**OFF 001**

**Immigration will pass – ignore random quotes from pissed off tea-partiers**

**BUCKHOUT 10 – 23 – 13 NDN Staff Blogger** [Emma Buckhout, Immigration Reform: Alive, Not Dead, in the House, <http://ndn.org/blog/2013/10/immigration-reform-alive-not-dead-house>]

A surprising number of recent media reports declare once again that immigration reform is dead- **surprising** because **numerous** House Republicans are **signaling the exact opposite**. It is true that responsibility for action lies with the House GOP after the Senate passed its bipartisan comprehensive immigration reform bill in June, House Democrats have introduced both CIR ASAP and H.R. 15 (now with 184 cosponsors), and President Obama has declared immigration reform a legislative priority. However, the House GOP passed five separate bills out of committee, and this week members have affirmed they are still working on more related to legalization of undocumented immigrants. As long as a contingent of the House majority is willing to keep moving on meaningful pieces of legislation, immigration reform is very much alive.

See these articles:

Speaker Hopeful of Immigration Reform This Year, Donna Cassata, Associated Press, October 23, 2013

“Reps. Mike Coffman, R-Colo., and David Valadao, R-Calif., joined immigrants brought illegally to the U.S. as children who want to join the military at a Capitol Hill news conference. Coffman and Valadao have been working with Majority Leader Eric Cantor, R-Va., and Judiciary Committee Chairman Robert Goodlatte, R-Va., on legislation that would offer citizenship to the children.”

Boehner Says He Might Bring Up Immigration Reform This Year, David Lawder and Caren Bohan, Reuters, October 23, 2013

House Speaker Boehner: "I still think that immigration reform is an important subject that needs to be addressed and I am hopeful."

Immigration Reform: Still Not Quite Dead, Greg Sargent, Washington Post, October 22, 2013

Rep. Mario Diaz-Balart (R, Fla.) says he is working with a number of representatives to figure out: “what to do with the millions of undocumented who are here in a way that completely conforms with the rule of law.”

House Republicans Drafting Immigration Measures, Kristina Peterson, Wall Street Journal, October 22, 2013

“Rep. Mario Diaz-Balart (R., Fla.) and a small group of other lawmakers are working on one proposal that includes elements of –but is expected to diverge from– a bipartisan plan Mr. Diaz-Balart had worked on earlier this year.”

“Rep. Darrell Issa (R., Calif.) is also working on a proposal that would offer temporary legal status to qualifying illegal immigrants, his spokesman said Tuesday.”

Is Immigration Really Dead in the House?, Fawn Johnson, National Journal, October 22, 2013

“Powerful House Republicans like Boehner, Majority Leader Eric Cantor, and Budget Committee Chairman Paul Ryan all want to see something happen on immigration.”

An Immigration Challenge for Boehner, William Galston, Wall Street Journal, October 22, 2013

“…a majority of rank-and-file Republicans, backed by evangelical leaders and business, favor immigration reform….”

Did Shutdown “Poison the Well” for Immigration Reform?, Carrie Dann, NBC News, October 20, 2013

"Another proposal being worked on by Majority Leader Eric Cantor, R-Va., and House Judiciary Chairman Bob Goodlatte, R-Va., would allow some children who were brought the United States illegally as children to obtain legal status.”

Written Off for Dead, Immigration Reform Could Still Live On, Byron York, Washington Examiner, October 17, 2013

"’There is still a window,’ says one House GOP aide involved in crafting a reform proposal. ‘The leadership has said keep working on it and see what you can do.’”

Time Running Out for Immigration Reform, Dan Nowicki, Arizona Republic, October 20, 2013

"’We're still committed to moving forward on step-by-step, common-sense reforms,’ Boehner spokesman Michael Steel told The Arizona Republic in an email. ‘The Judiciary Committee has already passed several bills that could see floor action.’"

**Obama’s top priority – his pressure is key**

**STOKOLS 10 – 17 – 13 Fox31 Denver Staff Writer** [Eli Stokols, ANALYSIS: Obama’s quick pivot to immigration reform, <http://kdvr.com/2013/10/17/analysis-obamas-quick-pivot-to-immigration-reform/>]

Just hours after signing the legislation ending the government shutdown and raising the debt ceiling, President Barack Obama told the country that “there are no winners” after the two-week stalemate that cost the country’s economy more than $20 billion.

But, in the political world, there is a clear winner — the president.

Republicans, by following a bone-headed strategy in pursuit of an unattainable goal, have put their own approval ratings in the toilet 13 months before the 2014 midterm election.

Further, they’ve put some wind back in the sails of an administration that had been rudderless and adrift almost from the start of the president’s second term.

On Thursday morning, Obama looked to press his advantage by urging Republicans in Congress to end the political brinksmanship and to start working together with Democrats on budget negotiations, immigration reform and the farm bill that has stalled in the House.

“To all my friends in Congress, understand that how business is done in this town has to change,” Obama said, implicitly chiding the Republicans who seemingly oppose his administration at every turn.

“You don’t like a particular policy, or a particular president, then argue for your position,” Mr. Obama said in the 15-minute statement. “Go out there and win an election. Push to change it. But don’t break it.”

While another stern lecture from the president isn’t likely to improve relations between the White House and Capitol Hill, **Obama does have a stronger hand** in the upcoming political fights; and **by pivoting quickly to immigration** reform, he’s taking advantage of a sudden window of opportunity.

During his remarks Thursday, Obama re-framed the debate over comprehensive immigration reform, reminding the country of the Senate proposal, passed with broad bipartisan support earlier this year, that’s lingering in the House.

“There’s already a broad coalition across America that’s behind this effort of comprehensive immigration reform — from business leaders to faith leaders to law enforcement,” the president said.

“In fact, the Senate has already passed a bill with strong bipartisan support that would make the biggest commitment to border security in our history; would modernize our legal immigration system; make sure everyone plays by the same rules, makes sure that folks who came here illegally have to pay a fine, pay back taxes, meet their responsibilities.”

The legislation, crafted by a bipartisan group of eight senators including Colorado Sen. Michael Bennet, a Democrat, would spend $46 billion to enhance security on the U.S. Mexico border and create a 13-year path to citizenship for undocumented immigrants.

“It will establish a sensible and rational system for the future flow of immigrants to this country, put in place a process to reunite families and provide a path to citizenship for millions of people who came to this country for a better but are living in the shadows of our society,” Bennet said. “I suggest the House take a hard look at the Senate bill. **There is no reason we can’t work out a final bill to pass into law in the coming months**.”

Obama noted that the legislation is likely to grow the nation’s economy over the next several decades.

“Our economy would be 5 percent larger two decades from now,” the president said. “That’s $1.4 trillion in new economic growth.

“The majority of Americans think this is the right thing to do. And it’s sitting there waiting for the House to pass it. Now, if the House has ideas on how to improve the Senate bill, let’s hear them. Let’s start the negotiations. But let’s not leave this problem to keep festering for another year, or two years, or three years. This can and should get done by the end of this year.”

The president is speaking to a House GOP caucus that is fractured into factions, the body’s growing dysfunction writ large by the debacle of the last two weeks.

While many of the conservative hard-liners who aimed to dismantle Obamacare by shutting down the government **will never support** comprehensive immigration reform, more moderate Republicans — those concerned with the GOP’s ability to win national elections, not just their own grip on their safe, gerrymandered, primary-ripe seats — have likely been chastened by recent polls showing their approval ratings in the 20s.

**Plan kills Obama’s agenda**

**KRINER 10 Assistant professor of political science at Boston University** [Douglas L. Kriner, “After the Rubicon: Congress, Presidents, and the Politics of Waging War”, page 276-77]

One of the mechanisms by which congressional opposition influences presidential cost-benefit calculations is by sending signals of American disunity to the target state. Measuring the effects of such congressional signals on the calculations of the target state is always difficult. In the case of Iraq it is exceedingly so, given the lack of data on the non-state insurgent actors who were the true “target” of the American occupation after the fall of the Hussein regime. Similarly, in the absence of archival documents, such as those from the Reagan Presidential Library presented in chapter 5, it is all but impossible to measure the effects of congressional signals on the administration’s perceptions of the military costs it would have to pay to achieve its objectives militarily.

By contrast. measuring the domestic political costs of congressional opposition, while still difficult, is at least a tractable endeavor. Chapter 2 posited two primary pathways through which congressional opposition could raise the political costs of staying the course militarily for the president. **First. high-profile congressional challenges** to a use of force can affect real or anticipated public opinion and bring popular pressures to bear on the president to change course. Second, congressional opposition to the president’s conduct of military affairs **can compel him to spend considerable political capital in the military arena to the detriment of other major items on his programmatic agenda**. On both of these dimensions, congressional opposition to the war in Iraq appears to have had the predicted effect.

**Immigration reform expands skilled labor --- spurs relations and economic growth in China and India.**

**Los Angeles Times, 11/9/2012** (Other countries eagerly await U.S. immigration reform, p. <http://latimesblogs.latimes.com/world_now/2012/11/us-immigration-reform-eagerly-awaited-by-source-countries.html>)

"Comprehensive immigration reform will see **expansion of skilled labor visas**," predicted B. Lindsay Lowell, director of policy studies for the Institute for the Study of International Migration at Georgetown University. A former research chief for the congressionally appointed Commission on Immigration Reform, Lowell said he expects to see at least a **fivefold increase** in the number of highly skilled labor visas that would provide "a **significant shot in the arm for India and China**." There is **widespread consensus among economists and academics** that skilled migration **fosters new trade and business relationships** between countries and **enhances links to the global economy**, Lowell said. "Countries like India and China weigh the opportunities of business abroad from their expats with the possibility of brain drain, and I think they still see the immigration opportunity as a bigger plus than not," he said.

**US/India relations averts South Asian nuclear war.**

**Schaffer**, Spring **2002** (Teresita – Director of the South Asia Program at the Center for Strategic and International Security, Washington Quarterly, p. Lexis)

Washington's increased interest in India since the late 1990s reflects India's economic expansion and position as Asia's newest rising power. New Delhi, for its part, is adjusting to the end of the Cold War. As a result, both giant democracies see that they can **benefit by closer cooperation**. For Washington, the advantages include a wider network of friends in Asia at a time when the region is changing rapidly, as well as a **stronger position** from which to help **calm possible future nuclear tensions in the region**. Enhanced trade and investment benefit both countries and are a **prerequisite for improved U.S. relations with India**. For India, the country's ambition to assume a stronger leadership role in the world and to maintain an economy that lifts its people out of poverty depends critically on good relations with the United States.

**China collapse causes nuclear war**

**Kaminski 7** (Antoni Z., Professor – Institute of Political Studies, “World Order: The Mechanics of Threats (Central European Perspective)”, Polish Quarterly of International Affairs, 1, p. 58)

As already argued, the economic advance of China has taken place with relatively few corresponding changes in the political system, although the operation of political and economic institutions has seen some major changes. Still, tools are missing that would allow the establishment of political and legal foundations for the modem economy, or they are too weak. The tools are efficient public administration, the rule of law, clearly defined ownership rights, efficient banking system, etc. For these reasons, many experts fear an economic crisis in China. Considering the importance of the state for the development of the global economy, the crisis would have serious global repercussions. Its political ramifications could be no less dramatic owing to the special position the military occupies in the Chinese political system, and the existence of many potential vexed issues in East Asia (disputes over islands in the China Sea and the Pacific). A potential hotbed of conflict is also Taiwan's status. Economic recession and the related destabilization of internal policies could lead to a political, or even military crisis. The likelihood of the **global escalation** of the conflict is high, as the interests of Russia, China, Japan, Australia and, first and foremost, the US clash in the region.

**OFF 010**

**Text: The United States federal government should establish a nitrogen fertilizer tax of 16 cents per pound of nitrogen, and use the revenue from that tax to provide loan guarantees for farmers to procure biocharcoal technology. The United States federal judiciary should rule that the United States federal government must comply with all non-environmental treaties ratified by Congress. The United States federal government should develop and deploy sunshades beyond the Earth’s mesosphere.**

**Solves through sequestration without reducing coal emissions.**

**Technology Review**, 4/26/**2007**. “The Case for Burying Charcoal,” published by MIT, http://www.technologyreview.com/news/407754/the-case-for-burying-charcoal/.

Several states in this country and a number of Scandinavian countries are trying to supplant some coal-burning by burning biomass such as wood pellets and agricultural residue. Unlike coal, biomass is carbon-neutral, releasing only the carbon dioxide that the plants had absorbed in the first place. But a new research [paper](http://dx.doi.org/10.1016/j.biombioe.2007.01.012) published online in the journal Biomass and Bioenergy argues that the battle against global warming may be better served by instead heating the biomass in an oxygen-starved process called pyrolysis, extracting methane, hydrogen, and other byproducts for combustion, and burying the resulting carbon-rich char. Even if this approach would mean burning more coal--which emits more carbon dioxide than other fossil-fuel sources--it would yield a net reduction in carbon emissions, according to the analysis by [Malcolm Fowles](http://technology.open.ac.uk/tm/mf.htm), a professor of technology management at the Open University, in the United Kingdom. Burning one ton of wood pellets emits 357 kilograms less carbon than burning coal with the same energy content. But turning those wood pellets into char would save 372 kilograms of carbon emissions. That is because 300 kilograms of carbon could be buried as char, and the burning of byproducts would produce 72 kilograms less carbon emissions than burning an equivalent amount of coal. ¶ Such an approach could carry an extra benefit. Burying char--known as black-carbon sequestration--enhances soils, helping future crops and trees grow even faster, thus absorbing more carbon dioxide in the future. Researchers believe that the char, an inert and highly porous material, plays a key role in helping soil retain water and nutrients, and in sustaining microorganisms that maintain soil fertility. ¶ Johannes Lehmann, an associate professor of crops and soil sciences at Cornell University and an expert on char sequestration, agrees in principle with Fowles's analysis but believes that much more research in this relatively new area of study is needed. "It heads in the right direction," he says.¶ Interest in the approach is gathering momentum. On April 29, more than 100 corporate and academic researchers will gather in New South Wales, Australia, to attend the first international conference on black-carbon sequestration and the role pyrolysis can play to offset greenhouse-gas emissions. Lehmann estimates that as much as 9.5 billion tons of carbon--more than currently emitted globally through the burning of fossil fuels--could be sequestered annually by the end of this century through the sequestration of char. "Bioenergy through pyrolysis in combination with biochar sequestration is a technology to obtain energy and improve the environment in multiple ways at the same time," writes Lehmann in a research paper to be published soon in [Frontiers in Ecology and the Environment](http://www.frontiersinecology.org/). Fowles says that there would be an incentive for farmers, logging communities, and small towns to convert their own dedicated crops, agricultural and forest residues, and municipal biowaste into char if a high enough price emerged for the sale of carbon offsets. "Every community at any scale could pyrolyse its biowaste ... motivated by doing their bit against global warming," he says. Fowles believes that storing black carbon in soil carries less risk, would be quicker to implement, and could be done at much lower cost than burying carbon dioxide in old oil fields or aquifers. And he says the secondary benefits to agriculture could be substantial: "Biochar reduces the soil's requirement for irrigation and fertilizer, both of which emit carbon." Fowles adds that it has also been shown to reduce emissions of greenhouse gases from decay processes in soil. This would include nitrous oxide, a potent greenhouse gas. "Biochar has been observed to reduce nitrous-oxide emissions from cultivated soil by 40 percent."

**Solves warming**

**Victor et al 2009** – a Professor at Stanford Law School, Director of Stanford's Program on Energy and Sustainable Development, and an Adjunct Senior Fellow at the Council on Foreign Relations. M. Granger Morgan is Head of Carnegie Mellon University's Department of Engineering and Public Policy and Director of the Climate Decision Making Center. Jay Apt is Professor of Engineering and Public Policy at Carnegie Mellon University. John Steinbruner is Professor of Public Policy and Director of the Center for International and Security Studies at the University of Maryland. Katharine Ricke is a doctoral student at Carnegie Mellon University (David G., March/April 2009 “The geoengineering option” http://iis-db.stanford.edu/pubs/22456/The\_Geoengineering\_Option.pdf )

Each year, the effects of climate change are coming into sharper focus. Barely a month goes by without some fresh bad news: ice sheets and glaciers are melting faster than expected, sea levels are rising more rapidly than ever in recorded history, plants are blooming earlier in the spring, water supplies and habitats are in danger, birds are being forced to find new migratory patterns. The odds that the global climate will reach a dangerous tipping point are increasing. Over the course of the twenty-first century, key ocean currents, such as the Gulf Stream, could shift radically, and thawing permafrost could release huge amounts of additional greenhouse gases into the atmosphere. Such scenarios, although still remote, would dramatically accelerate and compound the consequences of global warming. Scientists are taking these doomsday scenarios seriously because the steady accumulation of warming gases in the atmosphere is forcing change in the climate system at rates so rapid that the outcomes are extremely difficult to predict. Eliminating all the risks of climate change is impossible because carbon dioxide emissions, the chief human contribution to global warming, are unlike conventional air pollutants, which stay in the atmosphere for only hours or days. Once carbon dioxide enters the atmosphere, much of it remains for over a hundred years. Emissions from anywhere on the planet contribute to the global problem, and once headed in the wrong direction, the climate system is slow to respond to attempts at reversal. As with a bathtub that has a large faucet and a small drain, the only practical way to lower the level is by dramatically cutting the inflow. Holding global warming steady at its current rate would require a worldwide 60-80 percent cut in emissions, and it would still take decades for the atmospheric concentration of carbon dioxide to stabilize. Most human emissions of carbon dioxide come from burning fossil fuels, and most governments have been reluctant to force the radical changes necessary to reduce those emissions. Economic growth tends to trump vague and elusive global aspirations. The United States has yet to impose even a cap on its emissions, let alone a reduction. The European Union has adopted an emissions-trading scheme that, although promising in theory, has not yet had much real effect because carbon prices are still too low to cause any significant change in behavior. Even Norway, which in 1991 became one of the first nations to impose a stiff tax on emissions, has seen a net increase in its carbon dioxide emissions. Japan, too, has professed its commitment to taming global warming. Nevertheless, Tokyo is struggling to square the need for economic growth with continued dependence on an energy system powered mainly by conventional fossil fuels. And China's emissions recently surpassed those of the United States, thanks to coal-fueled industrialization and a staggering pace of economic growth. The global economic crisis is stanching emissions a bit, but it will not come close to shutting off the faucet. The world's slow progress in cutting carbon dioxide emissions and the looming danger that the climate could take a sudden turn for the worse require policymakers to take a closer look at emergency strategies for curbing the effects of global warming. These strategies, often called "geoengineering," envision deploying systems on a planetary scale, such as launching reflective particles into the atmosphere or positioning sunshades to cool the earth. These strategies could cool the planet, but they would not stop the buildup of carbon dioxide or lessen all its harmful impacts. For this reason, geoengineering has been widely shunned by those committed to reducing emissions. Serious research on geoengineering is still in its infancy, and it has not received the attention it deserves from politicians. The time has come to take it seriously. Geoengineering could provide a useful defense for the planet -- an emergency shield that could be deployed if surprisingly nasty climatic shifts put vital ecosystems and billions of people at risk. Actually raising the shield, however, would be a political choice. One nation's emergency can be another's opportunity, and it is unlikely that all countries will have similar assessments of how to balance the ills of unchecked climate change with the risk that geoengineering could do more harm than good. Governments should immediately begin to undertake serious research on geoengineering and help create international norms governing its use. THE RAINMAKERS Geoengineering is not a new idea. In 1965, when President Lyndon Johnson received the first-ever U.S. presidential briefing on the dangers of climate change, the only remedy prescribed to counter the effects of global warming was geoengineering. That advice reflected the scientific culture of the time, which imagined that engineering could fix almost any problem. By the late 1940s, both the United States and the Soviet Union had begun exploring strategies for modifying the weather to gain battlefield advantage. Many schemes focused on "seeding" clouds with substances that would coax them to drop more rain. Despite offering no clear advantage to the military, "weather makers" were routinely employed (rarely with much effect) to squeeze more rain from clouds for thirsty crops. Starting in 1962, U.S. government researchers for Project Stormfury tried to make tropical hurricanes less intense through cloud seeding, but with no clear success. Military experts also dreamed of using nuclear explosions and other interventions to create a more advantageous climate. These applications were frightening enough that in 1976 the United Nations adopted the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques to bar such projects. By the 1970s, after a string of failures, the idea of weather modification for war and farming had largely faded away. Today's proposals for geoengineering are more likely to have an impact because the interventions needed for global-scale geoengineering are much less subtle than those that sought to influence local weather patterns. The earth's climate is largely driven by the fine balance between the light energy with which the sun bathes the earth and the heat that the earth radiates back to space. On average, about 70 percent of the earth's incoming sunlight is absorbed by the atmosphere and the planet's surface; the remainder is reflected back into space. Increasing the reflectivity of the planet (known as the albedo) by about one percentage point could have an effect on the climate system large enough to offset the gross increase in warming that is likely over the next century as a result of a doubling of the amount of carbon dioxide in the atmosphere. Making such tweaks is much more straightforward than causing rain or fog at a particular location in the ways that the weather makers of the late 1940s and 1950s dreamed of doing.

**OFF 100**

**Statutory Restrictions include one of 5 things—they aren’t those**

**KAISER 80**—the Official Specialist in American National Government, Congressional Research Service, the Library of Congress [Congressional Action to Overturn Agency Rules: Alternatives to the Legislative Veto; Kaiser, Frederick M., 32 Admin. L. Rev. 667 (1980)]

In addition to direct statutory overrides, there are a variety of statutory and nonstatutory techniques that have the effect of overturning rules, that prevent their enforcement, or that seriously impede or even preempt the promulgation of projected rules. For instance, a statute may alter the jurisdiction of a regulatory agency or extend the exemptions to its authority, thereby affecting existing or anticipated rules. Legislation that affects an agency's funding may be used to prevent enforcement of particular rules or to revoke funding discretion for rulemaking activity or both. Still other actions, less direct but potentially significant, are mandating agency consultation with other federal or state authorities and requiring prior congressional review of proposed rules (separate from the legislative veto sanctions). These last two provisions may change or even halt proposed rules by interjecting novel procedural requirements along with different perspectives and influences into the process.

It is also valuable to examine **nonstatutory** controls available to the Congress:

1. legislative, oversight, investigative, and confirmation hearings;

2. establishment of select committees and specialized subcommittees to oversee agency rulemaking and enforcement;

3. directives in committee reports, especially those accompanying legislation, authorizations, and appropriations, regarding rules or their implementation;

4. House and Senate floor statements critical of proposed, projected, or ongoing administrative action; and

5. direct contact between a congressional office and the agency or office in question.

Such mechanisms are all indirect influences; unlike statutory provisions, they are neither self-enforcing nor legally binding by themselves. Nonetheless, nonstatutory devices are more readily available and more easily effectuated than controls imposed by statute. And some observers have attributed substantial influence to nonstatutory controls in regulatory as well as other matters.3

It is **impossible**, in a **limited space**, to provide a comprehensive and exhaustive listing of congressional actions that override, have the effect of overturning, or prevent the promulgation of administrative rules. Consequently, this report **concentrates** upon the **more direct statutory devices**, although it also encompasses committee reports accompanying bills, the one nonstatutory instrument that is frequently most authoritatively connected with the final legislative product. The statutory mechanisms surveyed here cross a wide spectrum of possible congressional action:

1. single-purpose provisions to overturn or preempt a specific rule;

2. alterations in program authority that remove jurisdiction from an agency;

3. agency authorization and appropriation limitations;

4. inter-agency consultation requirements; and

5. congressional prior notification provisions.

**AND—The Aff isn’t topical—relying on treaties to create restrictions aren’t statutory or judicial**

**YOO 2**—Professor of Law, School of Law, University of California, Berkeley [John C. Yoo, RESPONSE ESSAY: Rejoinder: Treaty Interpretation and the False Sirens of Delegation, California Law Review, July, 2002, 90 Calif. L. Rev. 1305]

Professor Van Alstine's argument, however, turns on the assumption that Congress also enjoys equally sweeping power to delegate rulemaking power to the federal judiciary. He claims that if Congress can delegate such power to the judiciary by statute, then the treatymakers must similarly be able to delegate it by treaty. n174 However, the underlying assumption is flawed. Delegation of rulemaking power by Congress to the judiciary differs from delegation to the executive in several crucial respects. First, unlike the executive branch, the judiciary cannot claim to be democratically accountable. n175 Second, the judiciary does not possess technocratic expertise in specific regulatory areas, at least not in the way contemplated by Chevron v. NRDC. n176 Since Congress's delegation power is not what Professor Van Alstine presumes it to be, the analogy between Congress and the treatymakers fails.

Regardless of whether such broad statutory delegation to the judiciary is constitutionally appropriate, Professor Van Alstine makes a fundamental error when he equates delegations by **statute** to delegations by **treaty**. As its placement in Article II suggests, and as I have argued above, the treaty power is an **executive power** and was widely understood as such during the Framing period. n177 Professor Van Alstine cannot demonstrate that an executive power has ever been delegated outside the executive branch. Perhaps the closest he could come would be Morrison v. Olson, n178 in which the Court upheld the exercise of prosecutorial power by an independent counsel who could be removed only for cause. Yet, even in that case, the Court emphasized that the independent counsel continued to be an executive-branch official responsible to the Attorney General and the President. n179 As far as I know, there is no example where any branch has successfully delegated part of the executive power to another branch of government and, certainly, no example where such power was delegated to the judicial branch. Delegations, when they occur, run in only one direction, from Congress to either the executive branch or, in limited circumstances, to the courts.

**Vote neg for Predictable Limits—allowing treaties creates new topics in a new literature base—destroying preparedness.**

**OFF 011**

**Text: The Office of Legal Counsel should determine that the Executive Branch must resolve its policy in opposition to Al-Bihani v. Obama, through the application of the “Charming Betsy” Canon, that treaties ratified by the United States are a restriction on the war powers authority of the President of the United States in the area of indefinite detention. The Office of Legal Counsel should rule that that United States federal government complies with commitments to treaties international treaties. The President should require the Office of Legal Counsel to publish any legal opinions regarding policies adopted by the Executive Branch. The Executive Branch should comply with the policies recommended by the Office of Legal Counsel.**

**The CP is competitive and solves the case—OLC rulings do not actually remove authority but nevertheless hold binding precedential value on the executive.**

Trevor W. **Morrison**, October **2010**. Professor of Law, Columbia Law School. “STARE DECISIS IN THE OFFICE OF LEGAL COUNSEL,” Columbia Law Review, 110 Colum. L. Rev. 1448, Lexis.

On the other hand, an OLC that says "yes" too often is not in the client's long-run interest. n49 Virtually all of OLC's clients have their own legal staffs, including the White House Counsel's Office in the White House and the general counsel's offices in other departments and agencies. Those offices are capable of answering many of the day-to-day issues that arise in those components. They typically turn to OLC when the issue is sufficiently controversial or complex (especially on constitutional questions) that some external validation holds special value. n50 For example, when a department confronts a difficult or delicate constitutional question in the course of preparing to embark upon a new program or course of action that raises difficult or politically sensitive legal questions, it has an interest in being able to point to a credible source affirming the  [\*1462]  legality of its actions. n51 The in-house legal advice of the agency's general counsel is unlikely to carry the same weight. n52 Thus, even though those offices might possess the expertise necessary to answer at least many of the questions they currently send to OLC, in some contexts they will not take that course because a "yes" from the in-house legal staff is not as valuable as a "yes" from OLC. But that value depends on OLC maintaining its reputation for serious, evenhanded analysis, not mere advocacy. n53

The risk, however, is that OLC's clients will not internalize the long-run costs of taxing OLC's integrity. This is in part because the full measure of those costs will be spread across all of OLC's clients, not just the client agency now before it. The program whose legality the client wants OLC to review, in contrast, is likely to be something in which the client has an immediate and palpable stake. Moreover, the very fact that the agency has come to OLC for legal advice will often mean it thinks there is  [\*1463]  at least a plausible argument that the program is lawful. In that circumstance, the agency is unlikely to see any problem in a "yes" from OLC.

Still, it would be an overstatement to say that OLC risks losing its client base every time it contemplates saying "no." One reason is custom. In some areas, there is a longstanding tradition - rising to the level of an expectation - that certain executive actions or decisions will not be taken without seeking OLC's advice. One example is OLC's bill comment practice, in which it reviews legislation pending in Congress for potential constitutional concerns. If it finds any serious problems, it writes them up and forwards them to the Office of Management and Budget, which combines OLC's comments with other offices' policy reactions to the legislation and generates a coordinated administration position on the legislation. n54 That position is then typically communicated to Congress, either formally or informally. While no statute or regulation mandates OLC's part in this process, it is a deeply entrenched, broadly accepted practice. Thus, although some within the Executive Branch might find it frustrating when OLC raises constitutional concerns in bills the administration wants to support as a policy matter, and although the precise terms in which OLC's constitutional concerns are passed along to Congress are not entirely in OLC's control, there is no realistic prospect that OLC would ever be cut out of the bill comment process entirely. Entrenched practice, then, provides OLC with some measure of protection from the pressure to please its clients.

But there are limits to that protection. Most formal OLC opinions do not arise out of its bill comment practice, which means most are the product of a more truly voluntary choice by the client to seek OLC's advice. And as suggested above, although the Executive Branch at large has an interest in OLC's credibility and integrity, the preservation of those virtues generally falls to OLC itself. OLC's nonlitigating function makes this all the more true. Whereas, for example, the Solicitor General's aim of prevailing before the Supreme Court limits the extent to which she can profitably pursue an extreme agenda inconsistent with current doctrine, OLC faces no such immediate constraint. Whether OLC honors its oft-asserted commitment to legal advice based on its best view of the law depends largely on its own self-restraint.

2. Formal Requests, Binding Answers, and Lawful Alternatives. - Over time, OLC has developed practices and policies that help maintain its independence and credibility. First, before it provides a written opinion, n55 OLC typically requires that the request be in writing from the head or general counsel of the requesting agency, that the request be as specific and concrete as possible, and that the agency provide its own written  [\*1464]  views on the issue as part of its request. n56 These requirements help constrain the requesting agency. Asking a high-ranking member of the agency to commit the agency's views to writing, and to present legal arguments in favor of those views, makes it more difficult for the agency to press extreme positions.

Second, as noted in the Introduction, n57 OLC's legal advice is treated as binding within the Executive Branch until withdrawn or overruled. n58 As a formal matter, the bindingness of the Attorney General's (or, in the modern era, OLC's) legal advice has long been uncertain. n59 The issue has never required formal resolution, however, because by longstanding tradition the advice is treated as binding. n60 OLC protects that tradition today by generally refusing to provide advice if there is any doubt about whether the requesting entity will follow it. n61 This guards against "advice-shopping by entities willing to abide only by advice they like." n62 More broadly, it helps ensure that OLC's answers matter. An agency displeased with OLC's advice cannot simply ignore the advice. The agency might  [\*1465]  construe any ambiguity in OLC's advice to its liking, and in some cases might even ask OLC to reconsider its advice. n63 But the settled practice of treating OLC's advice as binding ensures it is not simply ignored.

In theory, the very bindingness of OLC's opinions creates a risk that agencies will avoid going to OLC in the first place, relying either on their general counsels or even other executive branch offices to the extent they are perceived as more likely to provide welcome answers. This is only a modest risk in practice, however. As noted above, legal advice obtained from an office other than OLC - especially an agency's own general counsel - is unlikely to command the same respect as OLC advice. n64 Indeed, because OLC is widely viewed as "the executive branch's chief legal advisor," n65 an agency's decision not to seek OLC's advice is likely to be viewed by outside observers with skepticism, especially if the in-house advice approves a program or initiative of doubtful legality.

