### Contention 1 is the Science

#### US commitment to science is in question globally – expanding leadership is critical Science Diplomacy which solves a laundry list of scenarios

**Federoff, 8** - professor @ Penn State, National Medal of Science Recipient, Master @ Syracuse University, PhD @ Rockefeller University, National Science Board, Science and Technology Adviser to Sec. of State (Nina V., Statement before Congress, “Making Science Diplomacy More Effective”, 4-2-11, http://www.gpo.gov/fdsys/pkg/CHRG-110hhrg41470/html/CHRG-110hhrg41470.htm)  
Chairman Baird, Ranking Member Ehlers, and distinguished members of the Subcommittee, thank you for this opportunity to discuss science diplomacy at the U.S. Department of State. The U.S. is recognized globally for its leadership in science and technology. Our scientific strength is both a tool of ``soft power''--part of our strategic diplomatic arsenal--and a basis for creating partnerships with countries as they move beyond basic economic and social development. Science diplomacy is a central element of the Secretary's transformational diplomacy initiative, because science and technology are essential to achieving stability and strengthening failed and fragile states. S&T advances have immediate and enormous influence on national and global economies, and thus on the international relations between societies. Nation states, nongovernmental organizations, and multinational corporations are largely shaped by their expertise in and access to intellectual and physical capital in science, technology, and engineering. Even as S&T advances of our modern era provide opportunities for economic prosperity, some also challenge the relative position of countries in the world order, and influence our social institutions and principles. America must remain at the forefront of this new world by maintaining its technological edge, and leading the way internationally through science diplomacy and engagement. The Public Diplomacy Role of Science Science by its nature facilitates diplomacy because it strengthens political relationships, embodies powerful ideals, and creates opportunities for all. The global scientific community embraces principles Americans cherish: transparency, meritocracy, accountability, the objective evaluation of evidence, and broad and frequently democratic participation. Science is inherently democratic, respecting evidence and truth above all. Science is also a common global language, able to bridge deep political and religious divides. Scientists share a common language. Scientific interactions serve to keep open lines of communication and cultural understanding. As scientists everywhere have a common evidentiary external reference system, members of ideologically divergent societies can use the common language of science to cooperatively address both domestic and the increasingly trans-national and global problems confronting ~~human~~ity in the 21st century. There is a growing recognition that science and technology will increasingly drive the successful economies of the 21st century. Science and technology provide an immeasurable benefit to the U.S. by bringing scientists and students here, especially from developing countries, where they see democracy in action, make friends in the international scientific community, become familiar with American technology, and contribute to the U.S. and global economy. For example, in 2005, over 50 percent of physical science and engineering graduate students and postdoctoral researchers trained in the U.S. have been foreign nationals. Moreover, many foreign-born scientists who were educated and have worked in the U.S. eventually progress in their careers to hold influential positions in ministries and institutions both in this country and in their home countries. They also contribute to U.S. scientific and technologic development: According to the National Science Board's 2008 Science and Engineering Indicators, 47 percent of full-time doctoral science and engineering faculty in U.S. research institutions were foreign-born. Finally, some types of science--particularly those that address the grand challenges in science and technology--are inherently international in scope and collaborative by necessity. The ITER Project, an international fusion research and development collaboration, is a product of the thaw in superpower relations between Soviet President Mikhail Gorbachev and U.S. President Ronald Reagan. This reactor will harness the power of nuclear fusion as a possible new and viable energy source by bringing a star to Earth. ITER serves as a symbol of international scientific cooperation among key scientific leaders in the developed and developing world--Japan, Korea, China, E.U., India, Russia, and United States--representing 70 percent of the world's current population. The recent elimination of funding for FY08 U.S. contributions to the ITER project comes at an inopportune time as the Agreement on the Establishment of the ITER International Fusion Energy Organization for the Joint Implementation of the ITER Project had entered into force only on October 2007. The elimination of the promised U.S. contribution drew our allies to question our commitment and credibility in international cooperative ventures. More problematically, it jeopardizes a platform for reaffirming U.S. relations with key states. It should be noted that even at the height of the cold war, the United States used science diplomacy as a means to maintain communications and avoid misunderstanding between the world's two nuclear powers--the Soviet Union and the United States. In a complex multi-polar world, relations are more challenging, the threats perhaps greater, and the need for engagement more paramount. Using Science Diplomacy to Achieve National Security Objectives The welfare and stability of countries and regions in many parts of the globe require a concerted effort by the developed world to address the causal factors that render countries fragile and cause states to fail. Countries that are unable to defend their people against starvation, or fail to provide economic opportunity, are susceptible to extremist ideologies, autocratic rule, and abuses of ~~human~~ rights. As well, the world faces common threats, among them climate change, energy and water shortages, public health emergencies, environmental degradation, poverty, food insecurity, and religious extremism. These threats can undermine the national security of the United States, both directly and indirectly. Many are blind to political boundaries, becoming regional or global threats. The United States has no monopoly on knowledge in a globalizing world and the scientific challenges facing ~~human~~kind are enormous. Addressing these common challenges demands common solutions and necessitates scientific cooperation, common standards, and common goals. We must increasingly harness the power of American ingenuity in science and technology through strong partnerships with the science community in both academia and the private sector, in the U.S. and abroad among our allies, to advance U.S. interests in foreign policy.

