 minutes left to play in the fourth quarter has a 34 percent probability of winning the game. A team down by a touchdown wins just 16 percent of the time. (A technical note for sports geeks: these cases assume that the trailing team has possession of the football with first down and 10 yards to go at its own 20 yard line.) If you look at our estimate of Mitt Romney’s chances of winning the Electoral College, which are about 15 percent right now in the FiveThirtyEight forecast, the touchdown analogy works best: Mr. Romney has about as much chance of winning as an N.F.L. team does when it trails by a touchdown early in the fourth quarter. It might be surprising that a team down by just a touchdown — a close game, by any common description of it — winds up winning so rarely. But there are a few things to consider. First, a field goal alone won’t be enough for the team to come back. It needs something big to happen — or it needs to score at least twice. Second, although there’s still enough time in the game for the trailing team to have multiple opportunities to score, there is also enough time for the opponents to score as well and extend their lead. So the team still has to play defense — it’s not purely a two-minute drill. A third and often overlooked (if completely obvious) point: if the trailing team does score a clutch touchdown, it only ties the game. There are a lot of cases in which it will later lose anyway. Right now, our forecast says that Mr. Romney has only about a 15 percent chance of winning. But that does not mean that he only has a 15 percent chance of tightening the race — or of making it come down to the wire. But there are plenty of circumstances in which Mr. Romney has some good things happen, makes the race very close, and then loses — whether because he loses Ohio, or because his turnout operation isn’t much good, or because the polls turn out to be slightly biased toward him rather than against him. As for what might happen this week: the first debate alone will probably not provide an opportunity for Mr. Romney to score a touchdown. Historically, the largest shifts in the polls after the first debate have been about three points in either direction — smaller than Mr. Romney’s current deficit in most polls. This would be the equivalent of a field goal.

#### Obama win still decisively, but Romney is perilously close—events could flip the election

Harry Enten, Guardian election expert, 10/4/12, If Mitt Romney won the debate, will he win the election?, www.guardian.co.uk/commentisfree/2012/oct/04/mitt-romney-won-debate-win-election

Romney gains on an increasingly vulnerable Obama, but the president still leads.

First, general election debates are not primary debates. If you took a polling chart of the 2012 Republican primary, it would look like a w's and m's. Candidate preferences were so flexible that Herman Cain – a man never elected to political office who would leave the campaign because of a sexual harassment charge – led the contest a year ago. The reason Cain took the lead was because he looked good in the debates. When policy differences are small, as they are in primaries, personality matters.

Personality isn't anywhere near as important in general elections. Voters can decide on the issues because there are true substantive differences. That's why most voters have already locked in their choice. President Obama has seemingly held a small, but consistent lead most of this election.

We cannot expect that this or any one debate will turn an Obama edge into a large Romney lead. Romney is down by about 3 percentage points in the Real Clear Politics average. Only 5% of the electorate is truly undecided. Most of these undecided voters weren't watching the debate and probably won't make their choice until election day.

Second, history tells us that debates probably matter under certain circumstances. Thomas Holbrook crunched the numbers since 1988 and found that the margin between the two leading candidates changed by an average of about 4 percentage points between before the first and after the last debate. The margin between Romney and Obama was less than that heading into Wednesday night's debate.

Now, it's awfully difficult to figure out whether it's a debate that is moving polling data or some other event(s) over the course of the debates season. Obama, for instance, gained ground over John McCain in 2008 partly because of the debates, but more because of a financial crisis from which we still haven't fully recovered.

Candidates seem to gain when they were already gaining before the debate or when they are underperforming the "fundamentals". Bush picked up steam in the 1988 debates – ,continuing his rise pre-debates. Bob Dole was vastly underperforming the fundamentals in 1996: he should have been showing behind, but not by 20 points. So, it was not a huge surprise that his polling numbers improved after the debates.

That's why I think Mitt Romney will make up some ground. Though the 5% of undecided voters may be unreachable, there's another 5% of "soft" support. Many of these had been leaning towards Obama or saying they were "undecided" since the conventions: Obama's one-time 1.5-point edge among likely voters doubled or even close to tripled at times during the last few weeks. Those voters are likely to come home to Romney. If they don't, they likely never will.