OLC has also developed certain practices to soften the blow of legal advice not to a client's liking. Most significantly, after concluding that a client's proposed course of action is unlawful, OLC frequently works with the client to find a lawful way to pursue its desired ends. n66 As the OLC Guidelines put it, "when OLC concludes that an administration proposal is impermissible, it is appropriate for OLC to go on to suggest modifications that would cure the defect, and OLC should stand ready to work with the administration to craft lawful alternatives." n67 This is a critical component of OLC's work, and distinguishes it sharply from the courts. In addition to "providing a means by which the executive branch lawyer can contribute to the ability of the popularly-elected President and his administration to achieve important policy goals," n68 in more instrumental terms the practice can also reduce the risk of gaming by OLC's clients. And that, in turn, helps preserve the bindingness of OLC's opinions. n69

 [\*1466]  To be sure, OLC's opinions are treated as binding only to the extent they are not displaced by a higher authority. A subsequent judicial decision directly on point will generally be taken to supersede OLC's work, and always if it is from the Supreme Court. OLC's opinions are also subject to "reversal" by the President or the Attorney General. n70 Such reversals are rare, however. As a formal matter, Dawn Johnsen has argued that "the President or attorney general could lawfully override OLC only pursuant to a good faith determination that OLC erred in its legal analysis. The President would violate his constitutional obligation if he were to reject OLC's advice solely on policy grounds." n71 Solely is a key word here, especially for the President. Although his oath of office obliges him to uphold the Constitution, n72 it is not obvious he would violate that oath by pursuing policies that he thinks are plausibly constitutional even if he has not concluded they fit his best view of the law. It is not clear, in other words, that the President's oath commits him to seeking and adhering to a single best view of the law, as opposed to any reasonable or plausible view held in good faith. Yet even assuming the President has some space here, it is hard to see how his oath permits him to reject OLC's advice solely on policy grounds if he concludes that doing so is indefensible as a legal matter. n73 So the President needs at least a plausible legal basis for  [\*1467]  disagreeing with OLC's advice, which itself would likely require some other source of legal advice for him to rely upon.

The White House Counsel's Office might seem like an obvious candidate. But despite recent speculation that the size of that office during the Obama Administration might reflect an intention to use it in this fashion, n74 it continues to be virtually unheard of for the White House to reverse OLC's legal analysis. For one thing, even a deeply staffed White House Counsel's Office typically does not have the time to perform the kind of research and analysis necessary to produce a credible basis for reversing an OLC opinion. n75 For another, as with attempts to rely in the first place on in-house advice in lieu of OLC, any reversal of OLC by the White House Counsel is likely to be viewed with great skepticism by outside observers. If, for example, a congressional committee demands to know why the Executive Branch thinks a particular program is lawful, a response that relies on the conclusions of the White House Counsel is unlikely to suffice if the committee knows that OLC had earlier concluded otherwise. Rightly or wrongly, the White House Counsel's analysis is likely to be treated as an exercise of political will, not dispassionate legal analysis. Put another way, the same reasons that lead the White House to seek OLC's legal advice in the first place - its reputation for  [\*1468]  providing candid, independent legal advice based on its best view of the law - make an outright reversal highly unlikely. n76

Of course, the White House Counsel's Office may well be in frequent contact with OLC on an issue OLC has been asked to analyze, and in many cases is likely to make it abundantly clear what outcome the White House prefers. n77 But that is a matter of presenting arguments to OLC in support of a particular position, not discarding OLC's conclusion when it comes out the other way. n78The White House is not just any other client, and so the nature of - and risks posed by - communications between it and OLC on issues OLC is analyzing deserve special attention. I take that up in Part III. n79 My point at this stage is simply that the prospect of literal reversal by the White House is remote and does not meaningfully threaten the effective bindingness of OLC's decisions.

**Treaties**

**Judicial involvement in war power authority debates turns and escalates every impact**

**POSNER & VERMEULE 07 \*Professor of Law at the University of Chicago Law School. \*\*Professor of Law at Harvard** [Eric A. Posner & Adrian Vermeule, Terror in the Balance: Security, Liberty, and the Courts, Oxford University Press] page 17-18

Whatever the doctrinal formulation, the basic distinction between the two views is that our view counsels courts to provide high deference during emergencies, as courts have actually done, whereas the civil libertarian view does not. During normal times, the deferential view and the civil libertarian view permit the same kinds of executive action, and during war or other emergencies, the deferential view permits more kinds of executive action than the civil libertarian view does. We assume that courts have historically provided extra deference during an emergency or war because they believe that deference enables the government, especially the executive, to act quickly and decisively. Although deference also permits the government to violate rights, violations that are intolerable during normal times become tolerable when the stakes are higher. Civil libertarians, on the other hand, claim either that government action is likely to be worse during emergencies than during normal times, or at least that no extra deference should be afforded to government decisionmaking in times of emergency-and that therefore the deferential position that judges have historically taken in emergencies is a mistake.

The deferential view does not rest on a conceptual claim; it rests on a claim about relative institutional competence and about the comparative statics of governmental and judicial performance across emergencies and normal times. In emergencies, the ordinary life of the nation, and the bureaucratic and legal routines that have been developed in ordinary times, are disrupted. In the case of wars, including the "war on terror," the government and the public are not aware of a threat to national security at time 0. At time 1, an invasion or declaration of war by a foreign power reveals the existence of the threat and may at the same time cause substantial losses. At time 2, an emergency response is undertaken.

Several characteristics of the emergency are worthy of note. First, the threat reduces the social pie-both immediately, to the extent that it is manifested in an attack, and prospectively, to the extent that it reveals that the threatened nation will incur further damage unless it takes costly defensive measures. Second, the defensive measures can be more or less effective. Ideally, the government chooses the least costly means of defusing the threat; typically, this will be some combination of military engagement overseas, increased intelligence gathering, and enhanced policing at home. Third, the defensive measures must be taken quickly, and-because every national threat is unique, unlike ordinary crime-the defensive measures will be extremely hard to evaluate. There are standard ways of preventing and investigating street crime, spouse abuse, child pornography, and the like; and within a range, these ways are constant across jurisdictions and even nation-states. Thus, there is always a template that one can use to evaluate ordinary policing. By contrast, emergency threats vary in their type and magnitude and across jurisdictions, depending heavily on the geopolitical position of the state in question. **Thus, there is no general template that can be used for evaluating the government's response**.

In emergencies, then, judges are at sea, even more so than are executive officials. The novelty of the threats and of the necessary responses makes judicial routines and evolved legal rules seem inapposite, even **obstructive**. There is a premium on the executive's capacities for swift, vigorous, and secretive action. Of course, the judges know that executive action may rest on irrational assumptions, or bad motivations, or may otherwise be misguided. But this knowledge is largely useless to the judges, because they cannot sort good executive action from bad, and they know that **the delay** produced by judicial review **is costly in itself.** In emergencies, the judges have no sensible alternative but to defer heavily to executive action, and the judges know this.

**Effective fast response and mission planning is key to deterring every conflict globally**

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We live at a time when wars not only rage in nearly every region but threaten to erupt in many places where the current relative calm is tenuous. To view this as a strategic military challenge for the United States is not to espouse a specific theory of America’s role in the world or a certain political philosophy. Such an assessment flows directly from the basic bipartisan view of American foreign policy makers since World War II that overseas threats must be countered before they can directly threaten this country’s shores, that the basic stability of the international system is essential to American peace and prosperity, and that no country besides the United States is in a position to lead the way in countering major challenges to the global order. Let us highlight the threats and their consequences with a few concrete examples, emphasizing those that involve key strategic regions of the world such as the Persian Gulf and East Asia, or key potential threats to American security, such as the spread of nuclear weapons and the strengthening of the global Al Qaeda/jihadist movement. The Iranian government has rejected a series of international demands to halt its efforts at enriching uranium and submit to international inspections. What will happen if the US—or Israeli—government becomes convinced that Tehran is on the verge of fielding a nuclear weapon? North Korea, of course, has already done so, and the ripple effects are beginning to spread. Japan’s recent election to supreme power of a leader who has promised to rewrite that country’s constitution to support increased armed forces—and, possibly, even nuclear weapons— may well alter the delicate balance of fear in Northeast Asia fundamentally and rapidly. Also, in the background, at least for now, Sino Taiwanese tensions continue to flare, as do tensions between India and Pakistan, Pakistan and Afghanistan, Venezuela and the United States, and so on. Meanwhile, the world’s nonintervention in Darfur troubles consciences from Europe to America’s Bible Belt to its bastions of liberalism, yet with no serious international forces on offer, the bloodletting will probably, tragically, continue unabated. And as bad as things are in Iraq today, they could get worse. What would happen if the key Shiite figure, Ali al Sistani, were to die? If another major attack on the scale of the Golden Mosque bombing hit either side (or, perhaps, both sides at the same time)? Such deterioration might convince many Americans that the war there truly was lost—but the costs of reaching such a conclusion would be enormous. Afghanistan is somewhat more stable for the moment, although a major Taliban offensive appears to be in the offing.

Sound US grand strategy must proceed from the recognition that, over the next few years and decades, **the world is going to be a very unsettled and quite dangerous place**, with Al Qaeda and its associated groups as a subset of a much larger set of worries. The only serious response to this international environment is to develop armed forces capable of protecting America’s vital interests throughout this dangerous time. **Doing so requires a military capable of a wide range of missions**—including not only deterrence of great power conflict in dealing with potential hotspots in Korea, the Taiwan Strait, and the Persian Gulf but also associated with a variety of Special Forces activities and stabilization operations. For today’s US military, which already excels at high technology and is increasingly focused on re-learning the lost art of counterinsurgency, this is first and foremost a question of finding the resources to field a large-enough standing Army and Marine Corps to handle personnel intensive missions such as the ones now under way in Iraq and Afghanistan. Let us hope there will be no such large-scale missions for a while. But preparing for the possibility, while doing whatever we can at this late hour to relieve the pressure on our soldiers and Marines in ongoing operations, is prudent. At worst, the only potential downside to a major program to strengthen the military is the possibility of spending a bit too much money. Recent history shows no link between having a larger military and its overuse; indeed, Ronald Reagan’s time in office was characterized by higher defense budgets and yet much less use of the military, an outcome for which we can hope in the coming years, but hardly guarantee. While the authors disagree between ourselves about proper increases in the size and cost of the military (with O’Hanlon preferring to hold defense to roughly 4 percent of GDP and seeing ground forces increase by a total of perhaps 100,000, and Kagan willing to devote at least 5 percent of GDP to defense as in the Reagan years and increase the Army by at least 250,000), we agree on the need to start expanding ground force capabilities by at least 25,000 a year immediately. Such a measure is not only prudent, it is also badly overdue.

**No modeling**

**Law & Versteeg 12**—Professor of Comparative Constitutional Law @ Washington University & Professor of Comparative Constitutional Law @ University of Virginia [David S. Law & Mila Versteeg, “The Declining Influence of the United States Constitution,” New York University Law Review, Vol. 87, 2012

The appeal of American constitutionalism as a model for other countries appears to be waning in more ways than one. Scholarly attention has thus far focused on global judicial practice: There is a growing sense, backed by more than purely anecdotal observation, that **foreign courts cite** the constitutional jurisprudence of the U.S. Supreme Court less frequently than before.267 But the behavior of those who draft and revise actual constitutions exhibits a similar pattern. Our **empirical analysis** shows that the content of the U.S. Constitution is¶ becoming increasingly atypical by global standards. Over the last three decades, other countries have become **less likely to model** the rights-related provisions of¶ their own constitutions upon those found in the Constitution. Meanwhile, global adoption of key structural features of the Constitution, such as federalism, presidentialism, and a decentralized model of judicial review, is at best stable and at worst declining. In sum, rather than leading the way for global¶ constitutionalism, the U.S. Constitution appears instead to be losing its appeal as¶ a model for constitutional drafters elsewhere. The idea of adopting a constitution may still trace its inspiration to the United States, but the manner in which constitutions are written increasingly does not.

If the U.S. Constitution is indeed losing popularity as a model for other countries, what—or who—is to blame? At this point, one can only speculate as to the actual causes of this decline, but four possible hypotheses suggest themselves: (1) the advent of a superior or more attractive competitor; (2) a general decline in American hegemony; (3) judicial parochialism; (4) constitutional obsolescence; and (5) a creed of American exceptionalism.

With respect to the first hypothesis, there is little indication that the U.S. Constitution has been displaced by any specific competitor. Instead, the notion that a particular constitution can serve as a dominant model for other countries may itself be obsolete. There is an increasingly clear and broad consensus on the types of rights that a constitution should include, to the point that one can articulate the content of a generic bill of rights with considerable precision.269 Yet it is difficult to pinpoint a specific constitution—or regional or international human rights instrument—that is clearly the driving force behind this emerging paradigm. We find only limited evidence that global constitutionalism is following the lead of either newer national constitutions that are often cited as influential, such as those of Canada and South Africa, or leading international and regional human rights instruments such as the Universal Declaration of Human Rights and the European Convention on Human Rights. Although Canada in particular does appear to exercise a quantifiable degree of constitutional influence or leadership, that influence is not uniform and global but more likely reflects the emergence and evolution of a shared practice of constitutionalism among common law countries.270 Our findings suggest instead that the development of global constitutionalism is a polycentric and multipolar¶ process that is not dominated by any particular country.271 The result might be likened to a global language of constitutional rights, but one that has been collectively forged rather than modeled upon a specific constitution.

Another possibility is that America’s capacity for constitutional leadership is at least partly a **function of American “soft power**” more generally.272 It is reasonable to suspect that the overall influence and appeal of the United States and its institutions have a powerful spillover effect into the constitutional arena. The popularity of American culture, the prestige of American universities, and the efficacy of American diplomacy can all be expected to affect the appeal of American constitutionalism, and vice versa. All are elements of an overall American brand, and the strength of that brand helps to determine the strength of each of its elements. Thus, any erosion of the American brand may also diminish the appeal of the Constitution for reasons that have little or nothing to do with the Constitution itself. Likewise, a decline in American constitutional influence of the type documented in this Article is potentially indicative of a broader decline in American soft power.

There are also factors specific to American constitutionalism that may be¶ reducing its appeal to foreign audiences. Critics suggest that the Supreme Court has **undermined the global appeal of its own jurisprudence by failing to acknowledge the relevant intellectual contributions of foreign courts** on questions of common concern,273 and by pursuing interpretive approaches that lack acceptance elsewhere.274 On this view, the Court may bear some responsibility for the declining influence of not only its own jurisprudence, but also the actual U.S. Constitution: one might argue that the Court’s approach to constitutional issues has undermined the appeal of American constitutionalism more generally, to the point that other countries have become unwilling to look either to American constitutional jurisprudence or to the U.S. Constitution itself for inspiration.275

It is equally plausible, however, that responsibility for the declining appeal of American constitutionalism lies with the idiosyncrasies of the Constitution itself rather than the proclivities of the Supreme Court. As the oldest formal constitution still in force, and one of the most rarely amended constitutions in the world,276 the U.S. Constitution contains relatively few of the rights that have become popular in recent decades,277 while some of the provisions that it does contain may appear increasingly problematic, unnecessary, or even undesirable with the benefit of two hundred years of hindsight.278 It should therefore come as little surprise if the U.S. Constitution¶ strikes those in other countries–or, indeed, members of the U.S. Supreme Court279–as **out of date and out of line with global practice**.280 Moreover, even if the Court were committed to interpreting the Constitution in tune with global fashion, it would still lack the power to update the actual text of the document.

Indeed, efforts by the Court to update the Constitution via interpretation may actually reduce the likelihood of formal amendment by rendering such amendment unnecessary as a practical matter.281 As a result, there is only so much that the U.S. Supreme Court can do to make the U.S. Constitution an¶ attractive formal template for other countries. The obsolescence of the Constitution, in turn, may undermine the appeal of American constitutional jurisprudence: foreign courts have **little reason to follow the Supreme Court**’s lead on constitutional issues if the Supreme Court is saddled with the interpretation of an unusual and obsolete constitution.282 No amount of ingenuity or solicitude for foreign law on the part of the Court can entirely divert attention from the fact that the Constitution itself is an increasingly atypical document.

One way to put a more positive spin upon the U.S. Constitution’s status as a global outlier is to emphasize its role in articulating and defining what is unique about American national identity. Many scholars have opined that formal constitutions serve an expressive function as statements of national identity.283 This view finds little support in our own empirical findings, which suggest instead that constitutions tend to contain relatively standardized packages of rights.284 Nevertheless, to the extent that constitutions do serve such a function, the distinctiveness of the U.S. Constitution may simply reflect the uniqueness of America’s national identity. In this vein, various scholars have argued that the U.S. Constitution lies at the very heart of an “American creed of exceptionalism,” which combines a belief that the United States occupies a unique position in the world with a commitment to the qualities that set the United States apart from other countries.285 From this perspective, the Supreme Court’s reluctance to make use of foreign and international law in constitutional cases amounts not to parochialism, but rather to respect for the exceptional character of the nation and its constitution.286

Unfortunately, it is clear that the reasons for the declining influence of American constitutionalism cannot be reduced to anything as simple or attractive as a longstanding American creed of exceptionalism. Historically, American exceptionalism has not prevented other countries from following the example set by American constitutionalism. The global turn away from the American model is a relatively recent development that postdates the Cold War. If the U.S. Constitution does in fact capture something profoundly unique about the United States, it has surely been doing so for longer than the last thirty years. A complete explanation of the declining influence of American constitutionalism in other countries must instead be sought in more recent history, such as the wave of constitution-making that followed the end of the Cold War.287 During this period, America’s newfound position as lone superpower might have been expected to create opportunities for the spread of American constitutionalism. But this did not come to pass.

Once global constitutionalism is understood as the product of a polycentric evolutionary process, it is not difficult to see why the U.S. Constitution is playing an **increasingly peripheral** role in that process. No evolutionary process favors a specimen that is frozen in time. At least some of the responsibility for the declining global appeal of American constitutionalism lies not with the Supreme Court, or with a broader penchant for exceptionalism, but rather with the static character of the Constitution itself. If the United States were to revise the Bill of Rights today—with the benefit of over two centuries of experience, and in a manner that addresses contemporary challenges while remaining faithful to the nation’s best traditions—there is no guarantee that other countries would follow its lead. But the world would surely pay close attention. Pg. 78-83

**No impact**

* Cooper says founders didn’t want to go to war
* They don’t acces Mueller – doesn’t say norms are reversible

**Treaties serve bureaucracy not interests of the state—crushes any benefit**

**Drezner 1** [Daniel W., Assistant Professor of Political Science, University of Chicago, \*Advised by Jack Goldsmith, “ARTICLE AND RESPONSE: On the Balance Between International Law and Democratic Sovereignty,” Chicago Journal of International Law, 2 Chi. J. Int'l L. 321]

Perhaps the most pernicious effect of recent trends in international law is the proliferation of international and national bureaucracies. When the United States fashions a new international organization as a vehicle for advancing new rules and regulations, that institution persists. International organizations rarely die, even if and when they outlive their utility. This is particularly true for those organizations with secretariats and physical assets under their control. One observer notes, "The [\*335] UN Charter's slogan of 'we the people of the world' still only thinly disguises a reality of 'we the bureaucrats the world.'" 44 The result is, at best, a lot of bureaucratic deadwood on the international stage, draining countries of resources, time, and patience. At worst, these organizations become well-connected advocacy groups with little to no accountability to anyone, expecting to be treated like states. The result is a situation where a significant share of an international organization's membership is made up of other international organizations. For example, 35 percent of the Financial Stability Forum's membership consists of other international institutions, groupings, and committees. Furthermore, regulatory coordination often leads to the creation of new bureaucracies at the national level in order to implement multilateral agreements. 45 A certain degree of regulation is necessary for any economy, but the recent wave of international law lets a thousand regulatory agencies bloom. The deleterious effects of such bureaucratic proliferation for a democratic society are legion, and have been discussed elsewhere. 46 And as difficult as it is to shut down international organizations, eliminating established national bureaucracies is next to impossible.

**Norms are irrelevant**

**Forsyth and Griffith, ‘7** [James Wood Forsyth Jr, PhD, professor of national security studies and department chair, Strategy and Leadership, Air Command and Staff College, Maxwell Air force Base. Col Thomas E. Griffith Jr., USAf, is the dean of faculty and academic programs at the National War College. “Through the Glass Darkly The Unlikely Demise of Great-Power War”. Strategic Studies  Quarterly, Fall 2007. <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA509123>]

Essentially, the argument about norms is an argument about power and the role it plays in international life. Edward Hallet Carr observed, “While politics cannot be satisfactorily defined in terms of power, it is safe to say that power is always an essential element of politics.” 45 Thus, when states seek to cooperate with one another on issues like postal or transport services, they are working what can be called “nonpolitical” or “technical” issues. When, however, an issue arises which involves, or is thought to involve, the power of one state over another, the matter becomes political. In a very real way, those who advocate the importance of norms downplay the importance of power. for norms to play the determining role in international politics would require a politics devoid of power. That is never the case. **All politics,** as Carr argued beautifully in The Twenty Years’ Crisis, **are power politics.** Nonetheless, those who argue for the importance of norms to stop war often use the analogy of the disappearance of slavery because it became normatively wrong. This argument, however, ignores the fact that slavery, at least within the United States, did not go away because it became normatively prohibited. Instead, it was smashed by a war that was as brutal as anything we have to compare it to. In effect, slavery went the way of other heinous political movements like Nazism. It was drawn and quartered by a liberating army that was led by an idiosyncratic general who risked the lives of his troops by marching them deep into enemy territory in order to right a wrong. This phenomenon has been described as war and moral statecraft, and it just might be the long-lasting legacy of democratic armies on the march. 46 Thus, contrary to those who argue that war serves no moral purpose, great-power war can and often does serve moral ends. The world would be a very different place had the Confederates or the Nazis won. 47 Moreover, norms offer no guarantees. Indeed, the analogy of slavery having become a norm that is observed rests on a selective and narrow view of the issue. Indeed, slavery still exists in the world today, as noted by the United States Department of State in its annual Trafficking in Persons Report to Congress: “This Report is intended to raise global awareness and spur foreign governments to take effective actions to counter all forms of trafficking in persons—a form of modern day slavery.” 48 Certainly the idea of owning human chattel has acquired, at least in many countries, an opprobrium that was not the case 200 years ago. Yet, this norm has to be enforced through laws and the actions of people who will enforce those laws. This last point strikes at the heart of a two-pronged problem with norms. As long as the world is made up primarily, though not exclusively, of states, where there is no world government to protect citizens from the evil intentions of others, states and statesmen must be on their guard. Clearly, the possibility for evil exists, and it is tragic that we needed the events of September 11 to remind us of this fact. Indeed, the number of tyrannical leaders throughout history is striking. Men like Attila, Alexander, Caesar, Napoléon, and Hitler had one thing in common: they were intent on dominating others. This leads to the conclusion that war among the great powers is not unimaginable. Indeed, the most pressing strategic concern for the United States today is to figure out how it will live in a world where three or more great powers—one of which might be ruled by someone seeking to enslave or destroy us all—compete for influence in the international system.

**US adherence to treaties does not bind other nations to international norms**

**Posner 3** [Eric A., Federal Circuit Court Judge, Kirkland & Ellis Professor of Law, University of Chicago, Matthew Adler, Brian Bix, Jack Goldsmith, David Golove, Michael Moore, David Strauss, Ed Swaine, Adrian Vermeule, Alex Wendt, The Sarah Scaife Foundation Fund, and The Lynde and Harry Bradley Foundation Fund, Do States Have a Moral Obligation to Obey International Law?, The Board of Trustees of Leland Stanford Junior University, Stanford Law Review, 55 Stan. L. Rev. 1901]

We thus expect that states would violate legal obligations more often than individuals do. International law scholars like to say that states almost always obey the law. 28 Franck even argues that international law prevents states from shooting down civilian airliners - the Soviet Union's destruction of Korean Airlines flight 007 only shows how frequently it and other states respect the law. 29 But states would gain nothing by shooting down civilian airplanes. The most plausible reason why states do not violate international law more often than they do is that the law is so **exceedingly weak** - the rules are **vague**, states can **withdraw** from treaties, and so forth - and when the law is not weak, states **frequently violate it**. 30 Imagine a society where there are only a few, weak laws that already reflect people's interests - you must eat at least once every day, you must wear clothes on cold days. The observation that people in this society frequently obey the law is of **little value**. Perhaps, they have an obligation to obey their own laws, but if we know that they would violate laws that impose significant costs - tax laws, for example - then their obligations would extend **only to the weak laws** that are generally respected and not the strong laws that are routinely flouted. International law scholars confuse two separate ideas: (1) a moral obligation on the part of states to promote the good of all individuals in the world, regardless of their citizenship; and (2) a moral obligation to comply with international law. The two are not the same; indeed, they are in tension as long as governments focus their efforts on helping their own citizens (or their own [\*1915] supporters or officers). If all states did have the first obligation (which is an attractive but utopian idea), and they did comply with that obligation, then they would agree to treaties that implement, and engage in customary practices that reflect, the world good; and then they might have an obligation to comply with international law in the same rough sense that individuals have an obligation to comply with laws issued by a good government, or most of them. But this is not our world. In our world, we cannot say that if a particular state complies with international law - regardless of the normative value of the law, and regardless of what other states do, and maybe regardless of the interests of its own citizens, and so forth - or even treated compliance as a presumptive duty, the world would be a better place. 31 It should be clear by now that my argument is confined to the existing international system, where powerful states have more influence than weak states and **compliance is rare**. I do not argue that there is no alternative international system that could generate moral obligations on the part of individuals or states. Indeed, one interpretation of international-law scholarship, and perhaps some veins of political-science scholarship, is that states should comply with international law because doing so would create a culture of international legality, one in which international cooperation would flourish. If states entered into more treaties with stronger and more precise obligations; if they yielded more of their sovereignty to international organizations; if they submitted to multilateral rather than bilateral obligations; and if they relied on better and more transparent international decisionmaking procedures; then international law would be stronger as well as better, and compliance would be deeper and more uniform. I do not have the space to discuss this larger project, but it is worth noting because so much criticism these days is directed at the United States for not entering treaties (like the International Criminal Court treaty) or for (legally) withdrawing from treaties (like the Anti-Ballistic Missile treaty), rather than for violating treaties. It needs to be understood that the assumption that respect for international law, whether in the sense of complying with it or in the sense of creating more of it, will create a culture of international legality does not have [\*1916] any **empirical support**. A government that takes its responsibility to be that of protecting the national interest, and even one that cares about the well-being of citizens in other nations, would be **ill advised to comply** with laws that do neither in the hope that the compliance by itself would help create a culture of international legality.

**Warming**

**Turn – Climate leadership leads to emissions cuts**

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As leaders in Washington obsess about the fiscal cliff, President Barack Obama is putting in place the building blocks for a climate treaty requiring the first fossil- fuel emissions cuts from both the U.S. and China. State Department envoy Todd Stern is in Doha this week working to clear the path for an international agreement by 2015. While Obama failed to deliver on his promise to start a cap-and-trade program in his first term, he’s working on policies that may help cut greenhouse gases 17 percent in 2020 in the U.S., historically the world’s biggest polluter. Obama has moved forward with greenhouse-gas rules for vehicles and new power plants, appliance standards and investment in low-emitting energy sources. He’s also called for 80 percent of U.S. electricity to come from clean energy sources, including nuclear and natural gas, by 2035. “The president is laying the foundations for real action on climate change,” Jake Schmidt, who follows international climate policy for the Washington-based Natural Resources Defense Council, said in an interview in Doha. “Whether or not he decides to jump feet first into the international arena, we’ll see.” Envoys from more than 190 nations are entering their second week of talks today at the United Nations conference working toward a global warming treaty. Their ambition is to agree to a pact in 2015 that would take force in 2020. It would supersede limits on emissions for industrial nations under the Kyoto Protocol, which the U.S. never ratified. Quiet Effort Obama’s push is being pursued without fanfare as the administration and Congress grapple to avert a budget crisis and $607 billion in automatic spending cuts. Unlike 2009, when Obama failed to prevent the collapse of climate talks in Copenhagen, the U.S. can point to more concrete actions it’s taking in the fight global warming. He has more ammunition at hand. The Environmental Protection Agency is required under the Clean Air Act to move ahead with regulations on emissions from existing power plants. Those are responsible for about a third of U.S. emissions, the largest chunk. Measures such as those, along with continued low natural gas prices and state actions, can cut emissions 16.3 percent by 2020, Resources for the Future, a research firm, estimates. Emissions already are down 8.8 percent from 2005 levels, according to Jonathan Pershing, a State Department negotiator in Doha. `Stronger Position' “The U.S. is in a much stronger position going into the Doha talks despite failure of Congress to pass comprehensive climate legislation,” said Trevor Houser, a former U.S. climate negotiator who served during the Copenhagen meeting. “For countries like China that were able to hide behind a perception of U.S. inaction, the fact that U.S. emissions are falling helps increase pressure. It takes away the excuse that action is stalled because of the U.S.”

**That causes protectionism and violates the WTO**

**Rivkin 09** [Attorney David B. Rivkin, Jr., has studied the U.S. Constitution and related historical documents with

scholarly rigor, and has authored critical commentary on critical constitutional issues of our day. In private practice and partner at Baker Hostetler in Washington, D.C., Mr. Rivkin has had a lengthy career distinguished by service under Presidents Ronald Reagan and George H. W. Bush, in the U.S. Department of Justice, and in the U.S. Department of Energy. He is a well-known writer and media commentator on matters of constitutional and international law, as well as foreign and defense policy. He is a Visiting Fellow at the Nixon Center, Contributing Editor at the National Review, and a member of the Advisory Council at The National Interest magazine. He currently serves as Co-Chairman of the Center for Law and Counterterrorism at the Foundation for Defense of Democracies. He previously served on the United Nations Commission on Human Rights. A trusted representative of conservative viewpoints, he frequently testifies before the Senate Judiciary Committee and other Congressional committees. On July 30, 2009, Mr. Rivkin testified as a minority party witness in the confirmation hearings of Supreme Court Justice nominee Sonia Sotomayor. He had previously testified on June 9, 2009, before the Senate Judiciary Committee's Subcommittee on the Constitution regarding "The Legal, Moral, and National Security Consequences of 'Prolonged Detention.'" His extensive legal opinion articles and commentary include more than 350 articles and numerous guest appearances on radio, and network and cable televisions programs, such as CNN, NPR, BBC, Fox News, NBC, ABC, CBS, Al Jazeera, and The Laura Ingraham Show. Mr. Rivkin's editorial contributions include constitutional law, international law, defense and national security, intelligence, foreign policy, energy policy, and healthcare reform. He develops his positions on critical public and legal matters not from political ideology, but from a reasoned interpretation of the U.S. constitution, legislation, judicial rulings, and legal opinions.] David's Senate Committee Testimony on Climate Change Thursday, 30 July 2009 17:26 Senate Committee on the Environment and Public Works Hearings On Climate Change and National Security July 30, 2009 http://davidrivkin.com/index.php?option=com\_content&view=article&id=50

D. Attempting To Enforce GHG Emissions Reductions Through Trade Penalties Would Be Highly Problematic. Having made it all but impossible to obtain a comprehensive GHG emissions limitation treaty by trading concessions with other governments, advocates of the unilateral cap-and-trade approach must rely on either the moral example of the United States imposing emission limits on itself, or on the threat or use of trade penalties, to induce other countries to reduce their emissions. These strategies are unlikely to work. The moral example of U.S. abstention from GHG emissions will have little impact on foreign leaders who must worry about feeding their populations. The leaders of more developed societies “particularly in Europe“ have long been able to call for U.S. reduction of GHG emissions secure in the knowledge that the prior Administration of President George W. Bush was unlikely to take any action in the area. It is an open question whether Europe's enthusiasm for emissions reductions will persist once, as is likely, the moral example of Waxman-Markey proves, in fact, to be a cautionary one. Trade penalties are similarly unlikely to be a very effective tool in this context, for a number of reasons. First, carbon tariffs are very likely illegal under WTO rules. Numerous countries, as well as senior U.N. officials, have already denounced the possibility of carbon tariffs as a violation of WTO principles. See Dina Capiello, U.N. Climate Expert Warns Against Carbon Tariffs, The Washington Post (July 22, 2009).[7] They will be able to make a strong argument that a carbon tariff is trade protectionism in the disguise of environmental protection. See Remarks by Yao Jian, Spokesman for Ministry of Commerce of People's Republic of China, reported in Alan Beatie & Kathrin Hille, China joins carbon tax protest, The Financial Times (July 3, 2009).[8] This argument draws strength from the popularity of the Waxman-Markey bill among protectionist labor groups.Â Whether illegal under the WTO or not, it is a certainty that carbon tariffs would be challenged “repeatedly and acrimoniously“ before the WTO Dispute Resolution System. Climate-based protectionism would carry with it all the negative consequences of other forms of protectionism. If the United States puts carbon tariffs in place, other countries will likely retaliate. Protectionism pries countries apart. It widens oceans, divides friends and pushes rivals further apart. Trade would be impaired just as the world economy is struggling to recover from the worst downturn since the Great Depression (which was itself largely caused by retaliatory tariffs). Attempts to pressure other countries into reducing emissions through tariffs will also complicate relations with countries from whom the United States needs help on a range of issues, many of which have little to do with the environment. If, for example, the United States is shackled by a unilateral cap-and-trade scheme, its foreign policy will increasingly be dominated by a desperate need to get India, China, and others to commit to emissions reductions, lest U.S. competitiveness be entirely lost. This will put the U.S. in a far worse position vis-a-vis such countries with regard to extracting cooperation on counterterrorism, counter-proliferation programs, human rights, and a legion of other concerns. In other words, it can be argued that Waxman-Markey drives the U.S. to adopt a demanding and confrontational strategy, even while greatly reducing the leverage that would be available to the U.S. in dealing with other major emitters.

**The impact is trade war**

**Panzner 08** – faculty at the New York Institute of Finance, 25-year veteran of the global stock, bond, and currency markets who has worked in New York and London for HSBC, Soros Funds, ABN Amro, Dresdner Bank, and JPMorgan Chase (Michael, “Financial Armageddon: Protect Your Future from Economic Collapse,” p. 136-138)

Continuing calls for curbs on the flow of finance and trade will inspire the United States and other nations to spew forth protectionist legislation like the notorious Smoot-Hawley bill. Introduced at the start of the Great Depression, it triggered a series of tit-for-tat economic responses, which many commentators believe helped turn a serious economic downturn into a prolonged and devastating global disaster. But if history is any guide, those lessons will have been long forgotten during the next collapse. Eventually, fed by a mood of desperation and growing public anger, restrictions on trade, finance, investment, and immigration will almost certainly intensify. Authorities and ordinary citizens will likely scrutinize the cross-border movement of Americans and outsiders alike, and lawmakers may even call for a general crackdown on nonessential travel. Meanwhile, many nations will make transporting or sending funds to other countries exceedingly difficult. As desperate officials try to limit the fallout from decades of ill-conceived, corrupt, and reckless policies, they will introduce controls on foreign exchange. Foreign individuals and companies seeking to acquire certain American infrastructure assets, or trying to buy property and other assets on the cheap thanks to a rapidly depreciating dollar, will be stymied by limits on investment by noncitizens. Those efforts will cause spasms to ripple across economies and markets, disrupting global payment, settlement, and clearing mechanisms. All of this will, of course, continue to undermine business confidence and consumer spending. In a world of lockouts and lockdowns, any link that transmits systemic financial pressures across markets through arbitrage or portfolio-based risk management, or that allows diseases to be easily spread from one country to the next by tourists and wildlife, or that otherwise facilitates unwelcome exchanges of any kind will be viewed with suspicion and dealt with accordingly. The rise in isolationism and protectionism will bring about ever more heated arguments and dangerous confrontations over shared sources of oil, gas, and other key commodities as well as factors of production that must, out of necessity, be acquired from less-than-friendly nations. Whether involving raw materials used in strategic industries or basic necessities such as food, water, and energy, efforts to secure adequate supplies will take increasing precedence in a world where demand seems constantly out of kilter with supply. Disputes over the misuse, overuse, and pollution of the environment and natural resources will become more commonplace. Around the world, such tensions will give rise to **full-scale military encounters,** often with minimal provocation. In some instances, economic conditions will serve as a convenient pretext for conflicts that stem from cultural and religious differences. Alternatively, nations may look to divert attention away from domestic problems by channeling frustration and populist sentiment toward other countries and cultures. Enabled by cheap technology and the waning threat of American retribution, terrorist groups will likely boost the frequency and scale of their horrifying attacks, bringing the threat of random violence to a whole new level. Turbulent conditions will encourage aggressive saber rattling and interdictions by rogue nations running amok. Age-old clashes will also take on a new, more heated sense of urgency. China will likely assume an increasingly belligerent posture toward Taiwan, while Iran may embark on overt colonization of its neighbors in the Mideast. Israel, for its part, may look to draw a dwindling list of allies from around the world into a growing number of conflicts. Some observers, like John Mearsheimer, a political scientist at the University of Chicago, have even speculated that an “intense confrontation” between the United States and China is “inevitable” at some point. More than a few disputes will turn out to be almost wholly ideological. Growing cultural and religious differences will be transformed from wars of words to battles **soaked in blood**. Long-simmering resentments could also degenerate quickly, spurring the basest of human instincts and triggering genocidal acts. Terrorists employing biological or nuclear weapons will vie with conventional forces using jets, cruise missiles, and bunker-busting bombs to cause widespread destruction. Many will interpret stepped-up conflicts between Muslims and Western societies as the beginnings of a new world war.

**1NC ozone**

No intnerlal ink to ozone – Montreal protocol proves consensus exists – US legitimacy isn’t necessary to convince other states

**No impact – expected to fully recover in the next 30 years**

**Reynolds and Dixon 10** [Mark and Sara, “HOORAY, THE **OZONE LAYER** IS SAFE,” 9-21, Lexis]

It is on the mend and skin cancer will be cut

LEADING scientists say the ozone layer is starting to repair itself and will eventually give us much greater protection from skin cancer.

They say that phasing out almost 100 substances once used in such products as refrigerators and aerosols has stopped the layer from further depletion.

Ozone in the stratosphere is important because it absorbs most of the sun's dangerous ultraviolet radiation, which can lead to skin cancer and eye damage. Although it is not yet increasing again, the ozone layer outside the polar regions is, by the year 2048, expected to recover to the levels it was at 30 years ago.

The United Nations report, Scientific Assessment Of Ozone Depletion 2010, paints a much more optimistic picture than previous assessments and is the first comprehensive update in four years.

It argues that action taken through the Montreal Protocol, which began in 1987 and has introduced the reduction of harmful emissions, has helped to halt the damage.

**Not rapidly disappearing – new losses are due to substances that have been banned**

**States News Service 11** [“MYSTERIES OF OZONE DEPLETION CONTINUE 25 YEARS AFTER THE DISCOVERY OF THE ANTARCTIC OZONE HOLE,” 8-29, Lexis Nexis]

We're no longer producing the primary chemicals chlorofluorocarbons (CFCs) that caused the problem, but CFCs have very long lifetimes in our atmosphere, and so we'll have ozone depletion for several more decades, said Solomon. There are still some remarkable mysteries regarding exactly how these chlorine compounds behave in Antarctica and it's amazing that we still have much to learn, even after studying ozone for so long. Susan Solomon, Ph.D., delivered the Kavli Foundation Lecture at the ACS 242nd National Meeting and Exposition. High-resolution version The ozone layer is crucial to life on Earth, forming a protective shield high in the atmosphere that blocks potentially harmful ultraviolet rays in sunlight. Scientists have known since 1930 that ozone forms and decomposes through chemical processes. The first hints that human activity threatened the ozone layer emerged in the 1970s, and included one warning from Paul Crutzen, Ph.D., that agricultural fertilizers might reduce ozone levels. Another hint was from F. Sherwood Rowland, Ph.D., and Mario Molina, Ph.D., who described how CFCs in aerosol spray cans and other products could destroy the ozone layer. The three shared a 1995 Nobel Prize in Chemistry for that research. In 1985, British scientists discovered a hole, a completely unexpected area of intense ozone depletion over Antarctica. Solomon's 1986 expedition to Antarctica provided some of the clinching evidence that underpinned a global ban on CFCs and certain otherozone-depleting gases. Evidence suggests that the ozone depletion has stopped getting worse. Ozone can be thought of as a patient in remission, but it's too early to declare recovery, said Solomon. And surprises, such as last winter's loss of 40% of the ozone over the Arctic still occur due to the extremely long lifetimes of ozone-destroying substances released years ago before the ban.

**Newest evidence confirms the ozone threat was a sham. Depletion hasn’t occurred and effects have been minimal.**

**Lieberman ‘7** (Ben, Senior Policy Analyst for Energy and Environment – Heritage Foundation, China Post, “MONTREAL PROTOCOL AND OZONE CRISIS THAT WASN'T”, 9-14, L/N)

Environmentalists have made many apocalyptic predictions over the past decades and, when they have not come to pass, have proclaimed that their preventive measures averted disaster -- as with the 1987 Montreal Protocol On Substances That Deplete The Ozone Layer (Montreal Protocol). The many lurid predictions of skin cancer epidemics, eco-system destruction and so on have not come true, and to Montreal Protocol proponents this is cause for self-congratulation. But in retrospect the evidence shows that ozone depletion was an exaggerated threat in the first place and that the parade of horribles never really was in the cards. As the parties to the treaty return to Montreal for their 20th anniversary this week it should be cause for reflection, not celebration, especially for those who see it as a success story to be repeated for climate change. The treaty came about over legitimate but overstated concerns that chlorofluorocarbons (CFCs, then a widely used refrigerant gas) and other compounds were rising to the stratosphere and destroying ozone molecules. These molecules, collectively known as the ozone layer, shield the earth from excessive ultraviolet-B radiation (UVB) from the sun. The 1987 Montreal Protocol led to a CFC ban in most developed nations by 1996, while Developing nations were given an extension but are under pressure to curtail it. So what do we know now? A 1998 World Meteorological Organization (WMO) report said that "since 1991, the linear [depletion] trend observed during the 1980s has not continued, but rather total column ozone has been almost constant ..." This was too soon to be attributable to the Montreal Protocol as that same report noted that the stratospheric concentrations of the offending compounds were still increasing at the time of writing. In fact, they did not begin to decline until the end of the 1990s. This lends credence to the view, widely derided at the time of the Montreal Protocol, that natural variations explain the fluctuations in the global ozone layer more than CFC usage. More importantly, the feared widespread increase in ground-level UVB radiation has also failed to materialize. Keep in mind that ozone depletion, in and of itself, is not of consequence to human health or the environment. It is the concern that an eroded ozone layer would allow more of the sun's damaging UVB rays to reach the earth that gave rise to the Montreal Protocol. But the WMO concedes that no statistically significant long-term trends have been detected, noting earlier this year that "outside the polar regions, ozone depletion has been relatively small, hence, in many places, increases in UV due to this depletion are difficult to separate from the increases caused by other factors, such as changes in cloud and aerosol." In other words, ozone depletion's impact on UVB over populated regions is so small as to be easily lost amidst the noise of background variability. Needless to say, if UVB has not gone up, then the fears are unfounded: indeed, the much hyped acceleration in skin cancer rates has not happened. For example, U.S. National Cancer Institute statistics show that malignant melanoma incidence and mortality, which had shown a long-term increase that pre-dated ozone depletion, had actually been leveling off during the time of the putative ozone crisis. Further, no eco-system or species was ever shown to be seriously harmed by ozone depletion. This is true even in Antarctica, where the largest seasonal ozone losses, the so-called Antarctic ozone hole, occur each year. Also forgotten is a long list of truly ridiculous claims, such as the one from Al Gore's 1992 book Earth in the Balance that, thanks to the Antarctic ozone hole, "hunters now report finding blind rabbits; fishermen catch blind salmon." The Montreal Protocol has not made these problems go away -- they never occurred in the first place.

**Peer reviewed studies confirm.**

**Schein et al ’95** (Oliver MD, Bealriz Mufioz MS, Sheila West PhD, Center for Prevenlive Opthamology – Johns Hopkins U., James Nethercott MD, Dept. Env. Health Science – Johns Hopkins U., Donald Duncan PhD, Applied Physics Laboratory – Johns Hopkins U., Cesar Vicencio MD, Juan Honeyman MD, U. Chile, Kirk Geiatt VMD, Dept. Small Animal Clinical Sciences – U. Florida, Hillel Karen PhD, US EPA Health Effects Research Laboratory, American Journal of Public Health, “Ocular and Dermatologic Health Effects of Ultraviolet Radiation Exposure from the Ozone Hole in Southern Chile”, 85(4), April, p. 549, Ebsco)

The recent expansion of the geographic area covered by the ozone hole over Antarctica has been accompanied by numerous lay reports of UV radiation related disease in humans and animals in the region. However, our pilot project provides no convincing evidence to support the reported acute adverse health effects. No increase in adverse ocular health effects known to be related to acute UV exposure was witnessed by the ophthalmologists practicing in Punta Arenas. More visits to the dermatologist for verrucae were found during time periods associated with increased irradiance, but since no accompanying increase for sunburn, photcidermatoses, or other sentinel diagnoses was documented, these visits were probably not related to increased UV irradiation. Moreover, while verrucae may be linked with a decline in cellmediated immunity,---' they arc usually associated with wet work and arc quite common, tjccurring in 5% to 10% of all persons.-' They also often involute and recur. The 4% to 1 \% frequency of visits for verrucae in a dermatologic patient pt)pulation is, therefore, not striking. The lack of unusual findings in the systematic chart review was further supported by direct ophthalmologic and dermatologic examinations of small sample populations of fishermen, shepherds, and hospital workers (data not shown). The former two populations were selected because of their outdoor occupational exposure, and the third was selected as a control group. No significant differences in (Kular or dermatologic findings were present by occupation. Tinea infeetions were noted in more than 50% of all subjects examined but were most common in the hospital workers, the group least exposed to UV radiation. The animal investigations were also not supportive of the lay reports. Although external ocular disease consistent with C psittaci was found in 69% of the sheep evaluated, the findings were not consistent with blindness, nor is this infectious agent known to be associated with UV exposure. The frequency of nonblinding cataract among sheep ranged from 3% to 24% at the five ranches. Unfortunately, comparison data do not exist from elsewhere in Chile or from other countries to put these findings into perspective. However, no bilateral blinding cataract was found. Our examination occurred soon after the ozone hole appeared, so it is unlikely that animal loss due to death or injury from blindness could explain our findings. The acute effects of UV-B exposure in cattle have been documented in experimental studies of infectious keratoconjunctivitis caused by Mycohacteriiim bovis, an infection not seen in the cattle examined in Chile. UV exposure has been linked to squamous cell carcinoma in Hereford cattle in the United States.'^ In the sample of Hereford cattle examined in Chile, the prevalenee of presumed squamous cell earcinoma was high (5 of 30 animals). However, a larger sample would need to be examined before this rate could be considered reliable. The lack of observed adverse health effects is consistent with our estimation of an excess annual UV-B exposure in the region of 1%. It is also important to assess the absolute level of exposure in the region. Using historical cloud cover data from Punta Arenas, ozone column density measurements from a Brewer MK4 speetroradiometer located in Punta Arenas, and the Green model for estimating UV-B irradianee,-" we estimated an annual exposure in Punta Arenas of approximately 2190 MEDs. This may be compared with the approximately 2500 MEDs estimated for Maryland in 1992.^^ Clearly, the cumulative UV-B exposure in Punta Arenas, even within the context of an ozone hole, is exceeded by that in many temperate climates and is far surpassed by that in tropical locations.

**1NC warming**

**Can’t solve – eliminating every coal plant would only be a POINT 2 degree change**

**RAPIER Chief Technology Officer at Merica 12 Chief Technology Officer at Merica International – a Renewable Energy Company, Master’s in Chemical Engineering from Texas A&M University [Robert Rapier, Study: Eliminating Coal-Fired Power is Worth 0.2 Degrees in 100 Years,** [**http://www.consumerenergyreport.com/2012/03/05/study-eliminating-coal-fired-power-is-worth-0-2-degrees-in-100-years/**](http://www.consumerenergyreport.com/2012/03/05/study-eliminating-coal-fired-power-is-worth-0-2-degrees-in-100-years/)**]**

Who could have dreamed solving climate change would be so easy? A new paper in Environmental Research Letters called “Greenhouse gases, climate change and the transition from coal to low-carbon electricity” concludes that replacement of all of the world’s currently operating coal-fired power plants — which produce about 40% of the world’s electricity — and replacing them with renewable energy would have an impact of **0.2 degrees Celsius 100 years from now**. Cherry-Picking Conclusions According to One’s Viewpoint However, a number of climate change websites took away a very different message than I took away from the paper. Here is Joe Romm’s view: Bombshell: You Can’t Slow Projected Warming With Gas, You Need ‘Rapid and Massive Deployment’ of Zero-Carbon Power I seem to recall another “bombshell” that he recently reported upon on the same theme: Natural Gas Bombshell: Switching From Coal to Gas Increases Warming for Decades, Has Minimal Benefit Even in 2100. I debunked that by showing that in that particular study, every possible alternative — including wind power, solar power, and even simply shutting down all of the coal plants — was projected to increase global warming in the short term: BOMBSHELL: Solar and Wind Power Would Speed Up, Not Reduce, Global Warming. But Joe is back with the hyperbolic titles and exaggerations (which I get into below), and he missed the biggest story in the paper. Coal and Sunlight-Reflecting Pollutants The subject of Romm’s earlier “natural gas bombshell” was a paper written by Tom Wigley that concluded that shutting down coal-fired power plants would cause the global temperature to increase in the short term because of the loss of sunlight-reflecting pollutants. In that particular paper, Dr. Wigley modeled what would happen if coal-fired power was replaced with natural gas. He did indeed project short-term warming in that scenario, yet it was a result of the air becoming cleaner and allowing sunlight through as the coal was phased out. Thus, the media really got that story wrong, which was not about a deficiency of natural gas, but rather about the peculiarity of burning coal — that the particulate emissions reflect sunlight. Those who fixated on natural gas as the culprit could have written the same story about solar power — which the study’s author confirmed for me. Hence, I made that my “Bombshell” to illustrate the point. However, that particular study didn’t actually model the temperature impact of shutting down coal plants and replacing them with anything other than natural gas. So, I posed the following question to Dr. Wigley: What does the graph look like in 2100 if all coal-fired plants were replaced with zero emission sources (as the idealized study)? I am just wondering what the potential actually is. Are we talking about 1 or 2 degrees lower? I just have no idea of the relative context. We had several email exchanges over his paper, and he said that my questions were intriguing and he would look into them. I never heard back from him on that, but this new paper answers the question. Shuttering All the World’s Coal Plants Wouldn’t Do Much The authors of this newest study modeled the replacement of coal-fired power plants with either natural gas, coal with carbon capture and storage, hydropower, solar PV, solar thermal, wind power, or nuclear power. You can see from Joe Romm’s headline how the story is being spun, but let’s break it down in a more objective fashion. The following graphic from the paper tells the story. Pay particular attention to the temperature scale. The graphic indicates — as Tom Wigley’s previous paper indicated but which was only reported relative to natural gas — that in every single case, it doesn’t matter what coal-fired power plants are replaced with, the temperature is projected to increase for almost the next 40 years. This is true even in the baseline “Conservation” case, which involves merely idling the coal-fired plants and not replacing them with anything. The paper projects that if coal-fired power plants continue to operate, the expected temperature rise relative to the baseline (i.e., relative to the expected temperature increase from other sources) in 50 years is 0.15 degrees C, and in 100 years is about 0.33 degrees C. If coal is phased out and replaced with natural gas, the relative 50 and 100 year temperature rise is projected to be 0.14 degrees C and 0.24 degrees C, respectively. So the paper shows slightly less warming when natural gas is used, which Climate Progress Tweeted as “Switch from coal to natural gas would have zero effect on global temperatures by 2100” and included a link to Joe’s “bombshell.” That is obviously an exaggeration, as the graphic clearly shows that the effect is not zero. If it was, the natural gas line would overlay the coal line. Shocking Implications One shocking implication from the paper was the projection that hydropower would be worse than coal for the next 60 years. The study’s authors cited methane emissions from organic matter buried under water as the reason for this apparent anomaly. But that’s not the really shocking thing about the study for me. The most shocking conclusion was the magnitude of the numbers we are talking about. Even if you could in theory shut down all of the coal-fired power plants in the world and replace them with wind, solar, and hydropower — in 50 years the projected temperature is only one-twentieth of a degree C cooler than the base case of continuing to use coal. In 100 years, if I could replace all global coal-fired power plants with firm, renewable power — the temperature is only projected to be about 0.2 degrees cooler than under the coal base case. And the way this is being spun is that the 0.09 degree reduction from switching to natural gas is equivalent to an effect of “zero”, but the 0.2 degree reduction in hypothetically replacing everything with wind and solar power 100 years from now is significant. About the natural gas case, Romm literally said the 0.09 degree lower temperature in switching to natural gas means that “natural gas is a bridge fuel to nowhere”, but the 0.2 degree lower temperature in switching to renewables is “the world’s only plausible hope to avert catastrophic temperature rise.” Nuclear & Natural Gas to the Rescue — But Most Environmentalists Hate Them A big irony here is that there are only two power sources that are today capable of achieving the study’s conclusion that we must rapidly replace coal-fired power plants: Nuclear power and natural gas. If people really believe that we must urgently address this issue — and they don’t believe that the change from going to natural gas is enough — that leaves nuclear power as the only option capable of achieving a rapid replacement. Bear in mind that this is for a global replacement of coal — most of which is used in Asia. Good luck trying to sell China and India on a 0.2 degree temperature difference in 100 years if they quickly abandon their coal-fired power plants and replace them with wind power. Conclusion: Study is a Major Downer for Activists Battling Climate Change To be honest, if I was devoting my life to fighting against the threat of climate change, this would be one of the most depressing papers I have ever read. If we could convince everyone in the world to shut down their coal-fired power plants — which we can’t — and replace them with renewable power — which isn’t available in quantities sufficient to replace coal-fired power — then by the end of my life there would still be **no statistically significant temperature change** to even be able to tell if my life’s work was successful. But let’s be realistic, shall we? The people who are concerned about global warming have dug in their heels over natural gas, and they are generally opposed to nuclear power. Because of the sheer impossibility that we will rapidly replace coal with wind and solar power (especially since “we” is the world), then we will in all likelihood be left with the status quo. As I have said before, emissions are much higher in Asia Pacific than they are in the U.S. and Europe combined, and they are rising rapidly. Unless we can figure out a way to convince them to develop without fossil fuels — something no country has done — then global carbon emissions will continue to rise. This is why — even though I accept the science behind climate change — it isn’ t my focus. I just don’t see how the West can possibly do anything about it.

**No impact—mitigation and adaptation**

**Mendelsohn the Edwin Weyerhaeuser Davis Professor 9**—Robert O. Mendelsohn, the Edwin Weyerhaeuser Davis Professor, Yale School of Forestry and Environmental Studies, Yale University, June 2009, “Climate Change and Economic Growth,” online: http://www.growthcommission.org/storage/cgdev/documents/gcwp060web.pdf

The heart of the debate about climate change comes from a number of warnings from scientists and others that give the impression that human-induced climate change is an immediate threat to society (IPCC 2007a,b; Stern 2006). Millions of people might be vulnerable to health effects (IPCC 2007b), crop production might fall in the low latitudes (IPCC 2007b), water supplies might dwindle (IPCC 2007b), precipitation might fall in arid regions (IPCC 2007b), extreme events will grow exponentially (Stern 2006), and between 20–30 percent of species will risk extinction (IPCC 2007b). Even worse, there may be catastrophic events such as the melting of Greenland or Antarctic ice sheets causing severe sea level rise, which would inundate hundreds of millions of people (Dasgupta et al. 2009). Proponents argue there is no time to waste. Unless greenhouse gases are cut dramatically today, economic growth and well-being may be at risk (Stern 2006).

These statements are largely alarmist and misleading. Although climate change is a serious problem that deserves attention, society’s immediate behavior has an extremely low probability of leading to catastrophic consequences. The science and economics of climate change is quite clear that emissions over the next few decades will lead to only mild consequences. The severe impacts predicted by alarmists require a century (or two in the case of Stern 2006) of no mitigation. Many of the predicted impacts assume there will be no or little adaptation. The net economic impacts from climate change over the next 50 years will be small regardless. Most of the more severe impacts will take more than a century or even a millennium to unfold and many of these “potential” impacts will never occur because people will adapt. It is not at all apparent that immediate and dramatic policies need to be developed to thwart long-range climate risks. What is needed are long-run balanced responses.