Romney's also underperforming Jacob Montgomery et al's ensemble forecast from all the fundamental models. These models take into everything from the economy to incumbency to primary season performance. The ensemble has Romney losing, but only by 0.6 percentage points.

Another plus for Romney is that he looked to have been picking up a little steam before the debates began. Obama's lead in the Real Clear average has shrunk from a lead close to 4.5 points back down to 3.

Third, underlying voter sentiment may not change, but enthusiasm probably will and that could change polls. You can go on Twitter and see dejection among many Democrats. Many likely voter models rely upon some level of voter interest or enthusiasm in the election. During the 2000 campaign, Gallup's likely voter model went absolutely bonkers because of enthusiasm differences. One day, Republican enthusiasm was up because of the debates and the next, Democratic excitement went through the roof.

The registered voter numbers, however, didn't move anywhere near as much. With Republicans potentially gaining back the enthusiasm edge they held earlier in the cycle, don't be surprised if an already ridiculously wide likely/registered voter gap actually expands.

Fourth, and most importantly, any president whose approval rating is less than his disapproval rating remains vulnerable. This, folks, is a key point and remains tied to point four. If you read Real Clear Politics, you'll notice that many polls that ask about the president's approval are among adults or registered voters. Those polls are fine when enthusiasm ratings between Democrats and Republicans are near equal. They are not an accurate representation of the electorate if Republicans make a surprisingly large share of the voters come November.

I would not be surprised if a likely voter model average at this point had Obama's approval rating below his disapproval, given the large likely voter/registered voter gap. That's a problem for Obama because no president has won re-election with an approval rating below 50% among the voting (a smaller group than adult) electorate.

The question, then, is whether or not Romney can yank up his favorable rating above his unfavorable. If he can't, Obama's going to win. You don't trade in the bad steak that doesn't make you ill for a bad steak that may give you food poisoning. If Romney can present himself as a viable alternative, then a lot of us might be surprised by the final result.

At this point, however, my belief is that we'll return somewhere close to where we were before the conventions: a small Obama lead of about 1.5 points. There just aren't that many minds that Romney can change at this point. Democrats can also take heart that Republican excitement eventually rebounded a few weeks following President Bush's 2004 debate debacle.

Still, my confidence in an Obama victory is at least somewhat shaken right now. Obama's lead is probably not big enough for him to play the super-cautious game he did on Wednesday.

#### New info, like the plan, key

Nate Cohn, New Republic Election Expert, Part-Time Georgetown Coach -- his articles go through a TNR editing process and are available for all on his blog, He has been profiled on New York Magazine and MSNBC…he does not care about us…for realz, 10/4/12, Romney Won the Debate. But Will It Be Enough?, www.tnr.com/blog/electionate/108124/did-romney-reshape-the-race

It looks like Romney has been declared the winner of the first presidential debate. But will it be the turning point he needs. Romney’s performance was very strong, but the debates have not tended to fundamentally reshape past presidential elections, so the burden on Romney was quite high. For that same reason, a good performance by Romney might not have been good enough.

While Romney was on the offensive and Obama was listless, the president did not commit any gaffes and Romney did not level any blows that are likely to reverberate for the next few days. The president did not appear incapable or incompetent as much as he was simply out-debated. If you tend to believe that elections are about the incumbent, this matters. Forty-nine percent of voters have already made it clear that they're willing to reelect the president, so the question is whether tonight's debate introduced new information that might change their minds. If so, it would have to come from changing perceptions of Romney, not the president.

There’s no question that Romney came across as knowledgeable and substantive; to the extent that voters were unsure about his ability to handle the office, he certainly made real gains. But it’s unclear whether Romney made progress toward redressing his fundamental problem: low favorability ratings. It could be the case that Romney’s energy and interest in policy could help him address the “does Romney care” problem in an indirect way, even if it doesn't necessarily proven that he cares about the middle class. On the other hand, though, Romney didn’t go out of his way to stress a message oriented toward the middle class and he didn’t seem unusually empathetic. If anything, his quick pace might have left voters missing his message, even if they were impressed by his performance.