**CO2 boosts plant performance and prevents mass starvation—avoids extinction**

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Regarding the first of these requirements, Tilman et al. note that in many parts of the world **the historical rate of increase in crop yields is declining**, as the genetic ceiling for maximal yield potential is being approached. This observation, in their words, ―highlights the need for efforts to steadily increase the yield potential ceiling.‖ With respect to the second requirement, they indicate, ―without the use of synthetic fertilizers, world food production could not have increased at the rate it did [in the past] and more natural ecosystems would have been converted to agriculture.‖ Hence, they state the solution ―will require significant increases in nutrient use efficiency, that is, in cereal production per unit of added nitrogen, phosphorus,‖ and so forth. Finally, as to the third requirement, Tilman et al. remind us ―water is regionally scarce,‖ and ―many countries in a band from China through India and Pakistan, and the Middle East to North Africa either currently or will soon fail to have adequate water to maintain per capita food production from irrigated land.‖ Increasing crop water use efficiency, therefore, is also a must. Although the impending biological crisis and several important elements of its potential solution are thus well defined, Tilman et al. (2001) noted ―even the best available technologies, fully deployed, cannot prevent many of the forecasted problems.‖ This was also the conclusion of Idso and Idso (2000), who stated that although ―expected advances in agricultural technology and expertise will significantly increase the food production potential of many countries and regions,‖ these advances ―will not increase production fast enough to meet the demands of the even faster-growing human population of the planet.‖ Fortunately, we have a powerful ally in the ongoing rise in the air‘s CO2 content that can provide what we can‘t. Since atmospheric CO2 is the basic ―food of essentially all plants, the more of it there is in the air, the bigger and better they grow. For a nominal doubling of the air‘s CO2 concentration, for example, the productivity of Earth‘s herbaceous plants rises by 30 to 50 percent (Kimball, 1983; Idso and Idso, 1994), and the productivity of its woody plants rises by 50 to 80 percent or more (Saxe et al. 1998; Idso and Kimball, 2001). Hence, as the air‘s CO2 content continues to rise, the land use efficiency of the planet will rise right along with it. In addition, atmospheric CO2 enrichment typically increases plant nutrient use efficiency and plant water use efficiency. Thus, with respect to all three of the major needs identified by Tilman et al. (2002), increases in the air‘s CO2 content pay huge dividends, helping to increase agricultural output without the taking of new land and water from nature. Many other researchers have broached this subject. In a paper recently published in the Annual Review of Plant Biology, three scientists associated with the Institute of Genomic Biology at the University of Illinois at Urbana-Champaign (USA) write that meeting the global increase in agricultural demand during this century ―is predicted to require a doubling of global production,‖ but ―the world has limited capacity to sustainably expand cropland,‖ and this capacity is actually ―shrinking in many developed countries.‖ Thus, Zhu et al. (2010) state, ―meeting future increases in demand will have to come from a near doubling of productivity on a land area basis,‖ and they conclude ―a large contribution will have to come from improved photosynthetic conversion efficiency,‖ estimating ―at least a 50% improvement will be required to double global production.‖ The researchers‘ reason for focusing on photosynthetic conversion efficiency derives from the experimentally observed facts that increases in the atmosphere‘s CO2 concentration increase the photosynthetic rates of nearly all plants, and those rate increases generally lead to equivalent—or only slightly smaller—increases in plant productivity on a land area basis. That provides a solid foundation for their enthusiasm in this regard. In their review of the matter, however, they examine the prospects for boosting photosynthetic conversion efficiency in an entirely different way: genetically, without increasing the air‘s CO2 content. ―Improving photosynthetic conversion efficiency will require,‖ the three scientists state, ―a full suite of tools including breeding, gene transfer, and synthetic biology in bringing about the designed alteration to photosynthesis.‖ For some of these ―near-term‖ endeavors, they indicate ―implementation is limited by technical issues that can be overcome by sufficient investment,‖ meaning they can ―be bought.‖ But several ―mid-term‖ goals could take 20 years or more to achieve; and they state ―even when these improvements are achieved, it may take an additional 10–20 years to bring such innovations to farms in commercial cultivars at adequate scale.‖ And if that is not bad enough, they say of still longer-term goals that ―too little of the science has been undertaken to identify what needs to be altered to effect an increase in yield,‖ while in some cases they acknowledge that what they envision may not even be possible, as in developing a form of RuBisCO that exhibits a significant decrease in oxygenation activity, or in designing C3 crops to utilize the C4 form of photosynthetic metabolism. Clearly, we do not have the time to gamble on our ability to accomplish what needs to be done in order to forestall massive human starvation of global dimensions within the current century. Therefore—in addition to trying what Zhu et al. suggest—we must rely on the ―tested and true: the CO2-induced stimulation of plant photosynthesis and crop yield production. And all we need to do in this regard is to refrain from interfering with the natural evolution of the Industrial Revolution, which is destined to be carried for some time yet on the backs of fossil-fuel-driven enterprises that can provide the atmosphere with the extra carbon dioxide that will be needed to provide the extra increase in crop growth that may mean the difference between global food sufficiency and human starvation on a massive scale a mere few decades from now. Another take on the matter has been provided by Hanjra and Qureshi (2010). They begin their treatment of the subject by quoting Benjamin Franklin‘s well-known homily, ―When the well is dry, we know the worth of water,‖ and they write we ―must not lose sight of surging water scarcity.‖ Noting ―population and income growth will increase the demand for food and water,‖ they contend ―irrigation will be the first sector to lose water, as water competition by non-agricultural uses increases and water scarcity intensifies.‖ As ―increasing water scarcity will have implications for food security, hunger, poverty, and ecosystem health and services,‖ they report ―feeding the 2050 population will require some 12,400 km3 of water, up from 6800 km3 used today.‖ This huge increase, they continue, ―will leave a water gap of about 3300 km3 even after improving efficiency in irrigated agriculture, improving water management, and upgrading of rainfed agriculture,‖ as per the findings of de Fraiture et al. (2007), Molden (2007), and Molden et al. (2010). This water deficiency, according to Hanjra and Qureshi, ―will lead to a food gap unless concerted actions are taken today.‖ Some of the measures they propose are to conserve water and energy resources, develop and adopt climate-resilient crop varieties, modernize irrigation, shore up domestic food supplies, reengage in agriculture for further development, and reform the global food and trade markets. To achieve these goals, they write, ―unprecedented global cooperation is required,‖ which by the looks of today‘s world is an exceedingly remote possibility. What, then, can we do to defuse the ticking time-bomb of this looming food and water crisis? One option is to do nothing: don‘t mess with the normal, unforced evolution of civilization‘s means of acquiring energy. This is because on top of everything else we may try to do to conserve both land and freshwater resources, we will still fall short of what is needed to be achieved unless the air‘s CO2 content rises significantly and thereby boosts the water use efficiency of Earth‘s crop plants and that of the plants that provide food and habitat for what could be called ―wild nature,‖ enabling both sets of plants to produce more biomass per unit of water used. To ensure this happens, we will need all of the CO2 that will be produced by the burning of fossil fuels, until other forms of energy truly become more cost-efficient than coal, gas, and oil. In fact, these other energy sources will have to become much more cost-efficient before fossil fuels are phased out, because the positive externality of the CO2-induced increase in plant water use efficiency provided by the steady rise in the atmosphere‘s CO2 concentration due to the burning of fossil fuels will be providing a most important service in helping us feed and sustain our own species without totally decimating what yet remains of wild nature. In yet another paper to address this important issue—this one published in the Journal of Proteome Research—Sarkar et al. (2010) write, ―increasing population and unsustainable exploitation of nature and natural resources have made ‗food security‘ a burning issue in the 21st century,‖ echoing the sentiments expressed by Farrell (2009), who noted ―the alarming increase in biofuel production, the projected demand for livestock products, and the estimated food to feed the additional 700 million people who will arrive here by 2016, will have unprecedented consequences,‖ among which are likely to be that ―arable land, the environment, water supply and sustainability of the agricultural system will all be affected,‖ and not in a positive way. Furthermore, when the human population of the globe reaches 8.7–11.3 billion by the year 2050 (Bengtsson et al., 2006), the situation will become truly intolerable, unless something is done, far in advance of that date, to mitigate the situation dramatically. Thus, as Sarkar et al. suggest, ―a normal approach for any nation/region is to strengthen its agricultural production for meeting future demands and provide food security.‖ But a major difficulty, which could spoil mankind‘s ability to do so, is the ongoing rise in the atmosphere‘s ozone concentration. This is the subject of Sarkar et al.‘s new paper. In a study designed to elucidate the many ways in which ozone (O3) is harmful to plants, the eight researchers grew two high-yielding cultivars (Sonalika and HUW 510) of wheat (Triticum aestivum L.) outdoors at the Agriculture Research Farm of India‘s Banaras Hindu University. This was done within open-top chambers maintained at the ambient O3 concentration and at elevated O3 concentrations of 25 percent and 50 percent above ambient during the peak O3 period of the day (10:00 to 15:00 hours local time) for a total of 50 days, during which time they measured numerous responses of the plants to the two levels of ozone enrichment. Sarkar et al. determined, among several other things, that the moderate increases in the air‘s O3 concentration resulted in higher foliar injury, a reduction in photosynthetic efficiency, induced inhibition in photochemical efficacy of photosystem II, lowered concentrations of photosynthetic pigments and proteins, and what they describe as ―drastic reductions‖ in RuBisCO large and small subunits, while noting major leaf photosynthetic proteins and important energy metabolism proteins were also ―drastically reduced.‖ Discussing the results, the scientists from India, Japan, and Nepal remark that anthropogenic activities have made ozone a ―major environmental pollutant of our time,‖ while noting some are predicting it to be an even ―greater problem for the future.‖ Adding this dilemma to **the problem of feeding the world** over the next few decades and beyond **makes humanity‘s future look incredibly bleak**. Thus, Sarkar et al. suggest we focus on ―engineering crops for future high O3,‖ concentrating on maintaining ―effective stomatal conductance of plants which can avoid O3 entry but not hamper their productivity.‖ We agree. But not knowing to what extent we will be successful in this endeavor, we also need to do something we know will work: allowing the air‘s CO2 content to rise, unimpeded by the misguided efforts of those who would curtail anthropogenic CO2 emissions in the guise of fighting what they claim is anthropogenic-induced global warming. This contention is largely theoretical and wholly unproven, but we know, as a result of literally hundreds, if not **thousands, of real-world experiments**, that atmospheric CO2 enrichment increases both the productivity and water-use efficiency of nearly all plants, and that it often more than compensates for the negative effects of O3 pollution. Introducing another review of food security studies pertinent to the challenge of feeding 9 billion people just four decades from now, Godfray et al. (2010) note ―more than one in seven people today still do not have access to sufficient protein and energy from their diet and even more suffer some form of micronutrient malnourishment,‖ citing the FAO (2009). Although ―increases in production will have an important part to play‖ in correcting this problem and keeping it from worsening in the future, mankind ―will be constrained by the finite resources provided by the earth‘s lands, oceans and atmosphere,‖ This set of difficulties they describe at the end of their review as constituting a ―perfect storm.‖ In considering ways to mitigate these problems, the first question they ask is: ―How can more food be produced sustainably?‖ They state the primary solution to food shortages of the past was ―to bring more land into agriculture and to exploit new fish stocks,‖ but they note there is precious little remaining of either of these pristine resources. Thus, they conclude ―the most likely scenario is that more food will need to be produced from the same or less land.‖ As they suggest, ―we must avoid the temptation to sacrifice further the earth‘s already hugely depleted biodiversity for easy gains in food production, not only because biodiversity provides many of the public goods upon which mankind relies, but also because we do not have the right to deprive future generations of its economic and cultural benefits.‖ And, we might add, because we should be enlightened enough to realize we have a moral responsibility to drive no more species to extinction than we already have sent to that sorry state. So how can these diverse requirements all be met simultaneously? A clue comes from Godfray et al.‘s statement that ―greater water and nutrient use efficiency, as well as tolerance of abiotic stress, are likely to become of increasing importance.‖ And what is there that can bring about these changes in mankind‘s crops? You guessed it: carbon dioxide. Rising concentrations of atmospheric CO2 increase the photosynthetic prowess of essentially all of the Earth‘s plants, while generally reducing the rate at which they transfer water from the soil to the air. In addition, more CO2 in the air tends to enhance the efficiency with which plants utilize nutrients in constructing their tissues and producing the edible portions that we and all of Earth‘s animals depend upon for our very existence. Focusing on the water scarcity aspect of the food shortage problem, Kummu et al. (2010) write, ―due to the rapidly increasing population and water use per capita in many areas of the world, around one third of the world‘s population currently lives under physical water scarcity (e.g. Vorosmarty et al., 2000; Alcamo et al., 2003; Oki and Kanae, 2006).‖ But despite the large number of water scarcity studies conducted over the years, ―no global assessment is available of how this trend has evolved over the past several centuries to millennia.‖ Thus they conducted a study covering AD 0 to 2005. This analysis was carried out for ten different time slices, defined as those times at which the human population of the globe was approximately double the population of the previous time slice. Global population data for these analyses were derived from the 5‘ latitude x 5‘ longitude-resolution global HYDE dataset of Klein Goldewijk (2005) and Klein Goldewijk et al. (2010), while evaluation of water resources availability over the same period was based on monthly temperature and precipitation output from the climate model ECBilt-CLIO-VECODE, as calculated by Renssen et al. (2005). After completing these assessments, the four researchers found ―moderate water shortage first appeared around 1800, but it commenced in earnest from about 1900, when 9% of the world population experienced water shortage, of which 2% was under chronic water shortage (<1000 m3/capita/year).‖ Thereafter, from 1960 onwards, they write, ―water shortage increased extremely rapidly, with the proportion of global population living under chronic water shortage increasing from 9% (280 million people) in 1960 to 35% (2300 million) in 2005.‖ And currently, they continue, ―the most widespread water shortage is in South Asia, where 91% of the population experiences some form of water shortage,‖ while ―the most severe shortage is in North Africa and the Middle East, where 77% and 52% of the total population lives under extreme water shortage (<500 m3/capita/year), respectively.‖ To alleviate these freshwater shortages, Kummu et al. state measures generally have been taken to increase water availability, such as building dams and extracting groundwater. But they note ―there are already several regions in which such measures are no longer sufficient, as there is simply not enough water available in some regions.‖ In addition, they observe, ―this problem is expected to increase in the future due to increasing population pressure (e.g. United Nations, 2009), higher welfare (e.g. Grubler et al., 2007) [and] production of water intensive biofuels (e.g. Varis, 2007, Berndes, 2008).‖ Hence, they conclude there will be an increasing need for many nonstructural measures, the first and foremost of which they indicate to be ―increasing the efficiency of water use.‖ This characteristic of nearly all of Earth‘s plants is almost **universally promoted by atmospheric CO2 enrichment.**

# 2NC Overview

**AND it makes environmental cooperation impossible – that makes leadership useless – assumes tariffs for the environment**

**Anderson and Grewell 01** [Terry Anderson is a professor of economics @ Montana State and J. Bishop Grewell is a Research Associate @ the PERC, 2 Chi. J. Int'l L. 427, Lexis]

The unintended consequences of punishment for violating environmental agreements with trade restrictions should be considered. Trade offers the most likely route for acceptable punishments. Yet invoking sanctions, tariffs, and other economic penalties to ensure compliance with international environmental agreements could rebuild the wall against free trade that the United States and other countries are working so hard to tear down. And **once the wall is up, the wealth and prosperity that accrue under free trade will be staunched, as will the potential for environmental progress**. In addition, the effort to subject future trade agreements to more stringent environmental review risks slowing and even halting future trade agreements altogether, with enormous impacts on trade and world prosperity. The long-term effects of stifling wealth creation will harm environmental quality, as developing countries and former Communist countries take longer to grow wealthy enough to afford improving environmental quality. Subjecting free trade to subjective environmental review is shortsighted and misses the bigger picture of long-run environmental consequences.

**AND trade is the only way to adapt to warming**

**Tamiotti et al. 09** (Ludivine, Counsellor in the Trade and Environment Division of the World Trade Organisation, Robert Teh is Counsellor in the Economic Research and Statistics Division of the World Trade Organization, Vesile Kulaçoğlu, Director, Trade and Environment Division, WTO, Anne Olhoff, Sustainable Development and Climate Change Coordinator / Senior Economist, Benjamin Simmons is Head of the Trade, Policy and Planning Unit with UNEPs Economics and Trade Branch, Hussein Abaza is the Chief of the Economics and Trade Branch of UNEP's Division of Technology, Industry, and Economics, “Trade and Climate Change”, <http://www.wto.org/english/res_e/booksp_e/trade_climate_change_e.pdf>)

As discussed in the previous section, the technique effect can be a major mechanism through which trade opening can lead to mitigation of climate change. More open trade can increase the availability of goods and services that are more energy efficient. The increased income made possible through trade opening can lead to greater demand for better environmental quality and thus to reduced greenhouse gas emissions. Related to this, trade (or trade opening) encourages the spread from one country to another of technological innovations that are beneficial in mitigating climate change. Furthermore, allowing international markets to remain open could help countries adapt to supply disruptions that may be triggered by climate change, such as a shortage in food supplies. 1. Technological spillovers from trade International trade can serve as a means for diff using new technologies and know-how (Grossman and Helpman, 1991). International technology diffusion is important because of the highly skewed distribution of spending on research and development (R&D) around the world. Coe, Helpman and Hoff maister (1997) estimate that 96 per cent of global expenditure on R&D is undertaken by only a handful of industrialized countries. The distribution of expenditure on R&D is even more skewed than the distribution of world income. Keller (2004) notes that the G-7 countries (the world’s leading industrialized countries) accounted for 84 per cent of global spending on R&D in 1995, but represented only 64 per cent of global gross domestic product (GDP). Since Solow (1956), economists have understood the importance of technological change in raising productivity and underpinning economic growth. The greater a country’s exposure to the international economy, the more it gains from R&D activities in other countries (Helpman, 1997). This suggests a similar role for trade in diff using technologies that mitigate climate change. The available information indicates that 90 per cent of what is termed the environmental goods and services industry is located in member countries of the OECD.38 Since many OECD countries were among the first to adopt climate change mitigation measures, the already lopsided distribution of technological know-how may become more distorted as the adoption of mitigation measures leads to further innovation in environmental technologies in OECD countries. Porter and van der Linde (1995) have argued that domestic firms’ compliance with environmental regulations can trigger technological innovations, since such inventions will lower firms’ cost of compliance.39 The existence of spillovers in climate change technology (i.e. transfers of technological know-how from one country to another) provides one mechanism by which developing countries’ own efforts to combat climate change can benefit from innovations in OECD countries. Section III.B provides information on trade opening in goods that may mitigate greenhouse gas emissions. There are several channels by which technological dissemination through trade can occur (Grossman and Helpman, 1991; Helpman, 1997). As explained in Section I.B.4(a), one channel is through the importation of innovations embodied in both intermediate goods (i.e. manufactured or processed goods which are used in further production processes) and capital goods (e.g. machinery or equipment used in the production of other goods and services) which a country could not have produced on its own. A second channel is through the transfer of knowledge about new production methods and design from developed countries. Third, international trade can increase the available opportunities for adapting foreign technologies to meet local conditions. Lastly, the learning opportunities arising from international economic relations will reduce the cost of future innovation and imitation, making them more accessible to developing countries.

# 2NC Link Wall

**It would catalyze an international climate treaty**

**Claussen 07** Eileen Claussen, President and Elliot Diringer, Director of International Strategies, Harvard International Review A NEW CLIMATE TREATY: US LEADERSHIP AFTER KYOTO Spring 2007 http://www.c2es.org/newsroom/articles/new-climate-treaty-us-leadership-after-kyoto

For years, despite a steady accumulation of science showing the clear and present dangers of global climate change, efforts toward an effective international response have been at a virtual standstill**. The** principal **reason is that the United States has refused to play**. But with Washington now seemingly on a course to enact mandatory limits on US greenhouse gas emissions, it is plausible to begin envisioning a multilateral solution to this quintessentially global challenge. It is, in other words, time to contemplate a new climate change treaty. The urgency of the task is irrefutable. The Intergovernmental Panel on Climate Change’s latest assessment concluded with 90 percent confidence that human activity is warming the planet and warned of irreversible and potentially catastrophic consequences if emissions continue unabated. Politically as well, the next few years represent a critical window for action. The emission limits assumed by most industrialized countries under the Kyoto Protocol expire in 2012. What momentum the treaty has achieved and the multibillion-dollar carbon market it has spawned may well be lost unless a new agreement can be forged. Any new treaty will be environmentally effective and politically feasible only to the degree that it successfully engages and binds all of the world’s major economies. Coming to terms with cost and equity while also bridging the gap between developed and developing is an extraordinary diplomatic challenge. Meeting it will require fresh thinking and approaches, a genuine readiness to compromise and a collective political will that, while perhaps emerging, is by no means assured. **What is needed above all right now is US leadership, for no country bears greater responsibility for climate change, nor has greater capacity to catalyze a global response.** Responsibility is measured most directly in terms of emissions, and it should surprise no one that history’s greatest economic power is also the world’s largest greenhouse gas emitter. By the same token, the tremendous enterprise, prosperity, and technological prowess that have contributed so heavily to the atmospheric burden uniquely qualify the United States to lead a low-carbon transition. Indeed, no nation has done more to advance scientific understanding of the causes and consequences of global warming. But thus far, the US contribution to the global effort largely ends there. For the first time, however, US politics are beginning to favor real climate action. Even before the recent Democratic takeover of Congress, momentum was building for mandatory measures to reduce US emissions. As on many other environmental issues, individual states are leading the way, with California once again at the forefront. Business leaders, sensing that carbon constraints are inevitable and fearing a patchwork of state rules, are increasingly calling for a uniform national approach. Ten major companies, including General Electric, DuPont, and Alcoa, recently joined with four nonprofits in the US Climate Action Partnership to push for mandatory emission limits. Several bipartisan bills now before Congress would mandate emission cuts of 60 to 80 percent by 2050. With the enactment of mandatory US measures probably occurring no later than 2010, the global politics of climate change will be thoroughly transformed. Having resolved what it will do at home, the United States will know far better what it can commit to abroad. To avoid losing competitive advantage to countries without emission controls, the United States will have a strong incentive to rejoin and strengthen the global climate effort. For the struggling multilateral process, the United States’ re-entry cannot come soon enough. After President Bush’s outright rejection of Kyoto, other countries rallied around the treaty and brought it into force. But without the United States and Australia, the protocol encompasses only about one third of global emissions. Even if all countries meet their targets, which is unlikely, global emissions in 2012 would still be 30 percent higher than in 1997, when Kyoto was negotiated. While talks on post-2012 commitments have begun, under the treaty’s terms they contemplate targets only for those countries that already have them. European leaders are floating ambitious numbers, but Japan and others have made clear they are not taking on new commitments without movement by the United States and major developing countries. The political reality is that the negotiations are headed nowhere, unless they are somehow broadened or linked to bring in the other major players. **With the United States back at the table, there could be a way forward**. Once the largest emitter says it is ready to deal, China and other emerging economies might also be willing. Under this more hopeful scenario, what could a future climate treaty look like? To begin with, it must commit all the major economies. Today, 25 countries account for 85 percent of global emissions (as well as 70 percent of global population and 85 percent of global GDP). Environmentally, no long-term strategy to cut global emissions can succeed without them. Politically, it is imperative that all major economies be on board. All share concerns about costs and competitiveness, and none can sustain an ambitious climate effort without confidence that others will contribute their fair share. This requires binding commitments. But a new treaty should be flexible, allowing countries to take on different types of commitments. Circumstances vary widely among the major economies, and the policies that can address climate change in the context of national priorities will vary from one to the other. Countries will need different pathways forward.

**The US is key to create political will**

**Hague 10** (William, Secretary of State for Foreign and Commonwealth Affairs and Member of Parliament for Richmond, United Kingdom, “Russell C. Leffingwell Lecture: The Diplomacy of Climate Change,” September 27, 2010, pg online @ [[http://www.cfr.org/energy/russell-c-leffingwell-lecture-diplomacy-climate-change/p23037]//](http://www.cfr.org/energy/russell-c-leffingwell-lecture-diplomacy-climate-change/p23037%5D/) )

To drive that shift in investment from low to high carbon, we need a global climate change deal under the United Nations. Now, some have argued that we should abandon hope of doing so. They say Copenhagen proved it's all too difficult; we should focus instead on less inclusive and less demanding responses, such as coalitions of the willing. But we believe this would be a strategic error. It mistakes the nature of the task, which is to expand the realm of the possible, not to lower our ambition by accepting its current limits. And we must recognize this at Cancun. One thing Copenhagen did give us was a set of political commitments, captured in the Copenhagen Accord, on which we can build. More than 120 countries have now associated themselves with that accord, and that represents a broad and growing consensus. We now need to ensure that we live up to the commitments we made to each other in the accord, and reach out even more widely. Copenhagen, despite those accords, was a strategic setback, but it was not by any means the end of the road. We need to be clear why it failed to live up to high expectations and why it did not deliver a legally binding deal. Many people say that it failed because of process: The diplomats and the politicians had created a negotiation that was too difficult and too complex. But this misses the point. International treaties are an outcome, not an input, of political bargains. If you've made the political commitment to deliver, you can make the process work to deliver. **The** real **reason Copenhagen did not deliver on high expectations was a lack of political will**. Many in developing countries saw a gap between the words and the deeds of the industrialized economies. They questioned whether we really believed our own rhetoric. And to answer those questions, we each need to start at home. That is why the coalition government to which I belong has committed itself to being the greenest government ever in the United Kingdom, and why, with others in Europe, we are calling on the European Union to commit to a 30-percent cut in emissions by 2020 without waiting for the rest of the world to act. The UK is already the world leader in offshore wind, with more projects installed, in planning and in construction than any other country in the world. We're undertaking the most radical transformation of our electricity sector ever. We aim to provide over 30 percent of our domestic electricity from renewables by 2020. We have committed to build no new coal-fired power stations without carbon capture and storage technology, and we've announced our intention to continue the demonstration projects of that. And because it's imperative that foreign and domestic policies are mutually reinforcing, we must ensure that our approach is coherent. Now, that's one reason we have established the new British National Security Council: to ensure this happens across the full range of issues, including climate change. And that's why I work hand in glove with Chris Huhne, the British Energy and Climate Change secretary, and Andrew Mitchell, the International Development secretary, to ensure that our domestic action reflects our level of international ambition. But we won't succeed, of course, if we act alone. We must aim for a framework that is global and binding. It needs to be global because climate change affects everyone. Only a response that allows everyone a voice will generate a sense of common purpose and legitimacy. Only a response that is binding will convince investors that we intend to keep the promises we make to each other. Businesses need clear political signals, so let's show them an unequivocal green light. We are now a few weeks away from the 16th Conference of Parties on Climate Change in Cancun. And I commend the consultative and collaborative approach Mexico has taken ahead of this meeting. Thanks to their determination and foresight, we have a chance in Cancun to regain momentum and make progress on key issues such as forests, technology, finance and transparency of commitments. Cancun will -- may not get us all the way to a full agreement, but it can put us back on track to one. That said, the negotiations can't succeed inside a bubble. The negotiators in the U.N. process can't themselves build political will. They have to operate on the basis of current political realities in the countries they represent. And it's those realities that limit the ambition that we can set in the -- in such negotiations, and it's those realities that we now need to shift. There is no global consensus on what climate change puts at risk, geopolitically and for the global economy, and thus on the scale and urgency of the response we need. We must build a global consensus if we are to guarantee our citizens security and prosperity. That is a job for foreign policy. A fundamental purpose here for foreign policy is to shift the political debate, to create the political space for leaders and negotiators to reach agreement. We didn't get that right before Copenhagen, and we must get it right now. So we urgently need to mobilize foreign ministers and the diplomats they lead, as well as institutions such as the Council on Foreign Relations, to put climate change at the heart of foreign- policy thinking. When I became foreign secretary in May, I said the core goals of our foreign policy were to guarantee Britain's security and prosperity. Robust global action on climate change is essential to that agenda. That is why the British Foreign and Commonwealth Office, under my leadership, is a vocal advocate for climate diplomacy. All British **ambassadors carry the argument for a global low-carbon transition** in their breast pocket or in their handbag. Climate change is part of their daily vocabulary, alongside the traditional themes of foreign policy. And they're supported by our unique network of climate attaches throughout the world. The core assets of foreign policy are its networks and its convening power. Foreign policy can build political impulses to overcome barriers between sectors and cultures. In a networked world, diplomacy builds partnerships beyond government. **And nowhere are those partnerships more vital than on climate.**So we must mobilize all our networks, not just across government but between governments, using organizations such as the Commonwealth as well. We must reach out, beyond, to NGOs, faith groups and businesses. And of all these, perhaps business engagement is the key to making a difference. It's business that will lead low-carbon transition. It's business that best understands the incentives needed to help us all prosper. We must also harness scientific expertise in cutting-edge low- carbon technologies. The scientific community will develop the goods which will power the low-carbon economy and drive global ambition on climate change. And that's why the British government has a science and innovation network, which fosters collaborative research in the U.K. and other countries. Now, what can the U.K. and the European Union do to make that fundamental shift and shape a global consensus on climate change? The most serious problem at Copenhagen, and the strongest brake on political will, was and is a lack of confidence in the low-carbon economy. Too few people in too few countries are yet convinced that a rapid move to low carbon is compatible with economic recovery and growth. They see the short-term economic and domestic stability risks before the opportunities and the longer-term risks of inaction. There should be only one European response to that confidence gap. The EU, in my view, must accelerate its own progress and demonstrate that a low-carbon growth path makes us more competitive. I am convinced this is in the long-term interests of Europe's economy. We have learned painful lessons from the oil price shocks. We must modernize our infrastructure. The opportunities are out there. The global industry in low-carbon and environmental goods and services is already estimated to be worth up to 3.2 trillion pounds a year. Nearly a million British people are now employed in this sector, and that's why we are creating a green investment bank to ensure that we can properly support and develop low-carbon industry. But we need to redouble our efforts, both in the EU (itself ?) and in our engagement with partners. Each of us as member states will be better able to accelerate if we're doing so together as the world's largest single market. And by opening up this effort through partnership with others, we can make it easier for them to accelerate, too. So we'll be at the forefront of pushing for low-carbon modernization of Europe's infrastructure and energy policy. The European Union's budget until 2013 is set out in the current "financial perspective". We will argue -- we will need to agree the financial perspective for the seven years after that, the period including our 2020 climate goals. And it's -- as ever, it's right that the EU budget should reflect the prevailing economic circumstances. It's also right that we direct the budget to today's challenges, not those of yesterday. And that means one that supports the transition to a low-carbon economy. Action in Europe alone will not be enough. We need both the developed and developing world to take action. And this week Guido Westerwelle, the German foreign minister, and I have tasked our teams to come together to shape a coordinated, diplomacy-led effort on climate change, combining the strengths of our respective foreign services. I've just put the case for bringing a new urgency for low-carbon transition within the EU. But together we should carry that urgency in external dialogues, whether they are with the United States, China or India. **The transition to low carbon will happen faster and maximize the benefit for all if the U**nited **S**tates -- historically the world's largest emitter -- **is at the leading edge.** I recognize the political challenges that the U.S. administration faces and welcome President Obama's commitment to combat climate change. As he said in his State of the Union speech, "the nation that leads the clean-energy economy will be the nation that leads the global economy." Whatever the outcome of the upcoming midterm elections in the U.S., there is scope for political unity around an economic agenda that targets new energy opportunities and new jobs. American business understands this new market and should want to lead it. But to make these new clean-energy investments at the required pace and on a sufficient scale, they need the right incentives. **On climate**, as in so many areas, **the world looks to the US for leadership, because it has the economic clout and diplomatic leverage to shift the global debate.**

# 2NC AT: Intrinsic

# 2NC AT: No Trade War

**AND trade should be a conflict filter – our evidence is reverse causal**

**Griswold 11** Daniel Griswold is director of the Center for Trade Policy Studies at the Cato Institute and author of Mad about Trade: Why Main Street America Should Embrace Globalization. “Free Trade and the Global Middle Class,” Hayek Society Journal Vol. 9 [http://www.cato.org/pubs/articles/Hayek-Society-Journal-Griswold.pdf Accessed 6/30/12](http://www.cato.org/pubs/articles/Hayek-Society-Journal-Griswold.pdf%20Accessed%206/30/12) BJM

Our more globalized world has also yielded a “peace dividend.” It may not be obvious when our daily news cycles are dominated by horrific images from the Gaza Strip, Afghanistan and Libya, but our more globalized world has somehow become a more peaceful world. The number of civil and international wars has dropped sharply in the past 15 years, along with battle deaths. The reasons behind the retreat of war are complex, but again the spread of trade and globalization have played a key role. Trade has been seen as a friend of peace for centuries. In the 19th century, British statesman Richard Cobden pursued free trade as a way not only to bring more affordable bread to English workers but also to promote peace with Britain’s neighbors. He negotiated the Cobden-Chevalier free trade agreement with France in 1860 that helped to cement an enduring alliance between two countries that had been bitter enemies for centuries. In the 20th century, President Franklin Roosevelt’s secretary of state, Cordell Hull, championed lower trade barriers as a way to promote peaceful commerce and reduce international tensions. Hull had witnessed first-hand the economic nationalism and retribution after World War I. Hull believed that “unhampered trade dovetail[s] with peace; high tariffs, trade barriers and unfair economic competition, with war.” Hull was awarded the 1945 Nobel Prize for Peace, in part because of his work to promote global trade. Free trade and globalization have promoted peace in three main ways. First, trade and globalization have reinforced the trend towards democracy, and democracies tend not to pick fights with each other. A second and even more potent way that trade has promoted peace is by raising the cost of war. As national economies become more intertwined, those nations have more to lose should war break out. War in a globalized world not only means the loss of human lives and tax dollars, but also ruptured trade and investment ties that impose lasting damage on the economy. Trade and economic integration has helped to keep the peace in Europe for more than 60 years. More recently, deepening economic ties between Mainland China and Taiwan are drawing those two governments closer together and helping to keep the peace. Leaders on both sides of the Taiwan Straight seem to understand that reckless nationalism would jeopardize the dramatic economic progress that region has enjoyed. A third reason why free trade promotes peace is because it has reduced the spoils of war. Trade allows nations to acquire wealth through production and exchange rather than conquest of territory and resources. As economies develop, wealth is increasingly measured in terms of intellectual property, financial assets, and human capital. Such assets cannot be easily seized by armies. In contrast, hard assets such as minerals and farmland are becoming relatively less important in high-tech, service economies. If people need resources outside their national borders, say oil or timber or farm products, they can acquire them peacefully by freely trading what they can produce best at home. The world today is harvesting the peaceful fruit of expanding trade. The first half of the 20th century was marred by two devastating wars among the great powers of Europe. In the ashes of World War II, the United States helped found the General Agreement on Tariffs and Trade in 1947, the precursor to the WTO that helped to spur trade between the United States and its major trading partners. As a condition to Marshall Plan aid, the U.S. government also insisted that the continental European powers, France, Germany, and Italy, eliminate trade barriers between themselves in what was to become the European Common Market. One purpose of the common market was to spur economic development, of course, but just as importantly, it was meant to tie the Europeans together economically. With six decades of hindsight, the plan must be considered a spectacular success. The notion of another major war between France, Germany and another Western European powers is unimaginable. Compared to past eras, our time is one of relative world peace. According to the Stockholm International Peace Research Institute, the number of armed conflicts around the world has dropped sharply in the past two decades. Virtually all the conflicts today are civil and guerilla wars. The spectacle of two governments sending armies off to fight in the battlefield has become rare. In the decade from 1998 through 2007, only three actual wars were fought between states: Eritrea-Ethopia in 1998-2000, India-Pakistan in 1998-2003, and the United States-Iraq in 2003. From 2004 through 2007, no two nations were at war with one another. Civil wars have ended or at least ebbed in Aceh (in Indonesia), Angola, Burundi, Congo, Liberia, Nepal, Timor-Leste and Sierra Leone. Coming to the same conclusion is the Human Security Centre at the University of British Colombia in Canada. In a 2005 report, it documented a sharp decline in the number of armed conflicts, genocides and refugee numbers in the past 20 years. The average number of deaths per conflict has fallen from 38,000 in 1950 to 600 in 2002. Most armed conflicts in the world now take place in Sub-Saharan Africa, and the only form of political violence that has worsened in recent years is international terrorism. Many causes lie behind the good news – the end of the Cold War, the spread of democracy, and peacekeeping efforts by major powers among them – but expanding trade and globalization appear to be playing a major role in promoting world peace. In a chapter from the 2005Economic Freedom of the World Report, Dr. Erik Gartzke of Columbia University compared the propensity of countries to engage in wars to their level of economic freedom. He came to the conclusion that economic freedom, including the freedom to trade, significantly decreases the probability that a country will experience a military dispute with another country. Through econometric analysis, he found that, “Making economies freer translates into making countries more peaceful. At the extremes, the least free states are about 14 times as conflict prone as the most free. A 2006 study for the institute for the Study of Labor in Bonn, Germany, found the same pacific effect of trade and globalization. Authors Solomon Polachek and Carlos Seiglie found that “trading nations cooperate more and fight less.” In fact, a doubling of trade reduces the probability that a country will be involved in a conflict by 20 percent. Trade was the most important channel for peace, they found, but investment flows also had a positive effect. A democratic form

 of government also proved to be a force for peace, but primarily because democracies trade more. All this helps explain why the world’s two most conflict-prone regions – the Arab Middle East and Sub-Saharan Africa – are also the world’s two least globally and economically integrated regions. Terrorism does not spring from poverty, but from ideological fervor and political and economic frustration. If we want to blunt the appeal of radical ideology to the next generation of Muslim children coming of age, we can help create more economic opportunity in those societies by encouraging more trade and investment ties with the West. The U.S. initiative to enact free trade agreements with certain Muslim countries, such as Morocco, Jordan, Bahrain and Oman, represent small steps in the right direction. An even more effective policy would be to unilaterally open Western markets to products made and grown in Muslim countries. A young man or woman with a real job at an export-oriented factory making overcoats in Jordan or shorts in Egypt is less vulnerable to the appeal of an Al-Qaida recruiter. Of course, free trade and globalization do not guarantee peace or inoculation against terrorism, anymore than they guarantee democracy and civil liberty. Hot-blooded nationalism and ideological fervor can overwhelm cold economic calculations. Any relationship involving human beings will be messy and non-linear. There will always be exceptions and outliers in such complex relationships involving economies and governments. But deeper trade and investment ties among nations have made it more likely that democracy and civil liberties will take root, and less likely those gains will be destroyed by civil conflict and war.