None of this is to say that Romney didn’t win the debate decisively, or even that voters won’t perceive that Romney won decisively. This analysis is just as nit-picky as it sounds, but with good reason: The threshold for assessing that Romney might have reshaped the race is quite high, so it’s worth questioning whether Romney’s good performance was good enough. History suggests that the answer is probably no, but it's not assured and we'll see over the next week or two.

## at october surprise

#### Syria Irrelevant

Public Radio International 6/7/12

<http://www.pri.org/stories/world/middle-east/experts-say-foreign-policy-largely-irrelevant-when-u-s-voters-head-to-ballot-box-10128.html>

Though matters of foreign policy have provided Barack Obama and Mitt Romney equal chances to batter one another, and it could be argued that a large part of the slow U.S. economic recovery is due to foreign troubles, foreign policy doesn't amount to much for voters. The ongoing violence in Syria has become an issue on the U.S. presidential campaign trail. Mitt Romney has been critical of President Obama for failing to provide leadership on Syria. President Barack Obama’s campaign says it’s Romney who’s failed to provide a viable alternative. Foreign policy, though, isn’t really a top concern for many voters in this election.

#### Foreign policy irrelevant

Business Week 10/1/12

<http://www.businessweek.com/ap/2012-10-01/obama-romney-hunker-down-for-debate-prep>

AP White House Correspondent Ben Feller, AP News Survey Specialist Dennis Junius and Associated Press writers Steve Peoples and Matthew Daly in Washington and Julie Pace in Henderson, Nev., contributed to this report.

Foreign policy is the latest in a series of political openings that Romney has tried to exploit in recent weeks, as he has fallen behind the president in polls in key battleground states and in national surveys. In recent weeks, Romney also has castigated Obama on the coal industry, defense cuts, wealth redistribution and the president's comment that it's not possible to change Washington from the inside. But unlike some of those issues, Romney's campaign hasn't put serious money behind the foreign policy line of criticism. Paid TV ads in key states don't largely mention international affairs. The third-party group American Crossroads has a produced a Web video assailing Obama's foreign policy, but it's not on the air. Polls show foreign policy far down on the list of voters' concerns and Obama leads Romney on the issue.

New jobs report goes our way

Silver 10-5-12

Nate, Elections Analyst, Jobs News Makes Obama’s Case Easier http://fivethirtyeight.blogs.nytimes.com/2012/10/05/jobs-news-makes-obamas-case-easier/

Was Friday’s jobs report, which showed 114,000 jobs added in September and the unemployment rate dropping to 7.8 percent, strong enough to be one of the exceptional cases? My view is that the answer is yes: this report really does warrant some attention. The reported payrolls growth figure for September, 114,000 jobs, was incredibly close to consensus forecasts of about 115,000 jobs added. But everything else about the report considerably beat expectations. Jobs figures were revised upward by 40,000 in July, and by 46,000 in August. Combined with the jobs growth in September, that means the economy added 200,000 more jobs than we thought previously. The unemployment rate is calculated through a separate survey — one of households rather than business establishments. The data from the household survey tends to be even noisier than that from the establishment survey. But unlike last month, when a decline in the unemployment rate was caused by the exit of workers from the labor force, the household survey also reflected genuinely good news in September. According to that survey, 413,000 workers joined the labor force in September. But 873,000 more people became employed, causing the unemployment rate to fall to 7.8 percent. If the September numbers resulted in part from statistical variance, it is certainly possible that there will be some payback in the October report, which will be released the Friday before the Nov. 6 election. But it is also possible that the strength shown in the government’s report on Friday reflects it playing catch up. The firm ADP, which tracks private-sector payrolls, had reported that an average of 170,000 private-sector jobs had been created each month so far this year. The ADP reports are much maligned because they do not always match the government’s payroll figures over the short run. But in the long run, the numbers tend to converge. Furthermore, there has been a fairly consistent pattern of upward revisions to the government’s jobs reports recently. The jobs numbers are certainly not enough to change the basic story of a slow economic recovery, and it will take many years for the economy to get back to full employment. However, the jobs numbers are one of the more hopeful signs for the economy on balance. An average of 146,000 jobs have been created per month over the past year, or closer to 157,000 with the government’s anticipated benchmark revisions accounted for. Those aren’t great numbers by any means, and would translate to an annualized growth rate of 1.4 percent. But over the past 25 years, payroll jobs have grown at an annualized rate of 1.1 percent, or the equivalent of about 125,000 jobs added per month given today’s population. By this measure, it’s been a fairly average economic year, although certainly not enough to make up for the productivity that was lost from the economy in 2008 and 2009. The rate of jobs growth is now just slightly behind the one that was enough to re-elect George W. Bush in 2004, when an average of 168,000 jobs were created between January and September 2004. Although the unemployment rate remains stubbornly high, the recent trajectory now looks more favorable. Unemployment has fallen by 0.7 percent since December 2011, to 7.8 percent from 8.5 percent. Historically, there has been no relationship at all between the unemployment rate on Election Day and the incumbent’s performance. However, there has been a relationship between the change in the unemployment rate in the months leading up to the election and how well the incumbent does. The decline in unemployment under Mr. Obama this year since December is the largest in an election year since Ronald Reagan’s re-election bid, when it declined to 7.3 percent in Sept. 1984 from 8.3 percent in Dec. 1983. The drop in unemployment alone is no guarantee of re-election — there was also a considerable drop in unemployment in 1976, and Gerald Ford lost. However, the FiveThirtyEight economic index, which accounts for the payrolls numbers along with six other economic data series, would project a narrow re-election for Mr. Obama by about 3 percentage points — similar to Mr. Bush’s margin over John Kerry in 2004. Especially with the Friday jobs report, the economic numbers now seem just strong enough to make the incumbent a favorite for re-election, based on the way the public has evaluated their presidents historically.

## link

#### Plan perceived as a waste of money

Geoff Brumfiel, Scientific American, June 2012, Fusion's Missing Pieces, EBSCO

Supporters argue that ITER is the only hope, in the long term, of meeting the world's unquenchable demand for power. But even they have been forced to recalibrate their Utopian expectations. The project now seems to be propelled by institutional inertia -- it is easier for individual governments to stay the course rather than be the lone pariah who pulls out early. Critics, meanwhile, have more ammunition with each delay and cost overrun. ITER, they say, is a colossal waste of money at a time when funding is desperately needed in other areas of energy research. Both sides agree: when the project is finally completed, it had better work.

#### Empirics

Nesbit, 12

(Director of public affairs for two prominent federal science agencies, 8/8, “New Burst of Energy Could Bring Cold Fusion to Front Burner,”

http://www.usnews.com/news/blogs/at-the-edge/2012/08/08/new-burst-of-energy-could-bring-cold-fusion-to-front-burner)

None of this says that cold fusion is real. None of this means that senior executives at big companies like Boeing or National Instruments or senior officials at federal agencies or departments like NASA, the U.S. Navy, or DOE **are willing to commit publicly to spending meaningful taxpayer dollars on** cold **fusion research**. In fact, the Navy reportedly shut down its LENR research in California earlier this year after a news report on its efforts led to **unwanted publicity.**

Their polls stink

Mariotte, 2012

Michael Mariotte, Executive Director of Nuclear Information and Resource Service, 6-5-2012, “Nuclear Power and Public Opinion: What the polls say,” <http://www.dailykos.com/story/2012/06/05/1097574/-Nuclear-Power-and-Public-Opinion-What-the-polls-say>

Conclusion 1: The public does NOT want to pay for new nuclear power. It IS willing to pay for renewable energy.

This one is a slam dunk.