**WTO solves war**

**Lawrence 07** Robert Lawrence, Harvard JFK Government School International Trade and Investment Professor, National Economic Research Bureau Research Associate, Former President's Council of Economic Advisers (1998-2000), Former Brookings Institutions Senior Fellow, March 2007 "The United States and the WTO Dispute Settlement System," Council on Foreign Relations

The importance of enforceable multilateral rules is evident from the era in which they were absent. The lack of agreed-upon enforcement procedures under the original treaty of the postwar trading system—the General Agreement on Tariffs and Trade (GATT)—engendered considerable U.S. frustration. **There were innumerable bilateral conflicts with the European Union** over its Common Agricultural Policy (CAP) and with Japan over its closed market. These were extremely difficult to resolve. In response, the United States implemented laws such as Section 301 of the Trade Act of 1974 and the Super 301 provisions of the Omnibus Trade and Competitiveness Act of 1988. These provisions sought to remove “unreasonable and unjustifiable” barriers to U.S. exports by threatening unilateral trade sanctions.3 While these measures met with mixed results, they did help convince other countries of the merits of establishing a more effective system at the WTO, which was created to succeed GATT in 1995.4 The WTO provides more benefits to the United States than GATT did. Its provisions cover more issues that are of interest to the United States: The WTO includes rules on standards and technical barriers to trade; it protects intellectual property; it covers agriculture and services. But the biggest advantage of the WTO is that it includes a mechanism to enforce these rules: the dispute settlement system. **This has reduced the need for the United States to resort to unilateral retaliatory measures**, limiting an important source of tension between the United States and its partners and so generating a significant foreign-policy dividend. Indeed, it is striking that since the advent of the dispute settlement system, the United States has generally abided by its agreement not to impose unilateral trade sanctions against WTO members without WTO authorization.5 Naturally, the system has not been able to solve all the disputes that have arisen. But it has at least been able to contain the effects of these disputes. By authorizing retaliation but limiting its size, the WTO helps to prevent conflicts in which both parties and the trade system as a whole could be severely damaged. The shift from bilateral to multilateral enforcement helps secure the legitimacy of the trading system and reduces the political costs associated with bilateral dispute settlement. It helps the United States itself keep protectionist impulses at bay. It is also particularly useful for dealing with disputes with America’s largest trading partners, such as the European Union, Japan, China, India, and Brazil, with which the United States has not signed free trade agreements. And yet, despite these considerable strengths, support for the WTO and its dispute settlement system remains fragile. This report describes how that system operates, considers the arguments of its critics, and finally provides some recommendations for improvement.

# 2NC Can’t Solve

**Weve already passed the tipping point**

**Hamilton 10** – Professor of Public Ethics @ ANU

Clive Hamilton, Professor of Public Ethics in Australia, 2010, “Requiem for a Species: Why We Resist the Truth About Climate Change,” pg 27-28

The conclusion that, even if we act promptly and resolutely, the world is on a path to reach 650 ppm is almost too frightening to accept. That level of greenhouse gases in the atmosphere will be associated with warming of about 4°C by the end of the century, well above the temperature associated with tipping points that would trigger further warming.58 So it seems that even with the most optimistic set of assumptions—the ending of deforestation, a halving of emissions associated with food production, global emissions peaking in 2020 and then falling by 3 per cent a year for a few decades—we have no chance of preventing emissions rising well above a number of critical tipping points that will spark uncontrollable climate change. The Earth's climate would enter a chaotic era lasting thousands of years before natural processes eventually establish some sort of equilibrium. Whether human beings would still be a force on the pla

net, or even survive, is a moot point. One thing seems certain: there will be far fewer of us. These conclusions arc alarming, co say the least, but they are not alarmist. Rather than choosing or interpreting numbers to make the situation appear worse than it could be, following Kevin Anderson and Alice Bows 1 have chosen numbers that err on the conservative side, which is to say numbers that reflect a more buoyant assessment of the possibilities. A more neutral assessment of how the global community is likely to respond would give an even bleaker assessment of our future. For example, the analysis excludes non-CO2, emissions from aviation and shipping. Including them makes the task significantly harder, particularly as aviation emissions have been growing rapidly and are expected to continue to do so as there is no foreseeable alternative to severely restricting the number of flights.v' And any realistic assessment of the prospects for international agreement would have global emissions peaking closer to 2030 rather than 2020. The last chance to reverse the trajectory of global emissions by 2020 was forfeited at the Copenhagen climate conference in December 2009. As a consequence, a global response proportionate to the problem was deferred for several years.

# 2NC No Impact

**Humans can adapt**

**Moore ’08** Senior Fellow at the Hoover Institution at Stanford University, Stanford, (Thomas Gale 7/9/12 “Global warming; the good, the bad and the ugly and the efficient” EMBO reports http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3317379/?tool=pmcentrez)KG

Even if the pessimists are correct and future climate change reduces food production, wicked storms lash much of the planet, summers are plagued by terrible heat waves, and floods and droughts inundate large areas of the world and reduce the availability of clean water, human beings will be better able to handle such terrible conditions than they are now because technology will advance and people will become richer over the next century. Evidence of an increasing rate of technological advancement comes from patents; the number of patents issued for inventions has continued to rise at an increasing rate since 1790 ([Fig 2](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3317379/figure/f2/)). Although patented inventions are only a crude measure of technological growth, they do indicate that technology will continue to change the world in which we live. Consider the world 200 years ago when the fastest means of communication was by horseback, or just 100 years ago when telephones were only slowly spreading and radio, much less TV or the internet, were almost undreamed of. Thus progress will allow our descendants to deal with almost any difficulties that climate change brings.

**3 periods of rapid warming show no extinctions- models are flawed guesswork**

**NIPCC 11** (Nongovernmental International Panel on Climate Change, “2011 Interim Report from the Nongovernmental International Panel on Climate Change,” http://nipccreport.org/reports/2011/2011report.html)

The first period they examined was the Eocene Climatic Optimum (53–51 million years ago), when the atmosphere‘s CO2 concentration exceeded 1,200 ppm and tropical temperatures were 5–10°C warmer than modern values. Yet far from causing extinctions of the tropical flora (where the data are best), the four researchers report ―all the evidence from low-latitude records indicates that, at least in the plant fossil record, this was one of the most biodiverse intervals of time in the Neotropics.‖ They also note ―ancestors of many of our modern tropical and temperate plants evolved ...when global temperatures and CO2 were much higher than present ... indicating that they have much wider ecological tolerances than are predicted based on present-day climates alone.‖ The second period they examined included two rapid-change climatic events in the Holocene—one at 14,700 years ago and one at 11,600 years ago—when temperatures increased in the mid- to high-latitudes of the Northern Hemisphere by up to 10°C over periods of less than 60 years. There is evidence from many sites for rapid plant responses to rapid warming during these events. The researchers note ―at no site yet studied

, anywhere in the world, is there evidence in the fossil record for large-scale climate-driven extinction during these intervals of rapid warming.‖ On the other hand, they report extinctions did occur due to the cold temperatures of the glacial epoch, when subtropical species in southern Europe were driven out of their comfort zone. The Willis et al. study also makes use of recent historical data, as in the case of the 3°C rise in temperature at Yosemite Park over the past 100 years. In comparing surveys of mammal fauna conducted near the beginning and end of this period, they detected some changes but no local extinctions. Thus they determined that for all of the periods they studied, with either very warm temperatures or very rapid warming, there were no detectable species extinctions. In a study that may help explain how some researchers could have gotten things so wrong in predicting massive extinctions of both plants and animals in response to projected future warming, Nogues-Bravo (2009) explains the climate envelope models (CEMs)—often employed to predict species responses to global warming (and whether or not a species will be able to survive projected temperature increases)—―are sensitive to theoretical assumptions, to model classes and to projections in non-analogous climates, among other issues.‖ To determine how appropriate these models are for determining whether a particular species will be driven to extinction by hypothesized planetary warming, Nogues-Bravo reviewed the scientific literature pertaining to the subject and found several flaws. Nogues-Bravo writes, ―the studies reviewed: (1) rarely test the theoretical assumptions behind niche modeling such as the stability of species climatic niches through time and the equilibrium of species with climate; (2) they only use one model class (72% of the studies) and one palaeoclimatic reconstruction (62.5%) to calibrate their models; (3) they do not check for the occurrence of non-analogous climates (97%); and (4) they do not use independent data to validate the models (72%).‖ Nogues-Bravo writes, ―ignoring the theoretical assumptions behind niche modeling and using inadequate methods for hindcasting can produce ―a cascade of errors and naïve ecological and evolutionary inferences. Hence, he concludes, ―there are a wide variety of challenges that CEMs must overcome in order to improve the reliability of their predictions through time. Until these challenges are met, contentions of impending species extinctions must be considered little more than guesswork (see also Chapman, 2010).

# Turns Stuff

#### CO2 key to biodiversity—latest satellite studies prove

Solomon 8 [Lawrence, Executive Director of Energy Probe, National Post, “In praise of CO2,” 6-7, L/N]

The results surprised Steven Running of the University of Montana and Ramakrishna Nemani of NASA, scientists involved in analyzing the NASA data. They found that over a period of almost two decades, the Earth as a whole became more bountiful by a whopping 6.2%. About 25% of the Earth's vegetated landmass -- almost 110 million square kilometres -- enjoyed significant increases and only 7% showed significant declines. When the satellite data zooms in, it finds that each square metre of land, on average, now produces almost 500 grams of greenery per year. Why the increase? Their 2004 study, and other more recent ones, point to the warming of the planet and the presence of CO2, a gas indispensable to plant life. CO2 is nature's fertilizer, bathing the biota with its life-giving nutrients. Plants take the carbon from CO2 to bulk themselves up -- carbon is the building block of life -- and release the oxygen, which along with the plants, then sustain animal life. As summarized in a report last month, released along with a petition signed by 32,000 U. S. scientists who vouched for the benefits of CO2: "Higher CO2 enables plants to grow faster and larger and to live in drier climates. Plants provide food for animals, which are thereby also enhanced. The extent and diversity of plant and animal life have both increased substantially during the past half-century." Lush as the planet may now be, it is as nothing compared to earlier times, when levels of CO2 and Earth temperatures were far higher. In the age of the dinosaur, for example, CO2 levels may have been five to 10 times higher than today, spurring a luxuriantly fertile planet whose plant life sated the immense animals of that era. Planet Earth is also much cooler today than during the hothouse era of the dinosaur, and cooler than it was 1,000 years ago during the Medieval Warming Period, when the Vikings colonized a verdant Greenland. Greenland lost its colonies and its farmland during the Little Ice Age that followed, and only recently started to become green again. This blossoming Earth could now be in jeopardy, for reasons both natural and man-made. According to a growing number of scientists, the period of global warming that we have experienced over the past few centuries as Earth climbed out of the Little Ice Age is about to end. The oceans, which have been releasing their vast store of carbon dioxide as the planet has warmed -- CO2 is released from oceans as they warm and dissolves in them when they cool -- will start to take the carbon dioxide back. With less heat and less carbon dioxide, the planet could become less hospitable and less green, especially in areas such as Canada's Boreal forests, which have been major beneficiaries of the increase in GPP and NPP. Doubling the jeopardy for Earth is man. Unlike the many scientists who welcome CO2 for its benefits, many other scientists and most governments believe carbon dioxide to be a dangerous pollutant that must be removed from the atmosphere at all costs. Governments around the world are now enacting massive programs in an effort to remove as much as 80% of the carbon dioxide emissions from the atmosphere.

**Creates a negative feedback which solves warming**

Idso’s, 11 [**Sherwood PhD and former research physicist for the Department of Agriculture, Keith PhD Botany, Craig PhD Geography, 8/10/2011. “Forests Find More Nitrogen in the Soils of a Warming World”, http://www.co2science.org/articles/V14/N32/B2.php] DHirsch**

Background The authors write that "soil warming experiments conducted in a variety of ecosystems, including forests, have shown short-term losses of soil carbon as CO2," as well as "acceleration of nitrogen cycling rates, leading to an increase in the availability of nitrogen to the vegetation (Peterjohn *et al*., 1994; Rustad and Fernandez, 1998; Luo et al., 2001; Shaw and Harte, 2001; Melillo et al., 2002; Eliasson et al., 2005)," and they state that "the principles of ecosystem stoichiometry (Melillo and Gosz, 1983; Rastetter et al., 1992; Sterner and Elser, 2002) suggest that, in forest ecosystems, the redistribution of a relatively small amount of this newly available nitrogen from the soil to the trees could result in a substantial increase in carbon storage in woody tissues." What was done In a long-term (seven-year) effort designed to further explore these closely related phenomena, Melillo et al. (2011) measured changes in net carbon storage in both trees and soil in a mixed hardwood forest ecosystem in central Massachusetts (USA) in response to a 5°C increase in soil temperature imposed on a 30 x 30-m tract of land that was heated by a matrix of heating cables buried at a depth of 10 cm and spaced 20 cm apart, comparing the results from that tract of land with those they obtained on a non-heated 30 x 30-m tract of similar land. What was learned The fifteen researchers report that the soil warming of their study resulted in carbon losses from the soil; but they say that it simultaneously stimulated carbon gains in the woody tissues of the trees. Altogether, over the seven years of the experiment, they indicate that "the cumulative warming-induced net flux of carbon has been from the forest to the atmosphere," but they note that "the magnitude of the flux has diminished over time as a result of the increase in tree growth rate in the heated area." And they state that in the seventh year of the study, "warming-induced soil carbon losses were almost totally compensated for by plant carbon gains in response to warming," which phenomenon they attributed to "warming-induced increases in nitrogen availability." What it means Melillo et al. conclude that "although warming has resulted in a net positive feedback to the climate system, the magnitude of the feedback has been substantially dampened by the increase in storage of carbon in vegetation**.**" And if their study were to continue, and if the trend established over its first seven years were to continue, **one could expect to see the sign of the feedback change from positive to negative, perhaps as soon as the next year or two, and to grow more negative from that point in time, with the long-term climate feedback ultimately proving to be negative, demonstrating the extreme importance of long-term studies of this nature.**

# 2NC Fertilization Link Wall

#### CO2 is key to encourage plant growth—

#### Consensus of studies is on our side

Singer et al. 8 [S. Fred, President of the Science and Environmental Policy Project and Distinguished Research Professor @ George Mason, Prof. Emeritus Environmental Science @ UVA and First Director of the National Weather Satellite Service, “Nature, Not Human Activity, Rules the Climate,” Summary for Policymakers of the Report of the Nongovernmental International Panel on Climate Change, http://www.heartland.org/pdf/22835.pdf]

Higher concentrations of CO2 would be beneficial to plant and animal life. An extensive scholarly literature documents the fact that increases in CO2 give rise to many changes that are beneficial. In the geologic past, CO2 levels have been many times higher than present values (Figure 24) and have sustained a large flora and fauna [Berner 1997;Berner and Kothaualla 2001; IPCC-AR4 2007, p. 441]. Plants use CO2 to produce the organic matter out of which they construct their tissues. Higher levels of CO2 in the air enable plants to grow bigger, produce more branches and leaves, expand their root systems, and produce more flowers and fruit [Idso 1989]. Laboratory experiments show that a 300 ppm increase in the CO2 content typically raises the productivity of most herbaceous plants by about one-third [Kimball 1983; Idso 1992]. Some 176 experiments on trees and other woody plants reveal a mean growth enhancement of 48 percent for a 300 ppm increase in atmospheric CO2 content [Poorter 1993; Ceulemans and Mousseau 1994; Wullschleger et al.. 1995, 1997]. Higher levels of CO2 cause plants to produce fewer leaf stomatal pores per unit area of leaf surface, and to open those pores less widely [Woodward 1987; Morison 1987]. Both of these changes tend to reduce most plants’ rates of water loss by transpiration, making them better able to withstand drought conditions [Tuba et al.. 1998], enabling terrestrial vegetation to begin to win back lands previously lost to desertification [Idso and Quinn 1983].

#### USDA research proves—former head of the Board of Ag for the NRC agrees

Michaels 4 [Patrick, Senior Fellow in Environmental Studies @ Cato and Prof. Environmental Sciences @ UVA, “Meltdown: The Predictable Distortion of Global Warming by Scientists, Politicians, and the Media,” p. 172]

Not just ragweed. Most plants (including the world's major food crops) are doing better because of carbon dioxide fertilization. That fact is attested to in literally thousands of articles in the scientific literature. It has been estimated that crop yield has increased by about 10 percent as a consequence of anthropogenic carbon dioxide emissions, by an individual no less august than Sylvan Wittwer, former head of the Board on Agriculture for the National Research Council. One might naively believe that the U.S. Department of Agriculture might sing the praises of something that helps agricultural produce flourish. Farmers need expend absolutely no additional effort to reap this benefit—a benefit documented by USDA researchers, including other research by the USDA scientist, Lewis Ziska, whose study resulted in Secretary Glickman's press release. The enhanced CO2 is present rain or shine, at high temperature and low. USDA research demonstrates how carbon dioxide protects crops against the vagaries of climate, how plants grown under elevated CO 2 conditions better withstand stresses from drought, high temperature, insect predation, and lack of nutrients than do those grown at lower CO2 concentrations.

#### Our evidence is consistent with independent literature reviews—and operates under environmental stressors

Idso and Idso 94 [Keith, Batony Dep’t @ ASU, and Sherwood, US Water Conservation Laboratory, Agricultural and Forest Meteorology, “Plant responses to atmospheric CO2 enrichment in the face of environmental constraints: a review of the past 10 years’ research,” Vol. 69, p. 153-203]

Much the same results were found with respect to stresses produced by high temperature, salinity and gaseous air pollution. The presence of these growth-retarding influences tends to reduce the absolute magnitudes of the growth-increasing effects provided by atmospheric CO2 enrichment, but not their relative magnitudes. which are often greater in the face of these stresses than they are in their absence. To the extent that resource limitations and environmental stresses are present in nature, then, it is evident that the percentage growth responses of natural ecosystems to atmospheric CO 2 enrichment could well be greater than those of managed agricultural systems, where efforts are made to maintain high levels of needed resources and low levels of stress. Consequently, the response of the entire biosphere to the steadily rising carbon dioxide content of Earth's atmosphere may be substantial. Indeed, our grand-average results presented in Fig. 6 suggest that wherever environmental conditions are less than ideal, the percentage plant growth response to atmospheric C02 enrichment will probably be greater than it would have been under optimum growth conditions, and that this difference will continue to increase with the C02 content of the air. As an independent check on our grand-average relationships, we compare our results for plants experiencing no resource limitations or environmental stresses with the corresponding results of Kimball (1983a,b), who reviewed such experiments for all years before our review. To be compatible in this regard, we followed his procedure of transforming the data by means of the function x' = log]0(x ), where x is the ratio of the growth or CER of CO2-enriched plants to that of corresponding control plants, after which we determined grand-average means and standard errors and then performed the inverse operation of calculating antilogarithms of these statistics, obtaining the results of Fig. 7. This procedure gives somewhat less weight to extremely high percentage growth enhancements (which may possibly be spurious), and produces somewhat smaller means and standard errors than those displayed in Fig. 6. Superimposed upon Fig. 7 is the result of the grand-average linear analysis performed by Kimball (1983a) for all experiments covering the atmospheric CO2 enrichment range depicted by the dashed line. Across this range, our results average one percentage point less than those of Kimball (1983a), but Kimball (1983b), with nearly double the data of Kimball (1983a), obtained a result that was also about one percentage point less than that of Kimball (1983a). Hence, the two most comprehensive reviews ofpre- and post-1982 1983 experiments, that of Kimball (1983b) and of our current study, respectively, yield essentially the same results for the effects of atmospheric CO2 enrichment under conditions that do not impose limitations on growth, giving us added confidence in our results for conditions that do impose such limitations.

#### CO2 fertilization is real—amplitude of seasonal CO2 variations proves

Idso 1 [Craig, President Center for the Study of Carbon Dioxide and Global Change, Energy & Environment, “Earth’s Rising Atmospheric CO2 Concentration: Impacts on the Biosphere”, 12:4, p. 299-300]

Possibly the most compelling evidence that atmospheric carbon dioxide enrichment is stimulating Earth's plant life is found in an analysis of the annual cycle of the air's CO 2 concentration. Each year the spring and summer growth of the Northern Hemisphere's vegetation draws enough carbon dioxide out of the air to reduce the atmospheric CO 2 concentration by several parts per million. Then, when much of this vegetation dies in the fall, it releases huge quantities of carbon dioxide back to the air, causing the CO 2 content of the atmosphere to rise by several parts per million. Detailed measurements of this phenomenon conducted over the past four decades have clearly demonstrated that the difference between the high and low points of the seasonal CO 2 oscillation, i.e., its amplitude, is growing slightly larger each year. Several groups of scientists have concluded that this amplitude enhancement implies that the photosynthetic activity of the world's plant life is also growing greater and greater each year, with many of them suggesting that the aerial fertilization effect of the ongoing rise in the air's CO 2 content is its primary cause. Based on analyses of the seasonal CO 2 cycle at Mauna Loa Observatory in Hawaii, Point Barrow in Alaska, and Weather Station P in the North Pacific Ocean, Pearman and Hyson (1981) concluded as early as 1981 that "it is most probable that there has been an increase in the summer net ecosystem production of the Northern Hemisphere of 8.6 percent over the period 1958-1978," stating that "the results are consistent with the concept of enhanced activity due to increased levels of CO2." Cleveland et al.. (1983) confirmed this finding two years later with additional data from Mauna Loa and a companion record from the South Pole, stating that "we believe it most likely that the CO2 seasonal behavior reflects an increase in either the seasonally varying biomass or in global photosynthetic activity resulting from the increasing concentration of atmospheric carbon dioxide." Shortly thereafter, Keeling et al.. (1985) confirmed the earlier results for Ocean Weather Station P, stating that the increase in the amplitude of its annual CO 2 cycle "reflects an increase in activity of terrestrial plants." By 1985, Bacastow et al.. (1985) reported that the increase in the amplitude of the seasonal CO2 cycle at Mauna Loa was "approximately 1 ppm, a sizeable fraction of the average amplitude of 6 ppm." They concluded that "it seems likely that the increase mainly reflects enhanced metabolic activity of the land biota" and that "one obvious factor that might produce this enhancement is the CO 2 concentration itself." Nearly a decade later, Keeling (1994) observed that the amplitude of the seasonal CO 2 cycle had increased by an additional 20% at high latitudes in both hemispheres between 1988 and 1993, noting that "a preliminary investigation suggests that an increase in the net primary production of plants... caused the amplitude increase." Fourteen months after this revelation, Keeling et al.. (1995) reported that the amplitude of the seasonal CO 2 cycle at Mauna Loa had also risen significantly over this time period; while Okamoto et al.. (1995), after analyzing seasonal CO 2 amplitude trends at seventeen stations stretching from the South Pole to Alaska, concluded that "CO 2 fertilization exists on the global scale." More recently, Keeling et al.. (1996) have reported that the annual amplitude of the seasonal CO 2 cycle has increased by fully 20% in the latitudinal vicinity of Hawaii and by 40% in the Arctic since the early 1960s, again declaring that "the amplitude increases reflect increasing assimilation of CO2 by land plants." Atmospheric oxygen measurements provide independent evidence for this same scenario (Keeling and Shertz, 1992; Bender et al.., 1996; Keeling et al.., 1996). Between 1991 and 1994, for example, the oxygen content of the air decreased slightly, but much more slowly than would be implied by the known rate of fossil fuel consumption, which uses oxygen to form carbon dioxide and water vapor. The difference, according to Bender (1996), suggests the existence of a large oxygen source in those years, "which can only be from photosynthesis associated with the net growth of the land biosphere," the primary cause of which he lists as "CO 2 fertilization of the land biosphere." Finally, in an analysis of reflectance data obtained from a series of satellites deployed to monitor various Earth-surface processes, Myneni et al.. (1997) recently found evidence to suggest that terrestrial vegetation between 45 and 70°N latitude grew steadily more productive from 1981 to 1991, in a development that Fung (1997) has called "the first direct observation of the biosphere that photosynthesis has increased on such a broad scale for such a long time." Other investigators have observed this phenomenon as well (Maisongrande et al.., 1995; Malmstrom et al.., 1995; Myneni et al.., 1995); and in a recent discussion of the subject (Malmstrom et al.., 1997), it is again stated that the observations are "consistent with potential stimulation of terrestrial production by factors such as CO 2 enrichment."

#### This checks warming impacts—fertilization causes sequestration

Idso 1 [Craig, President Center for the Study of Carbon Dioxide and Global Change, Energy & Environment, “Earth’s Rising Atmospheric CO2 Concentration: Impacts on the Biosphere”, 12:4, p. 296]

As the air's CO 2 content climbs in response to the carbon dioxide emitted from the burning of fossil fuels, the productivity of the planet's vegetation rises in response to the aerial fertilization effect of that increase in CO 2 . One consequence of this phenomenon is more and larger plants, which yearly remove ever-greater quantities of CO2 from the atmosphere, storing it initially in their own tissues, eventually in the soil, and ultimately in the depths of the sea (Berner and Lasaga, 1989). This CO2-induced amplification of the carbon sequestering capacity of the biosphere has particular significance within the context of potential CO2-induced global warming; for in removing carbon dioxide from the atmosphere, it slows the rate at which the air's CO 2 content rises, mitigating any deleterious climatic consequences that might occur, and possibly even eliminating them (Idso, 1991a; 1991b).

#### CO2 increases ecosystem resilience and growth—checks the effect of other environmental stresses

Idso 1 [Craig, President Center for the Study of Carbon Dioxide and Global Change, Energy & Environment, “Earth’s Rising Atmospheric CO2 Concentration: Impacts on the Biosphere”, 12:4, p. 291-292]

Detailed investigations of several managed and unmanaged ecosystems have provided many striking examples of the ability of atmospheric CO2 enrichment to not only enhance vegetative productivity in general (Luscher et al.., 1996; Scarascia-Mugnozza et al.., 1996; Zanetti et al.., 1996), but to also endow plants with the capacities they need to overcome growth restrictions resulting from resource limitations and environmental stresses (Koch and Mooney, 1996a). In fact, in years when environmental factors have combined to severely curtail the growth and development of some of these plant communities, the effects of atmospheric CO 2 enrichment have typically been much more dramatic than when environmental conditions have been more conducive to growth (Koch and Mooney, 1996b). In the case of a Kansas tallgrass prairie, experimentally doubling the atmospheric CO2 concentration enhanced vegetative productivity by only 5 to 10% in several highproductivity years; but in an intermediate year it increased growth by approximately 40%, and in a low-productivity year it boosted production by nearly 80% (Owensby et al.., 1996). Likewise, in an agroecosystem study where CO2 was injected directly into the air over a wheat crop growing in a field under otherwise natural circumstances, a yield-reducing water stress raised the productivity enhancement created by a 50% increase in atmospheric CO2 from 10% to 23% in two different years (Pinter et al.., 1996). And in a cotton crop where the wetter of two irrigation regimes reduced the yield of the ambient-air treatment, it was the lower-yielding over-watered plants that experienced the greater CO 2-induced growth stimulation in two other years (Pinter et al.., 1996).

#### Increasing atmospheric CO2 increases water use efficiency and soil quality which solves almost all environmental stresses

Idso 1 [Craig, President Center for the Study of Carbon Dioxide and Global Change, Energy & Environment, “Earth’s Rising Atmospheric CO2 Concentration: Impacts on the Biosphere”, 12:4, p. 289-290]

Another major consequence of atmospheric CO2 enrichment is that plants exposed to elevated levels of atmospheric CO 2 generally do not open their leaf stomatal pores — through which they take in carbon dioxide and give off water vapor — as wide as they do at lower CO2 concentrations (Morison, 1987). In addition, they tend to produce less of these pores per unit area of leaf surface (Woodward, 1987). Both of these changes tend to reduce most plants' rates of water loss by transpiration (Overdieck and Forstreuter, 1994); and the amount of carbon they gain per unit of water lost—or water-use efficiency—therefore typically rises (Rogers et al.., 1983), greatly increasing their ability to withstand drought (Tuba et al.., 1998). And with fewer and smaller stomatal openings, plants exposed to elevated levels of atmospheric CO 2 are also less susceptible to damage by noxious air pollutants—including ozone and oxides of nitrogen and sulfur—that gain entry into plants via these portals (Allen ,1990). In addition to the obvious benefits that CO 2-induced increases in plant water use efficiency portend for both irrigated and dry-land agriculture, there are equally important consequences for Earth's natural ecosystems. As the air's CO 2 content continues to rise, for example, plants will be able to grow and reproduce where it has previously been too dry for them to exist (Johnson et al.., 1997). Consequently, terrestrial vegetation should become more robust and begin to win back lands previously lost to desertification (Idso and Quinn, 1983). Simultaneously, the greater vegetative cover of the land produced by this phenomenon should reduce the adverse effects of soil erosion caused by the ravages of wind and rain. Evidence that such is indeed occurring was recently presented by Trimble and Crosson (2000), who reported that "available field evidence suggests declines of soil erosion, some very precipitous, during the past six decades." Greater plant productivity should also lead to increases in soil organic matter (Sombroek, 1995), which will likely produce even further benefits for the planet's plant life. In the words of Wallace (1994), soil organic matter "stops soil erosion, it supplies nutrients, it is a buffer against pH change, it holds water, it increases the cation exchange capacity which protects against leaching loss of nutrients, it decreases compaction, it stores nutrients from season to season, it makes soil warmer in the spring, it makes soils easier to till especially when slightly too wet, it makes inputs more valuable, it protects against plant diseases, it gives better aerated more permeable soil, it protects against heavy metal and salt toxicities, it detoxifies pesticides and prevents their leaching, it is a storage mechanism for excess atmospheric CO 2, it gives high yields, it promotes microbial breakdown of toxic substances, it makes it possible to grow acid loving plants, it supports microorganisms that recycle nutrients, and it promotes soil formation." Creatures that live in the soil, such as earthworms, are also greatly stimulated by additions of organic matter (Rogers et al.., 1994); and an increase in their activity would likely lead to the creation of much new soil, while at the same time improving the fertility, structure, aeration and drainage of existing soils (Edwards, 1997). These improvements, in turn, would likely boost plant productivity higher yet, putting still more organic matter into the soil, and so on (Idso, 1991), with the several phenomena reinforcing and further enhancing each other in a way that lifts the whole biosphere to a new level of activity (Idso, 1992).