New nuclear reactors are simply too expensive for utilities to build with their own assets. Nor are banks willing to lend money for most nuclear projects; they’re considered too risky given the long history of cost overruns, defaults, cancellations and other problems. Thus, the only two means of financing a new reactor are to either get money from taxpayers, through direct federal loans or taxpayer-backed loan guarantees, or from ratepayers in a few, mostly Southern states, which allow utilities to collect money from ratepayers before reactors are built—a concept known either as “early cost recovery” or Construction Work in Progress (CWIP).

ORC International (which polls for CNN,, among others) has asked a straightforward question for the past two years (March 2011 and February 2012) in polls commissioned by the Civil Society Institute: “Should U.S. Taxpayers Take on the Risk of Backing New Nuclear Reactors?” The answer? Basically identical both years: 73% opposed in 2011, 72% opposed in 2012.

Maybe using the work “risk” skews the poll, you think? So ORC also asked, “Do you favor or oppose shifting federal loan guarantees from nuclear energy to clean renewables?” The answer was basically the same: 74% said yes in 2011, 77% in 2012 with 47% “strongly” holding that opinion both years.

A third poll conducted by ORC for Civil Society Institute in March 2012 asked this question:

“Utilities in some states are allowed to charge electricity ratepayers for “Construction Work in Progress” for new power plants. This means that ratepayers – instead of the companies – pay for construction of new nuclear reactors and other major power plants before any electricity ever reaches customers, thereby lowering the financial risks to shareholders. Knowing this, which of the following statements about “Construction Work in Progress” most closely reflects your view?”

The answer: fully 80% opposed CWIP.

Most pollsters have not asked similar questions; interestingly though, Rasmussen did in May 2012 for an undisclosed client. Their question: “The government is providing billions in loan guarantees to help the development of new nuclear plants. Would that money be better spent on the development of alternative new energy sources?” Unfortunately, Rasmussen did not publicize the results and hid them behind a paywall, which we were not inclined to pursue. But if anyone has access to that, we’d love to know what Rasmussen found.

Conclusion 2: Americans do not think nuclear power is “clean” energy, and still don’t want to pay for it.

Jumping back to ORC International, their March 2012 poll found this:

About two out of three Americans (66 percent) – including 58 percent of Republicans, 65 percent of Independents, and 75 percent of Democrats -- agree that the term “‘clean energy standard’ should not be used to describe any energy plan that involves nuclear energy, coal-fired power, and natural gas that comes from hydraulic fracturing, also known as ‘fracking.’”

and this:

About three out of four Americans (73 percent) agree that “federal spending on energy should focus on developing the energy sources of tomorrow, such as wind and solar, and not the energy sources of yesterday, such as nuclear power.” Fewer than one in four (22 percent) say that “federal spending on energy should focus on existing energy sources, such as nuclear, and not emerging energy sources, such as wind and solar.”

Meanwhile, the New York Times in May reported on a Harvard/Yale poll (also behind a paywall), conducted in 2011 but released in May 2012, that found that Americans are willing to pay an average of $162/year more for clean energy than they are paying now—an average 13% increase in electric bills. But when clean energy was defined as including nuclear power or natural gas, that support plummeted.

This is consistent with findings over the past decade, which have shown that nuclear power has typically ranked well below renewable energy sources, especially solar and wind, in public opinion, at times battling with coal for least-favorite U.S. energy source.

A March 2012 Gallup poll found that 69% of Americans support spending more government money on solar and wind power—with majorities among Democrats (84%) and Republicans (51%) alike. But support for “expanding the use of nuclear power” barely received a majority (52%) and then only due to Republican support: 64% of Republicans supported that idea, only 41% of Democrats.

Conclusion 3: On new reactors, how one asks the question matters.

Gallup and the Nuclear Energy Institute ask the same question: “Overall, do you strongly favor, somewhat favor, somewhat oppose or strongly oppose the use of nuclear energy as one of the ways to provide electricity in the U.S.?”

This question doesn’t really get to the issue of support for new nuclear reactors, although NEI typically tries to spin it that way. Although a question of support for current reactors wasn’t asked in any recent poll we saw, the public traditionally has been more supportive of existing reactors than new ones, and the question above could easily be interpreted as support for existing reactors, or even simple recognition that they exist. The results may also be skewed by the pollsters throwing nuclear in as “one of the ways,” without a context of how large a way.

Nonetheless, despite asking the same question, Gallup and NEI can’t agree on the answer. NEI, for example, in November 2011 asserted that 28% of the public strongly favors nuclear power with an additional 35% somewhat in favor. NEI found only 13% strongly opposed and another 21% somewhat opposed. A May 2012 NEI poll did not publicly break down the numbers into strongly vs somewhat, but claimed a similar 64-33% split between support for nuclear power and opposition.

Gallup, asking the same question in March 2012, found a narrower split. A smaller number was strongly in favor (23%, a drop of 5%) and a larger number strongly opposed (24%, increase of 3%)—overall an 8-point anti-nuclear swing among those with strong opinions. Those in the middle were 34% somewhat favor vs 16% somewhat opposed. The 2012 numbers were slightly worse for nuclear power than the identical question asked in March 2011, just before Fukushima.

But other polls suggest that Gallup and NEI may be asking the wrong question. For example, the LA Times reported on a Yale-George Mason University poll in April 2012 that found that support for new nuclear power had dropped significantly, from 61% in 2008 to 42% today.

Even Rasmussen in its May 2012 poll found that only 44% support building new reactors. That was good news for Rasmussen since it found that only 38% oppose them, with a surprising 18% undecided (surprising because no other poll we saw had such a high undecided contingent for any nuclear-related question).

Meanwhile the March 2012 ORC International poll found that:

“Nearly six in 10 Americans (57 percent) are less supportive of expanding nuclear power in the United States than they were before the Japanese reactor crisis, a nearly identical finding to the 58 percent who responded the same way when asked the same question one year ago. Those who say they are more supportive of nuclear power a year after Fukushima account for well under a third (28 percent) of all Americans, little changed from the 24 percent who shared that view in 2011.”

But perhaps the most telling, and easily the most interesting, poll comes from a March 2012 poll from the Yale Project on Climate Change Communications. Participants were asked, “When you think of nuclear power, what is the first word or phrase that comes to your mind?”

29% of those polled said “disaster.” Another 24% said “bad.” Only about 15% said “good” and that was the only measurable group that had anything positive to say. That poll also found that, “…only 47 percent of Americans in May 2011 supported building more nuclear power plants, down 6 points from the prior year (June 2010), while only 33 percent supported building a nuclear power plant in their own local area.”

Conclusions

Americans are not exactly wild about the idea of building new nuclear reactors. Polls asking the question different ways arrive at different results; at the lowest common denominator it is safe to say the country is divided on the issue. But Americans clearly don’t want to pay for construction of new reactors. And the reality is that no utility wants to or even can spend its own money building new reactors—they’re just too expensive. Congress, State legislatures and Public Service Commissions would do well to heed that warning, especially since it crosses all party and political lines.

It is also clear that the American public does not see nuclear power as a “clean energy” source (nor, for that matter, “clean” coal or natural gas fracking). Congressional or state efforts to include these technologies in a “clean energy standard” or a clean energy bank concept are bound to fail.

## at nuclear now

#### No new or actual increases- just extensions of previous allocations to nuclear

Baker, 12 -- Energy Boom writer

(Joseph, "Obama's Proposed 2013 Budget Allots $27 Billion for the Department of Energy," 2-14-12, www.energyboom.com/policy/united-states-obamas-proposed-2013-budget-decreases-doe-funding, accessed 9-13-12)