#### CO2 has benefited plants. We have robust supportive evidence.

Maguire 9 [Mike, Meteorologist, Courier Press, “"Climategate" exposes global warming hoax”, 12-6, http://www.courierpress.com/news/2009/dec/06/quotclimategatequot-exposes-global-warming-hoax/]

The biggest legitimate link involving CO2 is with plants. We know that increasing CO2 increases plant growth and crop yields. CO2 is essential to all life forms on earth. Treating it as pollution is about as absurd as believing we can predict our climate 50 years from now. We also know that the warmer our planet has been in the past, the more life it supported. The most devastating blows to creatures on earth from temperatures came from cold. Powerful evidence of life doing better because of increased CO2 and warmth comes from digital satellite observations that were processed, refined and compared to changes of satellite-based maps of vegetation collected by the National Oceanic and Atmospheric Administration's series of AVHRR (Advanced Very High Resolution Radiometer) sensors. The digital satellite observations were processed into maps by NASA's Global Inventory Modeling and Mapping Studies project. The time frame for this comprehensive study is significant. It studied the years of greatest warming this century. The scientists concluded: "Between 1982 and 1999, 25 percent of the Earth's vegetated area experienced increasing plant productivity."

# AT: Plants Low Now

# 2NC AT: Warming Prevents Fertilization

Biodiversity’s resilient to temperature shifts—newest and most robust evidence—prefer small-scale models over bigger studies—both cooling and productivity loss due to CO2 are bigger threats

 \*\*note: also applies to ‘warming kills biodiversity’

Tămaş, PhD Geology and senior researcher – Romanian Academy ‘Emil Racoviţă’ Institute of Speleology, Angelica Feurdean, Senckenberg Research Institute – Frankfurt, Ioan Tanţău, Department of Geology – Babeş-Bolyai University, and Sorina Fărcaş, National Institute of Research and Development for Biological Sciences, ’12

(Tudor, “Elevational variation in regional vegetation responses to late-glacial climate changes in the Carpathians,” *Journal of Biogeography* Vol. 39, Issue 2, p. 258–271, February)

Introduction

The projected changes in temperature and precipitation by 2080 (IPCC, 2007) and increased land-use change are likely to have profound impacts on the diversity and functioning of both terrestrial and marine ecosystems (Thomas et al., 2004; Thuiller et al., 2005; Anderson & Bows, 2008; Jump et al., 2009; Sutherland et al., 2009; La Sorte & Jetz, 2010). Previous studies have shown that species are not equally vulnerable to habitat modification and climate change, and that different areas will not go through the same change in diversity and turnover. In Europe, coarse-scale species distribution models under two extreme assumptions, no- and full-migration scenarios, predict that mountains of middling values of elevation, including the Carpathians, will feature the highest proportion of species loss (up to 29%), and turnover (up to 64%), while the Pannonian lowlands are predicted to gain species up to 15% and to record a 66% increase in turnover as new Mediterranean species, tolerant of a hot and dry climate, invade at the expense of Euro-Siberian elements (Thuiller et al., 2005). However, other species distribution models run at finer scales (Trivedi et al., 2008; Randin et al., 2009), or including representation of plant demography (Hickler et al., 2009), and more accurate dispersal capability (Engler & Guisan, 2009), appear to predict a much smaller habitat and species loss than the coarse-scale models (Thomas et al., 2004; Thuiller et al., 2005; Araújo et al., 2008). All the above model predictions are based only on the current static distribution of species in relation to climate (Thomas et al., 2004; Thuiller et al., 2005; Svenning & Skov, 2007). Past climate reconstructions and simulations have shown that the dimension of precipitation- and temperature-related variables is not static in time, and hence neither are the ecological niche dimensions that influence species distribution and abundance (Jackson et al., 2009; Willis et al., 2010).

A way to improve the assessment of the biotic response in a given area is to perform ecological, palaeoecological and modelling studies at multiple spatial and time scales. Fossil data are able to record multiple generations of a species through time, and can be used as a surrogate for direct measurement of biotic responses to past climate change. Palaeoecological records have been used widely to understand past vegetation dynamics, but these have often addressed the individualistic responses of species to past climate and human impact, while quantitative estimates of changes in community composition have been made less frequently (Williams et al., 2002; Birks, 2007; Birks & Birks, 2008).

In this paper, seven fossil pollen sequences from Romania situated at different elevations were analysed to examine the effects of climate change on community composition and biodiversity between 15,000 and 10,500 cal. yr bp in this biogeographically sensitive region of Europe. Studies of ice-core, marine and continental records have demonstrated that this period (known as the late-glacial period and the transition to the Holocene) was characterized by large-amplitude global climate fluctuations occurring on decadal to millennial time scales (Johnsen et al., 1992; Jouzel et al., 2007). Regional cold periods occurred between c. 18,000 and 14,700 cal. yr bp (GS-2/Oldest Dryas), 14,200 and 13,800 cal. yr bp (GI-1d/Older Dryas), and 12,500 and 11,500 cal. yr bp (GS-1/Younger Dryas), whereas the major warm periods occurred between 14,700 and 14,200 cal. yr bp (GI-1e/Bølling) and 13,800 and 12,500 cal. yr bp (GI-1c-1a/Allerød) (Tămaşet al., 2005; Constantin et al., 2007; Feurdean et al., 2008). This interval offers the possibility of exploring how repeated temperature changes have affected patterns of community composition and diversity, as well as studying the recovery processes following major disruptions of community structure. While the late-glacial and early Holocene climate changes are not perfect analogues for 21st century climate change, the palaeoecological records from this time period still provide useful information on the rates of species response, and on the way species escaped extirpation (Dawson et al., 2011). By examining sites at different elevations, we attempt to identify which elevations were the most sensitive to changes in turnover and species loss. The Carpathians are characterized by heterogeneous landscapes and strong climatic and vegetational zonation, and offer great potential for examining biological responses from the lowlands to the sub-alpine zone. Direct human impact in the form of forest clearance and agriculture was minimal. However, hunter–gatherer communities might have had an impact on the herbivore population and thus indirectly affected the vegetation composition (Gill et al., 2009).

Materials and methods

Selected site

Changes in the late-glacial vegetation communities were inferred from seven published pollen records distributed within the main vegetation belts of the Romanian Carpathians, at elevations from 275 to 1840 m (Fig. 1). These sites are dispersed across several massifs in the Carpathians and some are separated by relatively large distances (c. 50–300 km), so this is a composite elevational transect. Details of geographical settings and present vegetation composition around each site are given in Appendix S1 in the Supporting Information.

The sedimentary basins include peat bogs and lakes, which are small to medium in size (0.05–3 ha). According to models of pollen dispersal, the pollen assemblages of small sites should have a source radius of a few kilometres (1–2 km) around the basins, versus tens of kilometres for medium-sized sites (10–20 km; Gaillard et al., 2008). The relevant pollen source area is also dependent on vegetation patchiness, the size and spatial distribution of the patches, and the pollen productivity and fall speed of the plant taxa involved (Sugita, 1994; Hellman et al., 2009). Given the more open landscapes and patchy vegetation distribution during the late-glacial period, it is likely that the pollen grains were able to disperse over greater distances than today (Gaillard et al., 2008). This is particularly the case for the alpine/subalpine sites, where, due to uphill pollen transport, the pollen assemblages are probably indicative of mixed vegetation coming from a wider elevational and areal range (Pellatt et al., 1998).

Pollen and spore counts were converted into percentages of the terrestrial pollen sum (Fig. 2). The pollen sum is c. 450–600 grains per sample at each site studied, except for a few pollen-poor samples where this sum could not be reached. Pollen nomenclature largely follows Moore et al. (1991) except for the subfamilies within Asteraceae, which are referred to as Liguliforae and Tubuliforae. The pollen and spores are of mixed taxonomic resolution (family, genus, species) and were recorded by three analysts, but it can reasonably be assumed that a comparable taxonomic resolution applies to each analysis. In addition, plant macrofossils were available at two sites (Steregoiu and Preluca Ţiganului). Plant macrofossils are large in size, have a low dispersal capacity, and are usually deposited close to the parent plants and therefore are indicative of local floristic composition.

Radiocarbon dates were recalibrated using Calib Rev 6.0. (Stuvier et al. (2005)http://radiocarbon.pa.qub.ac.uk/calib/) and the INTCAL09 dataset of Reimer et al. (2009) (Appendix S2). The new calibration curve gives smaller standard deviation (SD) errors than the previous calibration datasets, but some of the dates still fall within the plateau at c. 12,600 cal. yr bp and have large probability distribution in the calibrated age (c. 500 years). The chronology is based on linear interpolation between the midpoints of the calibrated distribution at 1 or 2 SD, and in few cases on adjusted age (Appendix S2). The age–depth models at Turbuţa, Avrig, Steregoiu, Luci, Tăul Zănoguţii and Iezerul Călimani sedimentary sequences do not show signs of hiatus in sediment deposition. At Preluca Ţiganului, however, a short hiatus occurs at 6.5 m, indicated by a sharp rise in Ulmus and Picea pollen, and a corresponding drop in Artemisia, Poaceae and Chenopodiaceae (Fig. 2). The chronology shows that the temporal resolution of the samples at Turbuţa, Avrig, Steregoiu, Preluca Ţiganului, Luci and Tăul Zănoguţii sites is between 20 and 100 years, whereas the Iezerul Călimani records changes at multi-centennial intervals (> 100 years per pollen sample).

Numerical analyses

In order to quantitatively determine and compare the amount of change in community composition and diversity between sequences, the following analyses were performed.

The pollen records (Fig. 2) were statistically divided into pollen zones using optimal splitting based on the information content technique (Bennett, 2007). A broken-stick model, as implemented in Psimpoll, was used to assess the significant zones (Bennett, 1996, 2007). Applying the broken-stick model for optimal splitting may not always be the perfect choice, as each splitting starts anew for each successive zone (Bennett, 1996, 2007). Comparison of the results from optimal splitting with other zonation techniques, however, indicates a similar number of significant zones and statistically robust results (Bennett, 1996, 2007).

To determine the compositional difference between pollen zones, a principal components analysis (PCA) was applied. PCA was implemented on datasets from all seven sites combined, and calculated based on the correlation matrix of the square root pollen percentage of selected taxa (Fig. 3). PCA was chosen because the detrended correspondence analysis shows that the longest gradient length is smaller than two SD. PCA was also used to examine: (1) whether climatic events of similar duration and magnitude lead to comparable vegetation assemblages in our sites; and (2) whether there is a distinct sensitivity of the vegetation at sites located at different elevations during the late-glacial and early Holocene. All ordinations were carried out with canoco ver. 4.5 (ter Braak & Šmilauer, 2002).

Rarefaction analysis was used to determine diversity responses to rapid climate changes, that is, whether rapid and repeated climate changes lead to increased or decreased palynological diversity (Fig. 4). Rarefaction analysis was computed using Psimpoll (Bennett, 2007), and the lowest pollen count (Tn) was used to standardize the size of the pollen counts at each site (Birks & Line, 1992). Rarefaction eliminates bias in richness caused by different pollen count sizes (Birks & Line, 1992). However, this does not take the evenness into account. Because of the small samples, population abundance may strongly influence palynological richness (Odgaard, 2006).

Detrended canonical correspondence analysis (DCCA) was used to determine the amount of palynological change at each site (Figs 5 & 6). Because samples in a pollen-stratigraphical sequence are in a known temporal order, this analysis uses age as the external constraint (Birks, 2007; Birks & Birks, 2008), that is, the age–depth file is uploaded as environmental data. Results were scaled in SD units, and changes in palynological composition for the late-glacial and early Holocene were estimated by looking at the range of sample scores on the first, time-constrained DCCA axis, where each value represents a position of a pollen sample relative to the entire gradient scale. Thus, larger variation in the sample scores within a sequence implies greater compositional changes. Turnover, a measure of the total palynological changes over the late-glacial and the Holocene, was calculated as the difference between the highest and lowest values from each sequence. Datasets were prepared in two ways: with all seven sites irrespective of their basal late-glacial age; and using only samples aged between 13,000 and 10,500 cal. yr bp, the interval covered by all seven sequences, in order to ensure that trends in compositional turnover were not affected by using sequences of different duration (Birks, 2007). Before analysis, percentages of all terrestrial pollen and spores were square-root transformed and detrended by segments, with no down-weighting of rare taxa and nonlinear scaling.

Results

Regional patterns in vegetation dynamics

The late-glacial and early Holocene periods were characterized by rapid and recurrent changes in vegetation composition: alternation between high abundances of pollen of trees and of herbaceous taxa (Fig. 2). Zonation of the pollen records revealed between two and six significant zones (Fig. 2). A few, non-significant pollen zones that appear to show similar features in the pollen assemblages at several sites were also considered (Figs 2 & 3a,b). Significant zones are marked with an asterisk, and the first letter of the site name is used as the identifying code for each local assemblage zone at each sequence. The zone boundary marking the transition from the late-glacial to the Holocene is statistically significant at all sites. There is also a statistically significant zone at 6.49 m at Preluca Ţiganului, but this split is due to a sedimentary hiatus at this level and was therefore not included in Figs 2 & 3. Warm intervals are distinguished from cold intervals using these zones (Figs 2 & 3a,b). Results from the broken-stick model indicate that the first two PCA axes are statistically significant and explain 58.9 and 17.2%, respectively, of the total variance. The PCA diagram shows that there is a separation of the pollen samples into distinct clusters (Fig. 3). Samples from the pollen zones A2, PT1, S2, L1 and IC1 (14,700–14,200 cal. yr bp, Bølling) cluster close to those from zones T1, A4, PT3, S3, L3, L4 and TZ2 (13,800–12,900 cal. yr bp, Allerød) in the left part of the chart (Fig. 3a). Both clusters are characterized by an abundant presence of Pinus, Betula, Alnus and Salix (Figs 2 & 3c) and also include Picea abies and small amounts of Ulmus, Quercus, Tilia and Fraxinus. Samples T3, A6, PT5, S5, L6, IC3 and TZ4 (11,500–10,500 cal. yr bp, early Holocene) cluster to the right side of the chart (Fig. 3a) and are characterized by a significant presence of Pinus, Betula, Alnus and Picea abies, but also include pollen of deciduous tree taxa (Figs 2 & 3c). Samples from pollen zones S1 and A1 (> 14,700 cal. yr bp, Oldest Dryas); pollen zones A3, L2, PT2 and TZ1 (14,400–13,800 cal. yr bp, Older Dryas); and pollen zones T2, A5, PT4, S4, L5, IC2 and TZ3 (12,900–11,500 cal. yr bp, Younger Dryas) group together in the lower left part of the diagram (Fig. 3b). These samples are composed of pollen of steppe and tundra elements (Artemisia, Chenopodiaceae, Poaceae, Juniperus and Ephedra) with up to 50% arboreal pollen such as Pinus, Betula, Alnus and Salix (Figs 2 & 3c). The scatter plot of the PCA shows that the early Holocene samples from low and mid-elevations cluster together, whereas samples from the two high-elevation sites (Iezerul Călimani and Tăul Zănoguţii) form a distinctive assemblage in the upper part of the chart (Fig. 3a). All late-glacial samples, however, group fairly close together, regardless of their elevation.

Macrofossil records at the two sites with available data (Steregoiu and Preluca Ţiganului) show the occurrence of Pinus spp., Pinus mugo, Pinus sylvestris, Betula spp. and Salix spp. at the beginning of deglaciation from c. 14,500 cal. yr bp; Pinus cembra, Betula sect. Albae (B. pubescens, B. pendula) from c. 14,400 cal. yr bp; Picea abies, Larix decidua and Prunus padus from c. 14,100–13,900 cal. yr bp; and Populus tremula and Alnus at c. 13,000 yr bp. In contrast, macro-remains of the trees mentioned above were reduced (Pinus, Betula) or disappeared (Picea abies) between 12,900 and 11,700 yr bp (Appendix S3).

Results from the pollen data and the selected macrofossil records indicate that the woody vegetation built up during warm intervals (Bølling and Allerød) and was reduced during the subsequent cold intervals: Older Dryas and especially the Younger Dryas (Figs 2 & 3; Appendix S3). However, with each successive warm interval, new woody taxa with warmer climate requirements were added: Pinus spp., P. mugo, P. sylvestris and P. cembra (pollen and macrofossils), Betula spp. (pollen and macrofossils), Betula sect. Albae (macrofossils), and Salix spp. (pollen) during the Bølling; Picea abies (pollen and macrofossils) and Ulmus (pollen), Populus tremula (macrofossils) during the Allerød; and Ulmus, Quercus, Tilia, Fraxinus, Acer and Corylus avellana (pollen) in the early Holocene (Figs 2 & 3; Appendix S3).

Palynological richness

Many sites show the greatest palynological richness (Fig. 4) at the initiation of the Holocene (after 11,500 cal. yr bp). An interval of greater richness, but with less temporal co-variance between sites, is also recorded between c. 13,800 and 12,500 cal. yr bp. Intervals of low richness were observed largely between c. 12,900 and 11,500 cal. yr bp, between c. 14,200 and 13,800 cal. yr bp, or before c. 14,000 cal. yr bp (Fig. 4). The samples from the early late-glacial (14,700–13,800 cal. yr bp) may have been affected by the abundant occurrence of Pinus (Fig. 2), a taxon with high pollen productivity, which may consequently have reduced the detection of other taxa with lower pollen productivity. Higher-elevation sites record slightly greater richness values than the remaining sites.

Palynological compositional changes

Trends in compositional changes are displayed in two modes: variation in time at each sequence (Fig. 5) and spatial variation along an elevational gradient (Fig. 6).

The DCCA axis 1 scores for all samples (15,500–10,500 cal. yr bp) reveal that the greatest shift in compositional change is recorded around c. 11,500 cal. yr bp for all sites (Fig. 5; Table 1). Distinct compositional changes also occur around c. 14,900–14,700 cal. yr bp, c. 14,000 cal. yr bp, and c. 12,900–12,500 cal. yr bp (Fig. 5), although less evidently at Iezerul Călimani (1650 m). When DCCA analyses were repeated for the interval 13,100–10,500 cal. yr bp, a period covered by all seven sequences, trends in the compositional change were comparable with those for all samples (figure not shown).

Sites from mid-elevations (730–1100 m) show, on average, greater turnover than those at low (< 440 m; Turbuţa and Avrig) and high elevations (> 1650 m; Iezerul Călimani and Tăul Zănoguţii) on DCCA axis 1 for the time interval 15,500–10,500 cal. yr bp (Fig. 6). The range values for beta-diversity are between 1.39 and 1.57 SD (mean 1.49 SD) for lowlands, between 1.66 and 1.82 SD (mean 1.73 SD) for mid-elevation, and between 1.33 and 1.46 SD (mean 1.38 SD) for high-elevation sites (Fig. 6; Table 1).

Discussion

Evidence for distinct ecosystem responses to recurrent cold/warm episodes of the late-glacial and early Holocene

This synthesis shows that the compositional dissimilarity of the vegetation between the low-to-mid- and high-elevation sites became established at the transition from the late-glacial to Holocene (c. 11,500 cal. yr bp), suggesting that the formation of vegetation belts was initiated only at the beginning of the Holocene (Figs 2 & 3).

There is also compositional distinctiveness between samples spanning different warm climatic episodes in our sequences, with the Bølling (14,700–14,200 cal. yr bp) and Allerød (13,800–12,900 cal. yr bp) showing the highest compositional similarity (Fig. 3a). The Bølling and Allerød share a common species pool with pollen of tree species dominated by Pinus and Betula (also evident from macrofossils at the two sites with available records), but differ by a lower proportion of Picea abies and of deciduous tree species (Ulmus, Quercus, Populus) during the Bølling (Figs 2 & 3; Appendix S3). During the Allerød, the vegetation composition resembles that of the early Holocene, due to the dominance of Picea abies forests with large amounts of Pinus and Betula, but lacks the conspicuous occurrence of pollen of deciduous tree taxa common during the early Holocene. Independent climate information extracted from oxygen (δ18O) and carbon isotopes (δ13C) from speleothems from north-western Romania (Figs 4 & 5) reveals a shift towards warmer and wetter conditions and higher soil productivity during the Allerød and Bølling (Tămaşet al., 2005). Warming at the initiation of the Holocene was rapid and strong in amplitude world-wide, with an estimated increase in temperature of 10 °C in c. 60 years at mid-latitude (Johnsen et al., 1992; Steffensen et al., 2008). At a regional scale, stable isotope records (Figs 5 & 6) show a rise in temperature and more pronounced rises for precipitation and soil productivity around 11,700 cal. yr bp (Tămaşet al., 2005; Constantin et al., 2007).

We also identified three periods with a vegetation composition typical for colder stages: Oldest Dryas (> 14,700 cal. yr bp), Older Dryas (14,200–13,800 cal. yr bp) and Younger Dryas (12,900–11,500 cal. yr bp) (Fig. 3b). These ‘cold pollen assemblages’ were dominated by pollen of dry steppe and tundra elements, also containing Pinus, Betula, Alnus and some Picea abies (Figs 2 & 3). Local survival of these species during the Older Dryas and Younger Dryas is demonstrated by the occurrence of their macro-remains at selected sites (Appendix S3). During the Younger Dryas, the temperatures dropped close to those recorded at the height of the last glaciation, between 10 and 20 °C lower for winter temperatures, whereas precipitation was approximately half of present-day values (Isarin et al., 1998; Kutzbach et al., 1998; Jackson & Overpeck, 2000). On the other hand, the summer temperature (growing season) decreased only slightly, leading to an intensification of seasonality and continentality. Climate reconstructions based on stable isotopes (Tămaşet al., 2005) indicate a dramatic decline in precipitation at the initiation of the Younger Dryas (c. 12,500 cal. yr bp), but the changes in temperature were comparatively less marked (Figs 5 & 6).

The nature of recovery processes following major disruptions of community structure

Samples from each warm and each cold interval of the late-glacial show similarities in community composition; nevertheless, each interval possesses a distinct species assemblage. Each abrupt climatic cooling event caused a rapid modification in ecosystem composition, generally manifesting in a reduction of the relative abundance or local extirpation of many tree taxa alongside the development of plant communities with no modern analogue, that is, a mixed steppe and tundra (Fig. 2 & Appendix S3). However, the forests were capable of recovering during each subsequent warm period (Bølling, Allerød, early Holocene). The initial stage in the forest formation of each warm interval resembled the composition of the initial stage of the previous warm interval. During the Bølling, for example, where there was no immediate preceding warm interval and consequently no preceding cumulative events, the woody assemblage was dominated by Pinus (Pinus spp., P. sylvestris, P. mugo) and Betula spp. With the progress and/or increasing length of the warm interval (Fig. 2; Appendix S3), more temperate tree species colonized: P. cembra, Betula sect. Albae (B. pubescens, B. pendula) at the end of the Bølling; Picea abies, Salix, Sambucus, Alnus, Populus tremula, Prunus padus; and then Ulmus, Quercus, Tilia, Fraxinus excelsior, Acer, Corylus avellana in the case of the Allerød and the early Holocene, respectively (Fărcaşet al., 1999; Wohlfarth et al., 2001; Björkman et al., 2002, 2003; Tanţău et al., 2003, 2006; Ampel, 2004; Feurdean & Bennike, 2004; Feurdean, 2005; Tanţău, 2006; Feurdean et al., 2007a,b, 2010; Magyari et al., 2011). Full replacement of the formerly dominant coniferous forest by the temperate deciduous forest at low and mid-elevations took place in the first c. 1200 years of the post-glacial (Fig. 2), thus the period of conditions favourable for reproduction and recruitment needed by the temperate taxa was longer than the length of any mild interval of the late-glacial (c. 500 years for Bølling; c. 1000 years for Allerød). Our results suggest that population abundance/expansion at a given time was not only a consequence of the environmental condition of that period, but also a result of previous cumulative recruitment (Allerød and early Holocene) and extirpation events (end of the last glacial, Older Dryas and Younger Dryas). Bølling, the first warm interval of the deglaciation, is the interval with least diverse woody vegetation, while the Holocene, the last warm interval, is the richest (Fig. 2). This also resulted in a low between-sites vegetation similarity during the early Holocene, 11,500–11,000 cal. yr bp (Feurdean et al., 2010).

The community organization shown by our records during repeated warm/cold periods is consistent with the regeneration niche model, in which population establishment and growth is possible only when the duration of favourable environmental conditions exceeds the mean generation time of the species involved (Jackson et al., 2009). This allows recruitment and establishment (depending on summer temperature and the length of the growing season), survival of the new recruits (depending on minimum winter temperature), and successive recruitment episodes to accumulate (Miller et al., 2008). Indeed, taxa that expanded in representation quickly at the beginning of each warm period (Pinus, Betula, Larix decidua, Alnus, Salix and Juniperus) are those that have traits which enable rapid response to climate change, including fast life-history strategies (rapid establishment probability, smaller sum of minimum growing degree-days, high relative growth rate, lower minimum seed-bearing age) and high stress-tolerance rates (to drought, temperature fluctuations). Tree taxa that need longer to expand (Picea abies, Ulmus, Quercus, Tilia, Fraxinus excelsior, Acer and Corylus avellana) have slower life-history traits (a longer life span, slower recruitment and reproductive maturity, larger sum of minimum growing degree-days), and lower stress tolerance (Bhagwat & Willis, 2008; Jackson et al., 2009; Jump et al., 2009; Lacourse, 2009).

A key caveat, however, is that the production rates of pollen (which partially influence the pollen signal on which our vegetation inference is made) might have been affected by climate. Studies on the relationship between climate conditions and pollen productivity have shown that the pollen production for many tree species is related to the summer temperature of the year previous to plant flowering, but also to weather events (Autio & Hicks, 2004; Hicks, 2006; Broström et al., 2008). Trees may even stop flowering for a couple of years under cold conditions (Hicks, 2006), and this can give a false signal of a reduction in plant abundance. It is also suggested that changes in the atmospheric CO2 concentration might have affected pollen productivity: suppression during cold periods with low CO2 concentration (Jackson & Williams, 2004) and enhancement during warm periods with increased CO2 concentration (Feurdean et al., 2007a). However, one fossil sample generally covers multiple decades and therefore helps distinguish between plant die-back and cessation of pollen production. In addition, plant macrofossils at selected sites provide supplementary information on the local population survival (Appendix S3) and generally confirm the pollen-based interpretation of tree dynamics during the late-glacial.

How much variation in diversity is apparent in sequences from different elevations, in response to recurrent climate fluctuations?

Although there are limitations in using pollen to estimate past plant diversity resulting from varying taxonomic resolution (family, genus, species), differential pollen productivities, dispersal mechanisms of the taxa involved, and evenness (Odgaard, 2006; Weng et al., 2006; Peros & Gajewski, 2008; van der Knaap, 2009), the palynological richness provides a first-order approximation of the diversity within vegetation units: the higher the species number, the higher the palynological richness (Birks & Line, 1992; Flenley, 2005; Weng et al., 2007; Willis et al., 2007; Berglund et al., 2008).

Our results indicate that, except for the early late-glacial period, variations in palynological richness and climate conditions appear to be in good temporal correlation (Fig. 4). Higher richness (probably caused by immigration exceeding extirpation) is recorded mainly during intervals characterized by warmer and wetter conditions, such as the early Holocene and Allerød. Conversely, a slightly lower richness is recorded during cold and dry periods, mainly the Younger Dryas (Fig. 4). Our results show no distinct trends in vegetation diversity/units along elevational gradients during the late-glacial and early Holocene, and do not suggest greater susceptibility to past climate change of biodiversity at high elevations. Mountains are often considered to be highly sensitive to large-amplitude climate variability, due to limited range size, geographical isolation and special adaptation of montane species (Thuiller et al., 2005; La Sorte & Jetz, 2010). In contrast, some studies have invoked a high local persistence of plant species in the mountains due to topographic variability and the local adaptation of species to their environment (Randin et al., 2009; Scherrer & Körner, 2011).

How much variation in turnover is apparent in sequences during the periods of recurrent climate variability?

A complete turnover of species has a gradient length of 4 SD, and at sites with high turnover there are no or few species in common at each end of the temporal sequence (Hill & Gauch, 1980; Birks & Birks, 2008). Results from DCCA reveal that major shifts in compositional changes occurred at the onset of high-magnitude climate changes (c. 12,700 and c. 11,500 cal. yr bp), regardless of whether they were cold or warm, and suggest that these recurrent and rapid reorganizations in the community assemblages were climate-driven (Fig. 5). However, the warm Younger Dryas/Holocene transition features the strongest compositional change with an average of c. 1.2 SD (which translates into c. 70% of the total changes in our sequences), illustrating the strong compositional dissimilarity of the vegetation during the early Holocene versus that of the cold Younger Dryas (Fig. 5). With the exception of the sub-alpine site (Iezerul Călimani), significant compositional changes (between 0.4 and 0.8 SD; c. 25–50%) are also evident at the onset of other climate shifts, such as at c. 14,700 cal. yr bp (mild), c. 14,200 cal. yr bp (cold), and c. 13,800 cal. yr bp (mild) (Fig. 5). In a similar study from Norway, Birks & Birks (2008) reported a change in turnover of c. 1.91 SD at the transition to the Holocene, and noticed that the pollen-based turnover estimates tend to be lower than estimates of turnover based on vegetation present on recently deglaciated glacier forelands following the Little Ice Age, probably due to an incomplete representation of plant species in the fossil pollen records. The pollen-based turnover inferences may also be affected by the differences in pollen productivity of the taxa involved. Taxa with high pollen productivity and/or effective pollen dispersal, such as Pinus, Betula and Alnus, are likely to have contributed more strongly to the compositional changes, while others, with lower pollen productivity and/or capacity of dispersal, such as Picea abies, Larix decidua, Juniperus, Ulmus, Fraxinus, Acer and Tilia, are likely to have contributed less. This is particularly the case in our subalpine site, which shows an abundant occurrence of pollen of Pinus through the whole period, and consequently a low turnover (Figs 2 & 6).

Nevertheless, a major feature of our results is that sites at mid-elevations demonstrated the highest turnover (Fig. 6) and therefore appeared more sensitive to past climate change and encountered more extirpations and immigrations (Fig. 2). Mid-elevations were probably situated at the deciduous/coniferous timberline ecotone, and probably also at the limit between more forested versus more open landscapes during the late-glacial (Fig. 2; Appendix S3). Sites in the low-elevation (< 440 m) and lower alpine (1840 m) zones had the next highest turnover, while the sub-alpine site (1650 m) appeared the least sensitive (Fig. 6). Inhospitable climate conditions throughout most of the late-glacial in the subalpine and lower alpine areas could imply less species displacement and consequently a lower turnover (Figs 2 & 6). On the other hand, modern observations in the Alps indicate that the high local topographic variability of upper mountains allows plants to find suitable habitats for survival within small distances (Randin et al., 2009; Scherrer & Körner, 2011).

Conclusions

Numerous studies have set out to identify at which locations biodiversity is most vulnerable to projected future climate change. Our synthesis of pollen records provides evidence for recurrent rapid ecosystem organization and biotic responses (community composition, diversity and turnover) to late-glacial and early Holocene climate variability.

The biotic response appears to be greater at times with higher-amplitude climatic shifts (c. 11,500 cal. yr bp), providing evidence for a strongly positive relationship between the intensity of climate change and the vegetation response. There is a good consistency in vegetation composition and dynamics during repeated warm and cold episodes, but differences also exist. The community composition at a given time was not only the product of existing environmental conditions, but also the consequence of previous cumulative episodes of extirpation and recolonization. Many local circumpolar woody plants were able to survive when environmental conditions became unfavourable (colder/drier events of the late-glacial), and these populations acted as sources when the climate became more favourable again (warmer/wetter). This is in agreement with modelling results at the local scale, predicting the persistence of suitable habitats and species survival within large-grid cells in which they were predicted to disappear by the coarse-scale models.

In terms of elevation, change in past compositional turnover appears to be strongest between 730 and 1100 m, followed by the low-elevation sites. This finding is in partial contrast with coarse-scale models, which estimate a slightly higher future species turnover in lowlands than at mid-elevations. The magnitude of change in palynological richness does not support greater sensitivity of this measure of biodiversity at high elevations to climate change.

#### CO2 causes massive plant growth—increases species richness even at INCREDIBLY high temps

[FYI, 36 Celsius is about 96 Farenheit]

Idso and Idso 7 [Sherwood, Research Physicist @ US Water Conservation laboratory, and Craig, President of Center for the Study of Carbon Dioxide and Global change and PhD in Geography, “Carbon Dioxide and Global Change: Separating Scientific Fact from Personal Opinion,” 6-6, http://www.co2science.org/education/reports/hansen/HansenTestimonyCritique.pdf]

In searching Hansen’s testimony and his “accepted for publication” manuscript on the subject, we could find no real-world support for this aspect of his climate-alarmist thesis. What we did find was typically of the same nature as Hansen’s own writings: claims, contentions and opinions, but no hard evidence. Such is also the case with many peer-reviewed science journal articles that promote the same philosophy, such as those of Root et al.. (2003) and Parmesan and Yohe (2003). However, as we have indicated in a major study of the topic that is archived on our website (Idso et al.., 2003), even these studies have failed to provide any hard data in support of their egregious extrapolations. So what’s the real situation with respect to rising air temperatures and atmospheric CO2 concentrations, as well as the life-and-death impacts they may—or may not—have on earth’s plants and animals? A good place to begin in answering this question is with the growth-enhancing effects of elevated atmospheric CO2, which typically increase with rising air and leaf temperatures. This phenomenon is illustrated by the data of Jurik et al.. (1984), who exposed bigtooth aspen leaves to atmospheric CO2 concentrations of 325 and 1935 ppm and measured their photosynthetic rates at a number of different temperatures. In the figure below, we have reproduced their results and slightly extended the two relationships defined by their data to both warmer and cooler conditions. In viewing this figure, it can be seen that at a leaf temperature of 10°C, elevated CO2 has essentially no effect on net photosynthesis in this particular species, as Idso and Idso (1994) have demonstrated is characteristic of plants in general. At 25°C, however, where the net photosynthetic rate of the leaves exposed to 325 ppm CO2 is maximal, the extra CO2 of this study boosted the net photosynthetic rate of the foliage by nearly 100%; and at 36°C, where the net photosynthetic rate of the leaves exposed to 1935 ppm CO2 is maximal, the extra CO2 boosted the net photosynthetic rate of the foliage by a whopping 450%. In addition, the extra CO2 increased the optimum temperature for net photosynthesis in this species by about 11°C: from 25°C in air of 325 ppm CO2 to 36°C in air of 1935 ppm CO2. In viewing the warm-temperature projections of the two relationships at the right-hand side of the figure, it can additionally be seen that the transition from positive to negative net photosynthesis—which denotes a change from life-sustaining to life-sapping conditions—likely occurs somewhere in the vicinity of 39°C in air of 325 ppm CO2 but somewhere in the vicinity of 50°C in air of 1935 ppm CO2. Consequently, not only was the optimum temperature for photosynthesis of bigtooth aspen greatly increased by the extra CO2 of this experiment, so too was the lethal temperature (above which life cannot long be sustained) likewise increased, and by approximately the same amount, i.e., 11°C. These observations, which are similar to what has been observed in many other plants, suggest that when the atmosphere’s temperature and CO2 concentration rise together (Cowling, 1999), the vast majority of earth's plants would likely not feel a need (or only very little need) to migrate towards cooler regions of the globe. Any warming would obviously provide them an opportunity to move into places that were previously too cold for them, but it would not force them to move, even at the hottest extremes of their ranges; for as the planet warmed, the rising atmospheric CO2 concentration would work its biological wonders, significantly increasing the temperatures at which most of earth's C3 plants—which comprise about 95% of the planet's vegetation—function best, creating a situation where earth's plant life would actually “prefer” warmer conditions.

#### Even if warmth hurts yields CO2 bolsters them—the benefits outweigh the costs

Michaels 4 [Patrick, Senior Fellow in Environmental Studies @ Cato and Prof. Environmental Sciences @ UVA, “Meltdown: The Predictable Distortion of Global Warming by Scientists, Politicians, and the Media,” p. 174-175]

The press release, it turns out (once you do just a little digging), concerns results from yet-to-be-published research conducted by a graduate student whose work achieved the unsurprising outcome that rice grown in chambers with different temperature conditions has a lower yield in warmer chambers. That is an entirely predictable laboratory result. All else being equal, higher temperatures can be expected to produce lower yields. So the researcher tested the hypothesis and confirmed it. But who is responsible for extrapolating from that a consequence for global food supply? In the real world, all else is not equal. In truth, there will be a large number of confounding effects on future rice production. Ascertaining the impact of these intermingling variables will likely provide a very interesting professional career for any enterprising student. Only one variable is mentioned in the press release: rising temperature. More heat-tolerant varieties might be developed. Washington State University botanist Maurice Ku is currently researching a strain of heat-resistant rice that is demonstrating increased yields of up to 35 percent. (Talk about more food to feed the world!) But the central curiosity in the reportage of the University of Florida research is how it identifies "global warming" as a threat to world food production without mentioning what ostensibly causes the world to warm: a higher atmospheric concentration of carbon dioxide. This is all the more curious because tons of peerreviewed research performed by IFAS scientists mentioned in the press release finds that rice grown under conditions of higher CO2 shows large increases in photosynthetic rate, water-use efficiency, and a decreased rate of evapotranspiration. The conclusion? "Rice f. grown in the next century may use less water, use water more efficiently, and be able to tolerate drought better under some circumstances." Even the increased temperature/decreased yield relationship isn't straightforward. In a 1995 literature review, Sylvan Wittwer concluded that, worldwide, rice culture is more constrained by low temperature than by high. Wittwer stated that a temperature increase may produce a net expansion of regions where rice can be grown successfully. Recent research on observed climate trends in China by German professor Axel Thomas, including regions of heavy rice production, concludes, "Regional climatic change appears to have had a beneficial effect for several regions in China that have to cope with an increased demand on water resources by a growing population and industry as well as an intensified agriculture." Ascertaining plant responses to varied climatic conditions is important work. But as the University of Florida press office amply demonstrated, it's easy to distort this through the prism of global warming alarmism.

#### The benefits of warming swamp any local losses to agriculture

Singer and Avery 7 [Fred, President of the Science and Environmental Policy Project and Distinguished Research Professor @ George Mason, Prof. Emeritus Environmental Science @ UVA and First Director of the National Weather Satellite Service, and Dennis, Director of Global Food Issues @ Hudson Institute, “Unstoppable Global Warming: Every 1,500 Years,” p. 191-192]

Richard Willson of Columbia University and NASA has measured an increase in the sun's irradiance of 0.05 percent per decade for the past two decades. He says the upward trend in sunlight may well have been going on longer than that.' Earlier, we didn't have the precision instruments to measure that small but vital trend. But every bit of it encourages the growth of food crops. Stronger sunlight will importantly increase the productivity of farmland in the northern mid-latitudes, such as Germany, Canada, and Russia. The increased food production in the very extensive northern plains would far outweigh the negative impact of slightly more arid conditions in the southern mid-latitudes. Danish agricultural expert Jorgen Olesen of the Danish Institute of Agricultural Sciences predicts that Europe's overall food production will increase with warming, even though some southern European regions will have crops reduced by aridity.408 Increased heat means more precipitation, as more moisture evaporates from the oceans and then falls as rain or snow. NASA says global rainfall increased 2 percent in the 20th century compared with the tail-end of the Little Ice Age in the 19th century. Most of the increased moisture fell in the mid- and high-latitudes where much of the world's most productive cropland is located.' We can expect this to continue through the Modern Warming.

#### Elevated CO2 promotes heat tolerance—increases phytosynthetic efficiency

Taub et al. 2k [Daniel, Assistant Prof. Biology, James Coleman, Prof. Ecology and Evolutionary Biology @ Rice, and Jeffrey Seemann, Prof. Cell and Molecular Biology @ U. Rhode Island, Plant, Cell and Environment, “Growth in elevated CO2 protects photosynthesis against high-temperature damage”, 23, 649-656, Blackwell-Synergy]

We present evidence that plant growth at elevated atmospheric CO2 increases the high-temperature tolerance of photosynthesis in a wide variety of plant species under both greenhouse and field conditions. We grew plants at ambient CO2 (~ 360 mmol mol-1) and elevated CO2 (550–1000 mmol mol-1) in three separate growth facilities, including the Nevada Desert Free-Air Carbon Dioxide Enrichment (FACE) facility. Excised leaves from both the ambient and elevated CO2 treatments were exposed to temperatures ranging from 28 to 48 °C. In more than half the species examined (4 of 7, 3 of 5, and 3 of 5 species in the three facilities), leaves from elevated CO2-grown plants maintained PSII efficiency (Fv/Fm) to significantly higher temperatures than ambient-grown leaves. This enhanced PSII thermotolerance was found in both woody and herbaceous species and in both monocots and dicots. Detailed experiments conducted with Cucumis sativus showed that the greater Fv/Fm in elevated versus ambient CO2-grown leaves following heat stress was due to both a higher Fm and a lower Fo, and that Fv/Fm differences between elevated and ambient CO2-grown leaves persisted for at least 20 h following heat shock. Cucumis sativus leaves from elevated CO2-grown plants had a critical temperature for the rapid rise in Fo that averaged 2·9 °C higher than leaves from ambient CO2-grown plants, and maintained a higher maximal rate of net CO2 assimilation following heat shock. Given that photosynthesis is considered to be the physiological process most sensitive to high-temperature damage and that rising atmospheric CO2 content will drive temperature increases in many already stressful environments, this CO2-induced increase in plant high-temperature tolerance may have a substantial impact on both the productivity and distribution of many plant species in the 21st century.

#### CO2 checks extreme heat stress

Idso 1 [Craig, President Center for the Study of Carbon Dioxide and Global Change, Energy & Environment, “Earth’s Rising Atmospheric CO2 Concentration: Impacts on the Biosphere”, 12:4, p. 291]

At even higher temperatures that are normally lethal to plants, atmospheric CO2 enrichment has also been proven to be of great worth, as it sometimes can mean the difference between a plant's living or dying. High CO 2 levels, for example, have been demonstrated to enable plants to maintain positive leaf carbon exchange rates when similar plants growing under ambient CO 2 concentrations exhibited negative rates that led to their demise (Kriedemann et al.., 1976; Converse and George, 1987; Idso et al.., 1989, 1995). Likewise, elevated atmospheric CO2 levels tend to protect plants against the severe desiccation that often accompanies high temperatures (Johnson et al.., 1997; Tuba et al.., 1998).

# 1NR

**The CP solves warming through carbon sequestration and the prevention of NO2 and methane emissions from agriculture—biochar would be able to sequester more CO2 than the totality of fossil fuel emissions by the end of the century without displacing coal—that’s the MIT Tech Review. Prefer our evidence—it cites professors of soil and crop sciences at Cornell. The counterplan is a complex scientific science—defer to experts.**

**It’s the closest we’ve got to a silver bullet.**

Alok **Jha**, 3/13/**2009**. Green technology correspondent for the Guardian (UK). “'Biochar' goes industrial with giant microwaves to lock carbon in charcoal,” The Guardian, <http://www.guardian.co.uk/environment/2009/mar/13/charcoal-carbon>.

Giant microwave ovens that can "cook" wood into charcoal could become our best tool in the fight against global warming, according to a leading British climate scientist. Chris Turney, a professor of geography at the University of Exeter, said that by burying the charcoal produced from microwaved wood, the carbon dioxide absorbed by a tree as it grows can remain safely locked away for thousands of years. The technique could take out billions of tonnes of CO2 from the atmosphere every year. Fast-growing trees such as pine could be "farmed" to act specifically as carbon traps — microwaved, buried and replaced with a fresh crop to do the same thing again. Turney has built a 5m-long prototype of his microwave, which produces a tonne of CO2 for $65. He plans to launch his company, Carbonscape, in the UK this month to build the next generation of the machine, which he hopes will process more wood and cut costs further. He is not alone in touting the benefits of this type of charcoal, known as biochar or biocharcoal. The Gaia theorist, James Lovelock, and Nasa's James Hansen have both been outspoken about the potential benefits of biochar, arguing that it is one of the most powerful potential solutions to climate change. In a recent paper, Hansen calculated that producing biocharcoal by current methods of burning waste organic materials could reduce global carbon dioxide levels in the atmosphere by 8ppm (parts per million) over the next 50 years. That is the equivalent of three years of emissions at current levels. Turney said biochar was the closest thing scientists had to a silver-bullet solution to climate change. Processing facilities could be built right next to forests grown specifically to soak up CO2. "You can cut trees down, carbonise them, then plant more trees. The forest could act on an industrial scale to suck carbon out of the atmosphere." The biochar could be placed in disused coal mines or tilled into the ground to make soil more fertile. Its porous structure is ideal for trapping nutrients and beneficial micro-organisms that help plants grow. It also improves drainage and can prevent up to 80% of greenhouse gases such as nitrous oxides and methane from escaping from the soil. In a recent analysis of geo-engineering techniques published in the journal Atmospheric Chemistry, Tim Lenton, a climate scientist at the University of East Anglia, rated producing charcoal as the best technological solution to reducing CO2 levels. He compared it to other geo-engineering techniques such as dumping iron in oceans or seeding clouds to reflect the sun's radiation and calculated that by 2100 a quarter of the effect of human-induced emissions of CO2 could be sequestered with biochar production from waste organic matter, giving a net reduction of 40ppm in CO2 concentration. Johannes Lehmann of Cornell university has calculated that it is realistically possible to fix 9.5bn tonnes of carbon per year using biochar. The global production of carbon from fossil fuels stands at 8.5bn tonnes.

**Solves quickly—we’d be out of the danger zone by the middle of the century.**

Tim **Flannery**, 1/11/**2008**. Division of Environmental and Life Sciences Macquarie Uni. “Australian of the Year 2007, Tim Flannery talks bio char and why we need to move into the renewable age,” Beyond Zero Emissions, <http://www.beyondzeroemissions.org/2008/03/19/tim-flannery-australian-of-the-year-2007-talks-bio-char-why-we-need-to-move-into-the-renewable-age>.

Matthew Wright: In a recent address to the American Geophysical Union, Dr. James Hanson from NASA said that we need to go below 350 parts per million to have a stable atmosphere that we are used to experiencing for our agricultural needs, and our biodiversity and ecological systems. In terms of your call about trying to aim for say 5% sequestration per year over 20 years in order to remove that carbon debt, if we can get that going, how do you see, where do you see us going for a stable climate, a safe climate that can continue and maintain the huge populations that we've got around the world now?

Tim Flannery: Well that's a very good question. I mean I suppose implicit in James Hansons' comments is the reality that we are living right now with unacceptable climate risk, very high levels of unacceptable risk, and we need to draw that down as quickly as we can. Now if you used these agri-char based technologies and you have your aggressive reaforestation projects for the worlds tropics, you could conceivably be drawing down in the order of 10 to 15 tonnes, gigatonnes sorry, of carbon per annum by about 2030. At that rate we could bring ourselves down below the dangerous threshold as early as the middle of this century, but whether the world can actually get its act together and do that is another matter. This is the first real directed experiment at planetary engineering that we are talking about here, and we don't really have the political structures in place to enable us to implement the technology that we already have. So I would see the change basically as a political one. Its a global political change and the Kyoto process that rolls out now from Potsdam this year and then Copenhagen next year will be the key factors in the success or failure of us humans to do that.

**Sequestration through ag can offset a third of emissions—equivalent in magnitude to shifting to low-carbon energy.**

Claire **Schaffnit-Chatterjee**, 9/19/**2011**. Deutsche Bank Research. “Mitigating climate change through agriculture,” [www.dbresearch.com/PROD/DBR\_INTERNET\_EN-PROD/PROD0000000000278568/Mitigating+climate+change+through+agriculture%3A+An+untapped+potential.pdf](http://www.dbresearch.com/PROD/DBR_INTERNET_EN-PROD/PROD0000000000278568/Mitigating%2Bclimate%2Bchange%2Bthrough%2Bagriculture%3A%2BAn%2Buntapped%2Bpotential.pdf).

The IPCC estimates the global technical potential for GHG mitigation in agriculture production at 5.5 to 6 Gt of CO2 equivalent per year by 2030. These figures do not include improved energy efficiency, biofuels or other changes in demand. This theoretical reduction in emissions, assuming adoption of all technical options is derived mostly (89%) from carbon sequestration in soil, 9% from methane reduction in rice production and livestock/manure management and 2% from nitrous oxide reduction through better cropland management40. It does not take into account fossil fuel offsets from biomass use.¶ The economic potential, taking into account the costs involved, is naturally much lower and depends on carbon prices. For a range of USD 50 to 60 per ton of CO2 eq mitigated, agriculture has a mitigation potential of over 4 billion tons CO2 eq. Even at prices below USD 20 per ton of CO2 eq mitigated, the mitigation potential in agriculture is still substantial at over 1.5 billion tons of CO2 eq. The current price for carbon is 13 EUR per ton.¶ McKinsey identifies terrestrial carbon in agriculture/forestry as one of the three major areas of GHG abatement opportunities (at 12 billion tons of CO2 eq per year in 2030) next to energy efficiency (14 billion) and low-carbon energy supply (also 12 billion). This means that the agriculture/forestry sector accounts for one-third of the total economic abatement potential, while agriculture alone accounts for 12%. In comparison, most of the promising solutions for reducing emissions in the energy sector are still in development and unlikely to be widely used in the next years or maybe decades. Curbing GHG emissions caused by farming practices and deforestation should be cheaper41. Alternative energy systems have the important advantage of lowering GHG emissions by replacing fossil fuels. Many options in the energy sector are subsidized and benefit from high oil prices.¶ The agriculture and forestry sectors provide the crucial possibility of sequestering the carbon already in the atmosphere. Carbon capture and storage from energy-related emissions is technically possible but not doable on a large-scale until 2020 or so42. Most importantly, it is not designed to capture GHGs already present in the atmosphere, which only terrestrial carbon sequestration can do.

**2NC AT: Don’t Solve Global**

**First, doesn’t matter, sequestration means we take carbon out of the atmosphere while massively decreasing U.S. ag emissions. We’ve impacted our internal links above.**

**We solve global emissions just as effectively as the aff—[their evidence says that the U.S. is a global leader that can set trends on environmental issues, that means we could just as easily forge the way for biochar instead of the plan, especially given that imposing a tax on fertilizer is cost-free].**

**Once the U.S. has established a domestic regulation, the political economy changes and businesses will push for the U.S. to take a leadership role expanding that policy internationally.**

Elizabeth R. **DeSombre**, **2010**. Frost Associate Professor of Environmental Studies and associate professor of political science at Wellesley College. “The United States and Global Environmental Politics: Domestic Sources of U.S. Unilateralism,” in Regina Axelrod and Stacy VanDeveer, eds., The Global Environment: Institutions, Law, and Policy, 3rd ed. CQ Press.

A more nuanced view about the extent to which U.S. industry will be able to marshal domestic political efforts to avoid international commitments would focus on specifying aspects of the domestic political process in the United States that allow those opposing international environmental leader- ship to have influence. One argument made on a different issue is that the United States has a set of decentralized political institutions that “empower small veto groups.”56 Peter Cowhey has suggested that “national politicians have been unlikely to accept any global regime that fails to reinforce the pre- ferred domestic regime.”57 Kal Raustiala points out that states rarely create completely new domestic regulatory structures to address international issues, but rather rely on existing institutional structures domestically. That observa- tion suggests that how domestic institutions are structured “influences what can be implemented, and often what is negotiated.”58 This explanation may help us identify either domestic structural determinants of U.S. global envi- ronmental leadership or simply content-based approaches to evaluating the likelihood of eventual U.S. international action on an issue.¶ The United States also has an admirable tradition of accepting only those international environmental obligations with which it intends to comply, unlike some states, including the European Union, that are more likely to see commitments as goals. Other states (such as the former Soviet Union) frequently accept obligations they have no intention of complying with or know that they will not be capable of fulfilling in the near future.59 This propensity may influence the degree to which the United States is willing to take on obligations, limiting them to those with which it intends to comply. Structural constraints only serve to magnify this tendency.¶ Structurally, the separation of powers between the executive and legis- lative branches of government and the fact that the Senate must ratify trea- ties by a two-thirds majority can be seen to have the effect of hindering U.S. international environmental action under certain circumstances. Although a domestic ratification process for treaties exists in most countries, the U.S. barrier is doubly high, requiring not only a supermajority vote but also one in a completely different branch of government. Oona Hathaway notes that the United States is nearly unique in its high barrier to ratification—it is¶ one of only six states worldwide that requires support by a supermajority of a legislative body, and it is one of only a few in which ratification involves automatic incorporation into domestic law.60 Many other advanced indus- trialized democracies operate under parliamentary systems in which the head of government is a member of the majority (or largest) party; thus, treaties submitted to parliament for ratification by the prime minister are likely to be accepted. Some have noted that the willingness of Congress to reassert its control over foreign policy increased in the post–Cold War era, when the need for strong central executive leadership lessened.61 Under this explanation, the two branches of government may be at odds about what a policy should be, resulting in a situation in which the president pushes an international approach that Congress refuses to go along with.¶ That it is the Senate that ratifies treaties by such a supermajority may be especially important. The U.S. Senate is particularly prone to economic pressure from special interest groups. Elections to the Senate ensure that each state is represented by two senators concerned about the issues that matter to their states to a greater degree than those that impact the country as a whole. This focus is an avenue for industry impact. And, as Hathaway points out, the ideological composition of the Senate also means that the two-thirds ratifica- tion threshold requires cooperation among senators on vastly different parts of the political spectrum. If senators serving in the 109th Congress are lined up on an ideological spectrum, the sixty-seventh senator is rated more than twice as conservative as the fifty-first; the same is true in the liberal direc- tion.62 Requiring a two-thirds majority makes agreement orders of magnitude more difficult than requiring a simple majority would. This difference may serve to explain increased U.S. reluctance on international environmental issues compared with other major industrialized states, but it alone cannot explain the variations in degrees of U.S. unilateralism on different environmental issues.¶ What is possible, however, is that the role of the Senate intersects with some characteristics of environmental issues to influence the likelihood of U.S. international leadership on a given issue. The Senate’s consideration and adoption of the Byrd-Hagel resolution is itself an indication of the important congressional role in addressing international environmental policy. The Sen- ate took up this issue on its own, not only without direction from the execu- tive branch, but without making President Clinton even aware, until the last minute, that such a debate would happen. At that point the White House could not hope to stop the adoption of the resolution, and it simply tried to moderate its language.63 In the case of this particular resolution, Democratic senator Robert C. Byrd represented West Virginia, a major coal producer, and Republican senator Chuck Hagel represented Nebraska, where agriculture, the most important economic sector, is highly mechanized and thus sensitive to the price of oil.64¶ What brings these explanations together is the process of domestic con- gressional regulation. One notable consistency with U.S. international environmental leadership is the extent to which the United States had already¶ undertaken domestic regulatory action—on the topic and in the form being considered internationally—at the point at which such action was being pushed internationally. Harold Jacobson’s description of the U.S. experience with environmental multilateralism is telling: he points to the U.S. wave of multilateral environmental diplomacy in the 1970s with the following description: “[A]s soon as U.S. legislation designed to protect and enhance the environment was in place, the United States typically proposed that multilateral treaties be negotiated to achieve the same objective.”65 Note, for example, that a major concern in the U.S. decision about whether to sign or ratify the CBD was the question of whether it could be implemented within the existing legal framework protecting endangered species and land resources. This understanding helps explain particularly well the U.S. reluctance on climate change: the United States not only has no preexisting domestic climate change mitigation policy but also has traditionally rejected any sort of tax on energy. This reluctance has been particularly demonstrated in Congress. One analyst points out that eliminating chemicals under the Stockholm Convention on Persistent Organic Pollutants that the United States has not already banned domestically is a particular sticking point in the effort at ratification.66¶ This analysis does not imply that U.S. industry is always cheerful about adopting international environmental regulations, but it does suggest that the existence of previous regulations on the domestic industry change its interests internationally. The example of ozone depletion, a potentially costly regula- tory issue with a reasonably high degree of uncertainty at the time of interna- tional regulation, is illustrative. Although the history of U.S. regulatory efforts on the subject shows that producers and large consumers of CFCs fought initial regulatory efforts (and invoked scientific uncertainty as well as indus- trial cost as arguments against regulation), industry eventually acquiesced to international regulation. The process began domestically, when consumer purchasing habits and pressure from domestic environmental organizations persuaded Congress to include a ban on CFCs in nonessential aerosols in the 1977 Clean Air Act Amendments. That regulation, which the main produc- ers of CFCs fought from the beginning (and attempted to get repealed after it had passed),67 nevertheless put CFC producers and consumers on notice that they would have to come up with alternatives for at least some of their activities. It also fundamentally changed their incentive structure (especially when they realized that increasingly severe domestic regulations were likely). They then were more likely to support international controls on CFCs so that foreign industries with which they competed internationally would have to be bound by the same costly restrictions.¶ Conclusion¶ U.S. leadership (or even level of participation) in international environ- mental agreements has been mixed, and even can be seen as declining in the last decade and a half. To simply attribute this trend to U.S. unilateral urges¶ misses the opportunity, however, to understand when and why the United States is more or less likely to lead internationally on environmental issues. Within a domestic framework that can make international participation dif- ficult, it is nevertheless possible for the United States to exercise international leadership. It tends to do so on issues it has already addressed domestically and where the form of the domestic regulation fits the format of the inter- national regulation being considered. Under those circumstances, domestic opposition to international action is muted or even avoided because such domestic industries, which have disproportionate influence on the senators who have to vote for ratification of any international agreements, either are not additionally disadvantaged by new international regulations or even wel- come those that restrict the actions of their international competitors. To the extent that the United States returns to global environmental leadership under President Obama, it is at least as likely to be attributable to the change in the composition of the Senate as it is to executive branch leadership.¶ The United States took an early lead in the domestic regulation of many environmental harms in the 1960s and 1970s, and those regulations set the groundwork for many international efforts to deal with the global versions of these problems. It is thus no surprise that the United States would be both willing and able to lead globally in addressing them. To the extent that the United States has more recently ceased in many issue areas to be a domestic innovator on environmental policy, it is also no surprise that the United States resists international action on newer international environmental issues. Although issues such as uncertainty and the effect on the United States of the environmental problem or the costliness of regulatory solutions certainly con- tribute to the difficulty of international regulation, where they are particularly important may be at the level of domestic regulation. Those who would prefer that the United States lead internationally should perhaps focus their efforts at creating the domestic regulations that give it the incentive to do so.

**No impact alliances**

**Bandow 11**—Doug Bandow, senior fellow at the Cato Institute, former special assistant to Ronald Reagan, author of *Foreign Follies: America's New Global Empire* (Xulon) [January 31, 2011, “Solving the Debt Crisis: A Military Budget for a Republic,” http://www.cato.org/pub\_display.php?pub\_id=12746]

More than two decades after the Cold War dramatically ended, the U.S. maintains a Cold War military. America has a couple score allies, dozens of security commitments, hundreds of overseas bases, and hundreds of thousands of troops overseas. Yet international hegemonic communism has disappeared, the Soviet Union has collapsed, Maoist China has been transformed, and pro-communist Third World dictatorships have been discarded in history's dustbin. The European Union has a larger economy and population than America does. Japan spent decades with the world's second largest economy. South Korea has 40 times the GDP and twice the population of North Korea. As Colin Powell exclaimed in 1991, "I'm running out of demons. I'm running out of enemies. I'm down to Castro and Kim Il-sung." Yet America accounts for roughly half of the globe's military outlays. In real terms the U.S. government spends more on the military today than at any time during the Cold War, Korean War, or Vietnam War. It is difficult for even a paranoid to concoct a traditional threat to the American homeland. Terrorism is no replacement for the threat of nuclear holocaust. Commentator Philip Klein worries about "gutting" the military and argued that military cuts at the end of the Cold War "came back to haunt us when Sept. 11 happened." Yet the reductions, which still left America by far the world's most dominant power, neither allowed the attacks nor prevented Washington from responding with two wars. And responding with two wars turned out to be a catastrophic mistake. Evil terrorism is a threat, but existential threat it is not. Moreover, the best response is not invasions and occupations — as the U.S. has learned at high cost in both Afghanistan and Iraq. Rather, the most effective tools are improved intelligence, Special Forces, international cooperation, and restrained intervention. Attempts at nation-building are perhaps even more misguided than subsidizing wealthy industrialized states. America's record isn't pretty. The U.S. wasn't able to anoint its preferred Somali warlord as leader of that fractured nation. Washington's allies in the still unofficial and unstable nation of Kosovo committed grievous crimes against Serb, Roma, and other minorities. Haiti remains a failed state after constant U.S. intervention. The invasion of Iraq unleashed mass violence, destroyed the indigenous Christian community, and empowered Iran; despite elections, a liberal society remains unlikely. After nine years most Afghans dislike and distrust the corrupt government created by the U.S. and sustained only by allied arms. The last resort of those who want America to do everything everywhere is to claim that the world will collapse into various circles of fiery hell without a ubiquitous and vast U.S. military presence. Yet there is no reason to believe that scores of wars are waiting to break out. And America's prosperous and populous allies are capable of promoting peace and stability in their own regions. Indeed, U.S. security guarantees are profoundly dangerous. Intended to deter by making American involvement automatic, they ensure American participation if deterrence fails. Moreover, Washington's defense promises discourage friendly states from defending themselves while encouraging them to take more provocative positions against their potential adversaries. Yet analysts keep coming up with bizarre new duties for the U.S. government. John Guardiano, for one, thinks it is America's responsibility to prepare "to occupy and rebuild North Korea when it implodes." Actually, that should be South Korea's job.