President Barack Obama has requested $27.2 billion for the Department of Energy (DOE) as part of the 2013 budget proposal he has put forth to the United States Congress. At face value $27.2 billion may seem like a lot of money; however, relative the total $3.7 trillion the President has asked to spend, the DOE's portion is a drop in the bucket. Additionally, while spending increases have been proposed for many departments like the Internal Revenue Service (up 4.7% from 2012 to $92.1 billion), the Centers for Medicare and Medicaid Services (up 8.4% from 2012 to $1.18 trillion) and the Federal Highway Administration (the largest increase from 2012 up 103% to $81.1 billion), the DOE allotment is down $2.3 billion from what the president originally asked for in the 2012 budget. Even amidst the decrease, Energy Secretary Steven Chu hailed the budget request, saying: “The choice we face as a nation is simple: do we want the clean energy technologies of tomorrow to be invented in America by American innovators, made by American workers and sold around the world, or do we want to concede those jobs to our competitors? We can and must compete for those jobs. This budget request includes responsible investments in an American economy that is built to last.” On Monday, while speaking about the 2013 budget proposal Obama said, "In the State of the Union, I outlined a blueprint for an economy that is built to last -– an economy built on new manufacturing, and new sources of energy, and new skills and education for the American people. Today, we’re releasing the details of that blueprint in the form of next year’s budget." In terms of supporting "new sources of energy" here is how the funding will be dolled out to the DOE: $60 million to perform critical research on energy storage systems and devise new approaches for battery storage. $770 million for nuclear energy, including $65 million for cost-shared awards to support first-of-a-kind small modular reactors and $60 million for nuclear waste R&D that aligns with the recommendations of the Blue Ribbon Commission on America’s Nuclear Future. $276 million for research and development of advanced fossil fuel power systems and carbon capture, utilization and storage technologies to allow for the continued use of our abundant domestic coal resources while reducing greenhouse gas emissions. $350 million for the Advanced Research Projects Agency-Energy (ARPA-E) to continue support for promising early-stage research projects that could deliver game-changing clean energy technologies. $120 million to support the Energy Frontier Research Centers and $140 million for the five existing Energy Innovation Hubs and to establish a new hub to focus on grid systems and the tie between transmission and distribution systems. $11.5 billion to protect Americans by maintaining U.S. nuclear deterrence capabilities, reducing nuclear dangers in an increasingly unstable and unpredictable world, and providing for the Navy’s nuclear propulsion needs. **As was the case last year**, the clear majority of the funding will support nuclear power development. **This comes with little surprise** as the Obama Administration has been clanging the bell to ring in a new era of nuclear power generation. And, despite a shake up in the world's view of the safety of nuclear power following the disaster in Japan in March 2011, the Administration is succeeding.

#### Obama nuclear allocations empirically never approved AND he’s cutting them anyway

Bendery, 12 – Huffington Post reporter, covered the White House and Congressional leadership for three years at Roll Call

(Jennifer, "Obama's Budget Nixes New Money For Program That Funded Solyndra," Huffington Post, 2-14-12, www.huffingtonpost.com/2012/02/14/obama-budget-solyndra-program\_n\_1276605.html, accessed 9-13-12)

In a quiet shift from the past two years, President Barack Obama's 2013 budget includes **no new money** for the Department of Energy loan guarantee program, the same program that House Republicans have scrutinized for losing more than $500 million in taxpayer dollars to the now-defunct solar power company, Solyndra. Obama has regularly included huge increases to the program's loan guarantee authority in his budget, though Congress has not approved his proposals. He provided a $36 billion increase for nuclear reactors in his 2011 budget, and again in his 2012 budget. He also included $200 million in credit subsidies for renewable and energy efficiency projects in his 2012 budget. This year, he provided **nothing**. Meg Reilly, a spokeswoman for the Office of Management and Budget, said in an email that Obama opted not to put new money toward the loan guarantee program this time because the administration is waiting on the results of an evaluation of the Energy Department's loan portfolio. Reilly also said the program still has "a significant amount of remaining resources" from prior years and that the focus will be on putting those funds to use. There's about $10 billion in its reserves. The Energy Department "continues to conduct due diligence and is in active negotiations with a number of additional project sponsors," Reilly said. "It's important to point out here that, as of January 2012, over $24 billion in direct loans and loan guarantees have closed to support a diverse range of over 30 wind, solar, electric vehicles and other clean energy projects projected to fund more than 50,000 jobs." But some environmental groups say Obama's budgetary shift is hugely significant because **it means no new money for** building **nuclear** powerplants -- and they speculate that, at least in part, they have Solyndra to thank for the shift. "The entire loan program has fallen into some disrepute on Capitol Hill ... because of Solyndra and some of the other renewable programs getting in trouble," said Michael Mariotte, executive director of Nuclear Information and Resource Service, an information hub for organizations concerned with nuclear power. The administration "may have decided to cut their losses" and stop providing new funds to the program altogether.