**Terrorism**

**No impact---super unlikely**

**Schneidmiller 9** (Chris, Experts Debate Threat of Nuclear, Biological Terrorism, 13 January 2009, http://www.globalsecuritynewswire.org/gsn/nw\_20090113\_7105.php)

There is an "almost vanishinglysmall" likelihood that terrorists would ever be able to acquire and detonate a nuclear weapon, one expert said here yesterday (see GSN, Dec. 2, 2008). In even the most likely scenario of nuclear terrorism, there are 20 barriers between extremists and a successful nuclear strike on a major city, said John Mueller, a political science professor at Ohio State University. The process itself is seemingly straightforward but exceedingly difficult -- buy or steal highly enriched uranium, manufacture a weapon, take the bomb to the target site and blow it up. Meanwhile, variables strewn across the path to an attack would increase the complexity of the effort, Mueller argued. Terrorists would have to bribe officials in a state nuclear program to acquire the material, while avoiding a sting by authorities or a scam by the sellers. The material itself could also turn out to be bad. "Once the purloined material is purloined, [police are] going to be chasing after you. They are also going to put on a high reward, extremely high reward, on getting the weapon back or getting the fissile material back," Mueller said during a panel discussion at a two-day Cato Institute conference on counterterrorism issues facing the incoming Obama administration. Smuggling the material out of a country would mean relying on criminals who "are very good at extortion" and might have to be killed to avoid a double-cross, Mueller said. The terrorists would then have to find scientists and engineers willing to give up their normal lives to manufacture a bomb, which would require an expensive and sophisticated machine shop. Finally, further technological expertise would be needed to sneak the weapon across national borders to its destination point and conduct a successful detonation, Mueller said. Every obstacle is "difficult but not impossible" to overcome, Mueller said, putting the chance of success at no less than one in three for each. The likelihood of successfully passing through each obstacle, in sequence, would be roughly one in 3 1/2 billion, he said, but for argument's sake dropped it to 3 1/2 million. "It's a total gamble. This is a very expensive and difficult thing to do," said Mueller, who addresses the issue at greater length in an upcoming book, *Atomic Obsession*. "So unlike buying a ticket to the lottery ... you're basically putting everything, including your life, at stake for a gamble that's maybe one in 3 1/2 million or 3 1/2 billion." Other scenarios are even less probable, Mueller said. A nuclear-armed state is "exceedingly unlikely" to hand a weapon to a terrorist group, he argued: "States just simply won't give it to somebody they can't control." Terrorists are also not likely to be able to steal a whole weapon, Mueller asserted, dismissing the idea of "loose nukes." Even Pakistan, which today is perhaps the nation of greatest concern regarding nuclear security, keeps its bombs in two segments that are stored at different locations, he said (see *GSN*, Jan. 12). Fear of an "extremely improbable event" such as nuclear terrorism produces support for a wide range of homeland security activities, Mueller said. He argued that there has been a major and costly overreaction to the terrorism threat -- noting that the Sept. 11 attacks helped to precipitate the invasion of Iraq, which has led to far more deaths than the original event. Panel moderator Benjamin Friedman, a research fellow at the Cato Institute, said academic and governmental discussions of acts of nuclear or biological terrorism have tended to focus on "worst-case assumptions about terrorists' ability to use these weapons to kill us." There is need for consideration for what is probable rather than simply what is possible, he said. Friedman took issue with the finding late last year of an experts' report that an act of WMD terrorism would "more likely than not" occur in the next half decade unless the international community takes greater action. "I would say that the report, if you read it, actually offers no analysis to justify that claim**,** which seems to have been made to change policy by generating alarm in headlines." One panel speaker offered a partial rebuttal to Mueller's presentation. Jim Walsh, principal research scientist for the Security Studies Program at the Massachusetts Institute of Technology, said he agreed that nations would almost certainly not give a nuclear weapon to a nonstate group, that most terrorist organizations have no interest in seeking out the bomb, and that it would be difficult to build a weapon or use one that has been stolen.

**Aff**

**impact defense**

**That turns their offense—bureaucracy means treaties are net worse for problem solving global solutions**

**Bederman 1** [David J., A.B., M.Sc., J.D., Dipl. in Int'l Law, Ph.D., Professor of Law, Emory University School of Law, American Enterprise Institute's annual conference on Sovereignty, “NATIONAL SECURITY: GLOBALIZATION, INTERNATIONAL LAW AND UNITED STATES FOREIGN POLICY,” 50 Emory L.J. 717, Emory University School of Law]

But is there a real **democratic deficit** with international law? Some scholars, pursuing both a Hamiltonian and Jeffersonian idiom in U.S. foreign relations, have argued that there is. 18 And what is surprising with arguments on both sides of the political divide is the extent to which they emulate each other. Critics of WTO trade disciplines argue that the process is captured by commercial special interests that are set on dismantling progressive national or local legislation to protect **labor** or keep the **environment** clean. They express concern at nameless and faceless bureaucrats in Geneva who are dictating changes in national quality-of-life legislation. On the other side of the schism, opponents of the incorporation of international human rights or environmental rules into U.S. law claim that there is another form of regulatory capture at work here. Advocacy groups have hijacked international negotiations and have pursued their own agenda. In both instances, the story is one of insulated and removed decision makers, influenced by special interest elites. As I have already intimated, the backlash against international regimes is really no different than that directed against the U.S. federal government in the 1930s (and 1980s) or against the European Community ("EC") and Brussels in the 1970s and 1990s. The pathologies of accountability and transparency are always going to arise when there is a vertical shift in power. And despite such countervailing political phenomena as federalism (in the United States), devolution (in France and Britain), or subsidiarity (in the European Union), the trend towards concentration of power at some central locus (whether domestic or inter-national) appears to be well documented. [\*728] All this being said, the challenge in meeting the accountability and transparency critiques of the neo-isolationists is to design better international mouse-traps, and, even more importantly, to put in place domestic institutions that can counteract the democratic deficit. In the international arena, the problem is the clubby nature of conference diplomacy and international dispute settlement. The same individuals tend to appear at the same meetings with the same subject matters. It is no wonder that strong epistemic communities grow, and why they are highly resistant to outside scrutiny and pressures. National delegations attend these conferences, oftentimes with only very limited participation by non-governmental representatives. The United States is an exception with its strong tradition of including representatives of interested citizens' groups, industry or trade associations, scientific or technical advisers, and members of Congress on international delegations.

**2nc/1nr—NO Modeling**

**Foreign courts don't look to US rulings**

**Liptak 08** [Adam Liptak, “U.S. Court Is Now Guiding Fewer Nations,” The New York Times, September 18, 2008, pg. http://tinyurl.com/c2dw7jz

WASHINGTON — Judges around the world have long looked to the decisions of the [United States Supreme Court](http://topics.nytimes.com/top/reference/timestopics/organizations/s/supreme_court/index.html?inline=nyt-org) for guidance, citing and often following them in hundreds of their own rulings since the Second World War.

But now American legal influence is waning. Even as a debate continues in the court over whether its decisions should ever cite foreign law, a **diminishing number** of foreign courts seem to pay attention to the writings of American justices.

“One of our great exports used to be constitutional law,” said Anne-Marie Slaughter, the dean of the [Woodrow Wilson](http://topics.nytimes.com/top/reference/timestopics/people/w/woodrow_wilson/index.html?inline=nyt-per) School of Public and International Affairs at Princeton. “We are losing one of the greatest bully pulpits we have ever had.”

From 1990 through 2002, for instance, the Canadian Supreme Court cited decisions of the United States Supreme Court about a dozen times a year, an analysis by The New York Times found. In the six years since, the annual citation rate has fallen by half, to about six.

Australian state supreme courts cited American decisions 208 times in 1995, according to a recent [study](http://works.bepress.com/russell_smyth/1/) by Russell Smyth, an Australian economist. By 2005, the number had fallen to 72.

The story is similar around the globe, legal experts say, particularly in cases involving human rights. These days, foreign courts in developed democracies often **cite the rulings of the** [**European Court** of Human Rights](http://topics.nytimes.com/top/reference/timestopics/organizations/e/european_court_of_human_rights/index.html?inline=nyt-org) in cases concerning equality, liberty and prohibitions against cruel treatment, said Harold Hongju Koh, the dean of the Yale Law School. In those areas, Dean Koh said, “they tend not to look to the rulings of the U.S. Supreme Court.”

The rise of new and sophisticated constitutional courts elsewhere is one reason for the Supreme Court’s fading influence, legal experts said. The new courts are, moreover, generally **more liberal** than the Rehnquist and **Roberts courts** and for that reason more inclined to cite one another.

Another reason is the diminished reputation of the United States in some parts of the world, which experts here and abroad said is in part a consequence of the Bush administration’s unpopularity around the world. Foreign courts are less apt to justify their decisions with citations to cases from a **nation unpopular with their domestic audience**.

“It’s not surprising, given our foreign policy in the last decade or so, that American influence should be declining,” said Thomas Ginsburg, who teaches comparative and international law at the [University of Chicago](http://topics.nytimes.com/top/reference/timestopics/organizations/u/university_of_chicago/index.html?inline=nyt-org).

Aversion to Foreign Law

The adamant opposition of some Supreme Court justices to the citation of foreign law in their own opinions also plays a role, some foreign judges say.

“Most justices of the United States Supreme Court do not cite foreign case law in their judgments,” Aharon Barak, then the chief justice of the Supreme Court of Israel, wrote in the Harvard Law Review in 2002. “They fail to make use of an important source of inspiration, one that enriches legal thinking, makes law more creative, and strengthens the democratic ties and foundations of different legal systems.”

Partly as a consequence, Chief Justice Barak wrote, the United States Supreme Court “is **losing the central role** it once had among courts in modern democracies.”

Justice Michael Kirby of the High Court of Australia said that his court no longer confined itself to considering English, Canadian and American law. “Now we will take information from the Supreme Court of India, or the Court of Appeal of New Zealand, or the Constitutional Court of South Africa,” he said in an interview published in 2001 in The Green Bag, a legal journal. “America” he added, “is in danger of becoming something of a **legal backwater**.”

**Judges don't follow US precedent --- they cite former rulings to bolster their own justifications not to determine how to rule moving forward**

**US is the anti-model --- the plan is just as likely to set the wrong precedent**

**Schor 08** - Professor of Law @ Suffolk University Law School. [Miguel Schor, “Judicial Review and American Constitutional Exceptionalism,” Osgoode Hall Law Journal, Vol. 46, 2008

This article questions the conventional wisdom that the logic of Marbury has conquered the world’s democracies by exploring two questions: why do social movements contest constitutional meaning by fighting over judicial appointments in the United States, and why does such a strategy make little sense in democracies that constitutionalized rights in the late twentieth century?6 The short answer is that the United States has been both a model and an **anti-model** 7 in the worldwide spread of judicial review. The United States stood astride the world after the Second World War and elements of American constitutionalism such as judicial review proved irresistible to democracies around the globe.8 Polities that adopted judicial review in the late twentieth century, however, **rejected the key assumption** on which judicial review in the United States is founded.. American constitutionalism assumes that law is separate from politics and that courts have the power and the duty to maintain that distinction.

This assumption was rejected because other democracies learned from the American experience that courts that exercise judicial review are powerful political as well as legal actors. The **fear of providing** constitutional **courts with too much power** played an important role in shaping judicial review outside the United States. 9 When judicial review began to spread around the globe in the second half of the twentieth century, the hope of Marbury (the promise of constitutionalized rights) became fused with the fear of Lochner 10 (the possibility that courts might run amok). In seeking to thread a needle between Marbury and Lochner , the American assumption that a constitution is a species of law was rejected in favour of a very different baseline assumption that constitutions are neither law nor politics, but an entirely new genus of “political law.” 11Consequently, democracies abroad adopted stronger mechanisms by which **citizens can hold** constitutional **courts accountable** 12and which make it less likely that social forces will use appointments as a vehicle for constitutional battles. Pg. 37-38

**Pepsi challenge --- if \_\_\_\_\_ actually modeled US court decisions then their entire government structure would be the same as the US'**

**Interpreting the implications of regulation decisions is IMPOSSIBLE—all evidence supports**

**RYAN 13 Associate Professor, Lewis & Clark Law School**, Portland, Oregon, U.S.A; Fulbright Professor of Law, Zhongguo Haiyang Daxue (Ocean University), Qingdao, CHINA [Erin Ryan. "The Once and Future Challenges of American Federalism: The Tug of War Within" The Ways of Federalism in Western Countries and the Horizons of Territorial Autonomy In Spain. Ed. Alberto López Basaguren & Leire San-Epifanio. Springer, 2013.]

4.2 Procedural Faithfulness to Federalism Values

The principles of mutual consent that legitimize bargaining in general are the threshold procedural criteria that must be met before advancing to the second stage. The final analysis tests the criteria that render such bargaining not only fair, but constitutionally significant. And to some extent, the analysis begins with a similar story.

Indeed, we can introduce the procedural application of federalism values in terms not unlike those used to explain the principles of mutual consent. Just as individuals turn to negotiation as a legitimizing procedure of allocation, so do state and federal actors to allocate jurisdiction in areas of overlap. And very often, it is for the same basic reason—the lack of any up-front, substantive consensus about the objectively correct result. As history is our witness, Americans seem to have a lot of trouble agreeing at the outset about whether a given regulatory outcome in a context of jurisdictional overlap does or doesn’t satisfy the requirements of constitutional federalism. **Based on overwhelming evidence in the academic, judicial, and political realms**, we can see that it’s not always immediately clear how to interpret the federalism contours of a substantive regulatory policy.150 (At the very least, **what may seem immediately clear to some interpreters proves anything but to others**.)

Perhaps the most persuasive evidence for this proposition is the wealth of federalism decisions that regularly split the U.S. Supreme Court, in which roughly half of the justices determine that the challenged policy is perfectly consistent with federalism while the other half consider it a constitutional violation. For example, compare the majority and dissenting opinions in New York v. United States,151 a famous Tenth Amendment case holding that a Congressional statute forcing states to internalize their own toxic waste had unconstitutionally commandeered state authority—even though the law had been drafted by the states and the plaintiff had actively lobbied Congress to enact it.152 Writing for the majority, Justice O’Connor solemnly reminded the nation that “[w]hatever the outer limits of [state] sovereignty may be, one thing is clear: The Federal Government may not compel the States to enact or administer a federal regulatory program.”153 In near incredulous dissent, Justice White argued that “to read the Court’s version of events… one would think that Congress was the sole proponent of a solution to the Nation’s low-level radioactive waste problem [when the Act] resulted from the efforts of state leaders to achieve a state-based set of remedies to the waste problem. They sought not federal pre-emption or intervention, but rather congressional sanction of interstate compromises they had reached.”154 In this fascinating review of bargained-for encroachment, the two opinions diverge so dramatically that they almost appear to be interpreting different fact patterns. When it comes to federalism interpretation, reasonable minds can (and very frequently do) **disagree**—even the most highly skilled legal minds of the day.

Of course, part of the reason for so many divided-Court federalism decisions is that the individual justices often apply different theories of federalism in reaching their diverging conclusions (indeed, this is one of the core themes of my book). But another important factor, one that is too often missed, has to do with the special difficulty of applying structural federalism directives in specific contexts of jurisdictional overlap, at least in comparison to more straightforward individual rights analysis.155 In a nutshell, the problem is that it can be very difficult to sort out just the federalism considerations that go into a regulated outcome from all the other substantive considerations that must also go into that outcome—for example, to separate out concerns about who should be making health care policy from the complicated substantive elements of health care policy itself. By contrast, it’s much easier to figure out whether the process by which the parties come to an agreement about substantive policy is consistent with constitutional federalism. And the critically important reason for this, as foreshadowed earlier, is that the foundational federalism values are themselves procedural in nature.156

**Our dataset is better and Canada solves the impact**

**Liptak 12** [Adam Liptak, “‘We the People’ Loses Appeal With People Around the World,” The New York Times, February 6, 2012, pg. http://tinyurl.com/88mmfq7

A quarter-century later, the picture looks very different. “The U.S. Constitution appears to be losing its appeal as a model for constitutional drafters elsewhere,” according to [a new study](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1923556) by [David S. Law](http://law.wustl.edu/faculty_profiles/profiles.aspx?id=6629) of Washington University in St. Louis and [Mila Versteeg](http://www.law.virginia.edu/lawweb/faculty.nsf/FHPbI/2301734) of the University of Virginia.

The study, to be published in June in The New York University Law Review, **bristles with data**. Its authors coded and analyzed the provisions of **729 constitutions** adopted by **188 countries** from 1946 to 2006, and they considered **237 variables** regarding various rights and ways to enforce them.

“Among the world’s democracies,” Professors Law and Versteeg concluded, “constitutional similarity to the United States has clearly gone into free fall. Over the 1960s and 1970s, democratic constitutions as a whole became more similar to the U.S. Constitution, only to reverse course in the 1980s and 1990s.”

“The turn of the twenty-first century, however, saw the beginning of a steep plunge that continues through the most recent years for which we have data, to the point that the constitutions of the world’s democracies are, on average, less similar to the U.S. Constitution now than they were at the end of [World War II](http://topics.nytimes.com/top/reference/timestopics/subjects/w/world_war_ii_/index.html?inline=nyt-classifier).”

There are lots of possible reasons. The United States Constitution is terse and old, and it guarantees relatively few rights. The commitment of some members of the Supreme Court to interpreting the Constitution according to its original meaning in the 18th century may send the **signal that it is of little current use** to, say, a new African nation. And the Constitution’s waning influence may be part of a general **decline in American power and prestige**.

In an interview, Professor Law identified a central reason for the trend: the availability of newer, sexier and more powerful operating systems in the constitutional marketplace. “Nobody wants to copy Windows 3.1,” he said.

In a [television interview](http://www.youtube.com/watch?v=vzog2QWiVaA) during a visit to Egypt last week, Justice Ruth Bader Ginsburg of the Supreme Court seemed to agree. “I would not look to the United States Constitution if I were drafting a constitution in the year 2012,” she said. She recommended, instead, the [South African Constitution](http://www.info.gov.za/documents/constitution/), the [Canadian Charter of Rights and Freedoms](http://laws.justice.gc.ca/eng/charter/) or the [European Convention on Human Rights](http://www.hri.org/docs/ECHR50.html).

The rights guaranteed by the American Constitution are parsimonious by international standards, and they are frozen in amber. As [Sanford Levinson](http://www.utexas.edu/law/faculty/svl55/) wrote in 2006 in [“Our Undemocratic Constitution,”](http://www.utexas.edu/law/faculty/slevinson/undemocratic/) “the U.S. Constitution is the most difficult to amend of any constitution currently existing in the world today.” (Yugoslavia used to hold that title, but Yugoslavia did not work out.)

Other nations routinely trade in their constitutions wholesale, replacing them on average every 19 years. By odd coincidence, Thomas Jefferson, in [a 1789 letter to James Madison](http://teachingamericanhistory.org/library/index.asp?document=2220), once said that every constitution “naturally expires at the end of 19 years” because “the earth belongs always to the living generation.” These days, the overlap between the rights guaranteed by the Constitution and those most popular around the world is spotty.

Americans recognize rights not widely protected, including ones to a speedy and public trial, and are outliers in prohibiting government establishment of religion. But the Constitution is out of step with the rest of the world in failing to protect, at least in so many words, a right to travel, the presumption of innocence and entitlement to food, education and health care.

It has its idiosyncrasies. Only 2 percent of the world’s constitutions protect, as the Second Amendment does, a right to bear arms. (Its brothers in arms are Guatemala and Mexico.)

The Constitution’s waning global stature is consistent with [the diminished influence of the Supreme Court](http://www.nytimes.com/2008/09/18/us/18legal.html?ref=americanexception), which “is losing the central role it once had among courts in modern democracies,” Aharon Barak, then the president of the Supreme Court of Israel, [wrote in The Harvard Law Review in 2002](https://litigation-essentials.lexisnexis.com/webcd/app?action=DocumentDisplay&crawlid=1&doctype=cite&docid=116+Harv.+L.+Rev.+16&srctype=smi&srcid=3B15&key=0bacc7c7026c426ae19a031de806c331).

Many foreign judges say they have become less likely to cite decisions of the United States Supreme Court, in part because of what they consider its parochialism.

“America is in danger, I think, of becoming something of a legal backwater,” Justice Michael Kirby of the High Court of Australia said in [a 2001 interview](https://litigation-essentials.lexisnexis.com/webcd/app?action=DocumentDisplay&crawlid=1&doctype=cite&docid=4+Green+Bag+2d+287&srctype=smi&srcid=3B15&key=27e2ae15f94c08a6f86b86181db67a34). He said that he looked instead to India, South Africa and New Zealand.

Mr. Barak, for his part, identified a new constitutional superpower: “Canadian law,” he wrote, “serves as a source of inspiration for many countries around the world.” The new study also suggests that the Canadian Charter of Rights and Freedoms, adopted in 1982, may now be more influential than its American counterpart.

**Compliance**

**AND only the turn accesses an internal link—international law is irrelevant and kills hegemony and deterrence**

**Persaud 4** [Randolph, Associate Professor of International Relations, American University, School of International Service, Shades of American Hegemony: The Primitive, the Enlightened, and the Benevolent, 19 Conn. J. Int'l L. 263]

The third **key characteristic** of primitive hegemony is the reliance on the threat and/or use of coercion, and more specifically military force, to achieve goals. In military terms, the U.S. has, for all practical purposes, achieved 'Full Spectrum Dominance,' and has a stated goal of unchallengeable military supremacy. David Mosler and Bob Catley note that: U.S. conventional forces . . . have the capacity to fight and win wars in most regions of the world and at all levels of intensity. Because of their size and quality, they are superior to any other national forces. Since U.S. forces have the capacity to win MTWs [major-theatre wars], the United States can use force in order to achieve decisive victories and achieve its other objectives. 3 [\*265] Full Spectrum Dominance is the overarching vision of U.S. military preparedness. 4 The Joint Vision 2020 report defines it as "the ability of US forces, operating unilaterally or in combination with multinational and interagency partners, to defeat any adversary and control any situation across the full rage of military operations." 5 Full spectrum dominance is in part tied to the ever-expanding economic interests of the United States in the wider world. Joint Vision 2020 specifically notes that "transportation, communications, and information technology will continue to evolve and foster expanded economic ties." 6 The global economic interests of the United States then is one element of the "strategic context" informing Full Spectrum Dominance. The fourth characteristic of primitive hegemony is that multilateralism, international law, and more broadly, international institutions are generally seen as obstacles to American global objectives, except in those circumstances where the United States is able to have effective veto power over what transpires. The military aspect of this position is clearly articulated in the Joint Vision 2020 report. Thus it states that: The complexity of future operations also requires that, in addition to operating jointly, our forces have the capability to participate effectively as one element of a unified national effort. This integrated approach brings to bear all the tools of statecraft to achieve our national objectives unilaterally when necessary, while making optimum use of the skills and resources provided by multinational military forces, regional and international organizations, non-governmental organizations, and private voluntary organizations ... 7 The American (and British) invasion and occupation of Iraq seems to be a textbook case for the Joint Vision strategy as described above. The U.S. carried out the invasion without U.N. Security Council authorization. It has since been attempting to make use of "the skills and resources provided by multinational military forces." In an extraordinarily candid expression of primitive hegemony, Richard Perle, then Chair of the Defense Policy Board, triumphantly pronounced the United Nations dead, and thanked God for that. 8 The fifth feature of primitive hegemony is actually more of a principle. The principle is that strength is more important than legitimacy, and by implication that when strength is applied in the form of coercion, there will be followers, or at a minimum the will of adversaries may be broken. In geostrategic terms this is based on the notion of positional advantage. 9 Positional advantage, in part, is a strategic [\*266] concept that advocates the diffusion of United States military capability all over the world. In addition to the obvious advantage of being able to rapidly respond to actual conflict theatres world wide, positional advantage is also intended to forge compliant behavior on account of the proximity and preponderance of American military power. Here is what the Joint Vision 2020 report says on that subject: In a conflict, this ability to attain positional advantage allows the commander to employ decisive combat power that will compel an adversary to react from a position of disadvantage, or quit. In other situations, it allows the force to occupy key positions to shape the course of events and minimize hostilities or react decisively if hostilities erupt. And in peacetime, it constitutes a credible capability that influences potential adversaries while reassuring friends and allies. Beyond the actual physical presence of the force, dominant maneuver creates an impact in the minds of opponents and others in the operational area. 10

**US adherence to treaties does not bind other nations to international norms**

**Posner 3** [Eric A., Federal Circuit Court Judge, Kirkland & Ellis Professor of Law, University of Chicago, Matthew Adler, Brian Bix, Jack Goldsmith, David Golove, Michael Moore, David Strauss, Ed Swaine, Adrian Vermeule, Alex Wendt, The Sarah Scaife Foundation Fund, and The Lynde and Harry Bradley Foundation Fund, Do States Have a Moral Obligation to Obey International Law?, The Board of Trustees of Leland Stanford Junior University, Stanford Law Review, 55 Stan. L. Rev. 1901]

We thus expect that states would violate legal obligations more often than individuals do. International law scholars like to say that states almost always obey the law. 28 Franck even argues that international law prevents states from shooting down civilian airliners - the Soviet Union's destruction of Korean Airlines flight 007 only shows how frequently it and other states respect the law. 29 But states would gain nothing by shooting down civilian airplanes. The most plausible reason why states do not violate international law more often than they do is that the law is so **exceedingly weak** - the rules are **vague**, states can **withdraw** from treaties, and so forth - and when the law is not weak, states **frequently violate it**. 30 Imagine a society where there are only a few, weak laws that already reflect people's interests - you must eat at least once every day, you must wear clothes on cold days. The observation that people in this society frequently obey the law is of **little value**. Perhaps, they have an obligation to obey their own laws, but if we know that they would violate laws that impose significant costs - tax laws, for example - then their obligations would extend **only to the weak laws** that are generally respected and not the strong laws that are routinely flouted. International law scholars confuse two separate ideas: (1) a moral obligation on the part of states to promote the good of all individuals in the world, regardless of their citizenship; and (2) a moral obligation to comply with international law. The two are not the same; indeed, they are in tension as long as governments focus their efforts on helping their own citizens (or their own [\*1915] supporters or officers). If all states did have the first obligation (which is an attractive but utopian idea), and they did comply with that obligation, then they would agree to treaties that implement, and engage in customary practices that reflect, the world good; and then they might have an obligation to comply with international law in the same rough sense that individuals have an obligation to comply with laws issued by a good government, or most of them. But this is not our world. In our world, we cannot say that if a particular state complies with international law - regardless of the normative value of the law, and regardless of what other states do, and maybe regardless of the interests of its own citizens, and so forth - or even treated compliance as a presumptive duty, the world would be a better place. 31 It should be clear by now that my argument is confined to the existing international system, where powerful states have more influence than weak states and **compliance is rare**. I do not argue that there is no alternative international system that could generate moral obligations on the part of individuals or states. Indeed, one interpretation of international-law scholarship, and perhaps some veins of political-science scholarship, is that states should comply with international law because doing so would create a culture of international legality, one in which international cooperation would flourish. If states entered into more treaties with stronger and more precise obligations; if they yielded more of their sovereignty to international organizations; if they submitted to multilateral rather than bilateral obligations; and if they relied on better and more transparent international decisionmaking procedures; then international law would be stronger as well as better, and compliance would be deeper and more uniform. I do not have the space to discuss this larger project, but it is worth noting because so much criticism these days is directed at the United States for not entering treaties (like the International Criminal Court treaty) or for (legally) withdrawing from treaties (like the Anti-Ballistic Missile treaty), rather than for violating treaties. It needs to be understood that the assumption that respect for international law, whether in the sense of complying with it or in the sense of creating more of it, will create a culture of international legality does not have [\*1916] any **empirical support**. A government that takes its responsibility to be that of protecting the national interest, and even one that cares about the well-being of citizens in other nations, would be **ill advised to comply** with laws that do neither in the hope that the compliance by itself would help create a culture of international legality.

**AND it is toothless and lacks an enforcement mechanism—that a state could comply, does not mean they will—this turns all of their offense because it makes cooperation impossible**

**Posner 3** [Eric A., Federal Circuit Court Judge, Kirkland & Ellis Professor of Law, University of Chicago, Matthew Adler, Brian Bix, Jack Goldsmith, David Golove, Michael Moore, David Strauss, Ed Swaine, Adrian Vermeule, Alex Wendt, The Sarah Scaife Foundation Fund, and The Lynde and Harry Bradley Foundation Fund, Do States Have a Moral Obligation to Obey International Law?, The Board of Trustees of Leland Stanford Junior University, Stanford Law Review, 55 Stan. L. Rev. 1901]

On the first view, international law is a source of expectations about how states will act under various conditions. If an international law forbids behavior X, then states **might retaliate** against someone who engages in X. But whether they do so or not depends on their own **interests** and **capacities**. Each state makes a cost-benefit **decision**, albeit a sophisticated one that takes account of the reputational consequences of that decision, and it makes such a decision both when deciding whether to comply with an international law and whether to retaliate against another state that violates international law. On the second view, international law is a source of moral obligations that influence states by constraining their prudential decisions. In the Eichmann case, the likelihood that Argentina would be too embarrassed to raise forceful objections to Israel's violation of international law, and that other nations would have no strong interest in keeping Eichmann in Argentina, are legitimate considerations under the prudential view but not the moral view. Under this view it is wrong to break the law even when one can escape sanctions. This Article argues that states do not have a general moral **obligation** to comply with international law.

**AND it is not binding because promises are not obligations**

**Posner 3** [Eric A., Federal Circuit Court Judge, Kirkland & Ellis Professor of Law, University of Chicago, Matthew Adler, Brian Bix, Jack Goldsmith, David Golove, Michael Moore, David Strauss, Ed Swaine, Adrian Vermeule, Alex Wendt, The Sarah Scaife Foundation Fund, and The Lynde and Harry Bradley Foundation Fund, Do States Have a Moral Obligation to Obey International Law?, The Board of Trustees of Leland Stanford Junior University, Stanford Law Review, 55 Stan. L. Rev. 1901]

Before turning to international law, I want to discuss whether states have an obligation to keep their promises. These obligations would not be legal: There is **no international law** requiring states to **keep their promises**. If these obligations exist, then they must be a different kind of obligation. They are worth discussing because they are simpler than obligations under international [\*1906] law, but they are also related, and this preliminary discussion of promises will foreshadow the arguments about international law. Individuals have an obligation to keep their promises, but sometimes they should break their promises. For example, a person should break a promise to help out in a scheme that turns out to be harmful. The competing obligation not to harm others defeats the obligation to keep a promise. A promise is a reason to act in a certain way - to perform the promise - but it is not a **conclusive reason** to act in that way. If one promises to do X, one creates the expectation that one will do X unless one has a special reason other than a disinclination resulting from a change in one's private interests. 10 One might argue that when states make promises, they must be creating obligations for themselves; that is what it means to make a promise.

**AND compliance to international law just proves correlation not causality**

**Goldsmith 99** [Jack L., Eric A. Posner, Professor of Law at the University of Chicago, A Theory of Customary International Law, University of Chicago Law Review, 66 U. Chi. L. Rev. 1113]

Our theory suggests that international behavioral regularities associated with customary international law may reflect coincidence of interest or coercion. These cases have no normative content, for states independently pursue their self-interest without generating gains from interaction. The theory also suggests that some international behavioral regularities associated with CIL will reflect cooperation or coordination, but these regularities will arise in bilateral, not multilateral, interactions. Our theory differs from the standard conception of CIL in several fundamental respects. It rejects the usual explanations of customary international law based on legality, morality, and related concepts. States do not comply with customary international law because of a sense of moral or legal obligation; rather, customary international law emerges from the states' pursuit of self-interested policies on the international stage. In addition, our theory rejects the traditional claim that the behaviors associated with customary international law reflect a unitary logic. These behaviors instead reflect different logical structures that describe discrete, historically contingent contexts. Finally, our theory is skeptical of the existence of multilateral behavioral regularities that are typically thought to constitute customary international law. It holds that multinational regularities will reflect coincidence of interest or coercion, and that regularities that reflect cooperation or coordination arise only in bilateral contexts.

**Impact**

**Forsyth and Griffith, ‘7**

**Muerllr?**