## impacts

#### Obama key to energy leadership

The Hill 12

(“Report says global climate deal hinges on Obama reelection” By Ben Geman, 01/05/12, http://thehill.com/blogs/e2-wire/e2-wire/202539-report-global-climate-deal-hinges-on-obama-reelection-)

Prospects for striking a binding global climate deal by 2015 are probably **toast** if President Obama loses in November. That’s among the conclusions in a wide-ranging, new climate and green energy outlook from banking giant HSBC’s research branch. A major outcome from the United Nations climate talks in December was a plan to craft a deal by 2015 — one that would include big, developing nations such as China — and have it come into force by 2020. But Obama’s main Republican White House rivals are critical of emissions limits and skeptical of climate science. HSBC predicts an international agreement by 2015 is highly unlikely if Obama loses the election. From their research note: [T]he prospects for a new global climate deal in 2015 **depend** considerably on the election of a pro-climate action president. The election of a President opposed to climate action will not only damage growth prospects for low-carbon solutions in the USA itself, **but** will **make the hard task of negotiating a new global agreement** by 2015 almost impossible.

#### Romney kills growth and competitiveness

Waldron 12

(Travis, Economists: Romney’s Economic Plan Fails to Deal With ‘Main Drags’ On U.S. Economy, 1/12/2012 Think Progress, p. <http://thinkprogress.org/economy/2012/01/12/403210/economists-romneys-draconian/>)

Former Massachusetts Gov. Mitt Romney’s (R) economic plan has become the centerpiece of his presidential campaign. Though his proposals are often vague, analyses of the plan shows that it would provide huge tax breaks for the wealthiest Americans while raising taxes on low-income families. And though Romney claims to be concerned about the federal budget deficit, his plan would add more than $6 trillion in deficits over 10 years. Romney, who touts his experience as a job creator, has suggested laying off thousands of public sector workers. He wants to slash vital programs for the poor and middle-classes, repeal the Affordable Care Act, and gut Medicare and Social Security. His embrace of the radical Cut, Cap, and Balance plan pushed by House Republicans would, in effect, shrink the federal government to pre-Ronald Reagan era sizes. But for all his talk about the plan on the campaign trail, economists surveyed by Reuters say Romney’s plan **likely wouldn’t deal with the main drags on the American economy**, while the cuts to vital programs would be “utterly draconian“: These steps would shrink the federal government’s role more than even former president Ronald Reagan managed 30 years ago when he turned many social programs over to the states. That scenario concerns liberal economists. “If applied, these fiscal measures would be utterly draconian. The attacks on Medicare and Social Security would throw large portions of the population into poverty,” said Jamie Galbraith, business professor at the University of Texas in Austin. Mainstream economists worry more that neither Romney nor his Republican opponents are addressing the main drag on the U.S. economy – weak demand from American consumers still weighed down by debt. Among the “main drags” highlighted in the Reuters piece is the housing crisis, which has placed “a big drag on consumer spending which drives two thirds of the U.S. economy.”

Marked

But the GOP candidates have offered little in the way of solutions for the crisis, and Romney’s own prescription involves **letting the housing market hit rock bottom** — further damaging millions of homeowners. “Markets work,” Romney told moderators at a debate in November when asked what he would do to address the housing crisis. According to former Wall Street economist Thomas Gallagher, addressing demand should be at the top of the list when it comes to speeding the recovery. Instead, Romney is focused on budget deficits and tax reform — the types of austerity measures that are pushing Europe toward another recession. Perhaps that’s why a survey of economics professors found that the Republican proposals were so bad, they wouldn’t pass an Econ 101 class.