#### Thats an impact filter

The Royal Society, 10 – a Fellowship of more than 1400 outstanding individuals from all areas of science, mathematics, engineering and medicine, who form a global scientific network of the highest calibre. The Fellowship is supported by over 130 permanent staff with responsibility for the day-to-day management of the Society and its activities. (January, 2010, “New frontiers in science diplomacy”)  
Cooperation on the scientific aspects of sensitive issues may sometimes be the only way to initiate a wider political dialogue. The soft power of science, and the universality of scientific methods, can be used to diffuse tensions even in ‘hard power’ scenarios, such as those relating to traditional military threats. For example, technologies to verify nuclear arms control agreements were a rare focus of joint working between the US and USSR during the Cold War. Lessons from the Cold War are once again highly pertinent. In the run-up to the May 2010 Review Conference of the Nuclear Non-Proliferation Treaty (NPT), nuclear disarmament is firmly back on the international agenda. However, the timescale for disarmament is long, as illustrated by the history of negotiations over the Chemical Weapons Convention. After the Geneva Convention banned the use of chemical weapons in 1925, negotiations for a treaty banning their production and stockpiling did not start until the 1980s, and the convention entered into force only in 1997. Even now, stockpiles of chemical weapons in the US and Russia have yet to be destroyed. So focusing in 2010 on the challenges of the final stages of a nuclear disarmament process may be premature. A more practical next step could be to establish the scientific requirements for the verification regime necessary to support future stages of negotiation (Pregenzer 2008). In 2008, the Norwegian Minister of Foreign Affairs suggested that a high-level Intergovernmental Panel on Nuclear Disarmament could be established (based on the model of the Intergovernmental Panel on Climate Change). This panel could begin by identifying the scientific and technical aspects of disarmament, and then set out a research agenda necessary to achieve them. International cooperation would be essential, both between nuclear and non-nuclear weapon states, as all would need to have confidence that reductions are taking place. The recent initiative between the UK and Norwegian governments on disarmament verifi cation sets a precedent here, and could be expanded to include additional States (VERTIC 2009). However, security threats now extend beyond the military domain, with environmental security attracting particular attention (Abbott C, Rogers P & Sloboda S 2007). Essential resources, such as freshwater, cultivable land, crop yields and fish stocks, are likely to become scarcer in many parts of the world, increasing the risk of competition over resources within and between states (UNEP 2009). This could intensify as previously inaccessible regions, such as the Arctic Ocean, open up as a consequence of climate change and ice melt. Substantial parts of the world also risk being left uninhabitable by rising sea levels, reduced freshwater availability or declining agricultural capacity. Many of the regions that are vulnerable to the impacts of these multiple stresses are already the locus of existing instability and conflict (see Figure 2). 5 Conclusions The main conclusions to emerge from the discussions at the Royal Society/AAAS meeting were as follows: 5.1 The three dimensions of science diplomacy The concept of science diplomacy is gaining increasing currency in the US, UK, Japan and elsewhere. It is still a fluid concept, but can usefully be applied to the role of science, technology and innovation in three related areas: • informing foreign policy objectives with scientific advice (science in diplomacy); • facilitating international science cooperation (diplomacy for science); • using science cooperation to improve international relations between countries (science for diplomacy). 5.2 Science and universal values Scientific values of rationality, transparency and universality are the same the world over. They can help to underpin good governance and build trust between nations. Science provides a non-ideological environment for the participation and free exchange of ideas between people, regardless of cultural, national or religious backgrounds. 5.3 The soft power of science Science is a source of what Joseph Nye terms ‘soft power’ (Nye 2004). The scientific community often works beyond national boundaries on problems of common interest, so is well placed to support emerging forms of diplomacy that require non-traditional alliances of nations, sectors and non-governmental organisations. If aligned with wider foreign policy goals, these channels of scientific exchange can contribute to coalition building and conflict resolution. Cooperation on the scientific aspects of sensitive issues—such as nuclear nonproliferation—can sometimes provide an effective route to other forms of political dialogue. Similarly the potential of science as an arena for building trust and understanding between countries is gaining traction, particularly in the Middle East and wider Islamic world (see Case study 1). 5.4 Motivations for science diplomacy Science diplomacy seeks to strengthen the symbiosis between the interests and motivations of the scientific and foreign policy communities. For the former, international cooperation is often driven by a desire to access the best people, research facilities or new sources of funding. For the latter, science offers useful networks and channels of communication that can be used to support wider policy goals. Foreign ministries should place greater emphasis on science within their strategies, and draw more extensively on scientific advice in the formation and delivery of policy objectives. In the UK, the appointment of Professor David Clary FRS as the Chief Scientific Adviser at the Foreign and Commonwealth Office creates an important opportunity to integrate science across FCO priorities, and develop stronger linkages with science-related policies in other government departments. Mechanisms to help achieve this could include: • ensuring messages about the value of science are promulgated throughout foreign ministries and embassies, including to all Heads of Mission; • incorporating science policy training into induction courses and training for foreign ministry staff, and specialist diplomatic training for dedicated science officers; • involving more scientists in foreign ministries to advise at senior and strategic levels; • encouraging the recruitment of science graduates as part of the general intake to the foreign service; • encouraging secondments and pairing between diplomats and scientists; • encouraging independent scientific bodies to provide science policy briefi ngs for foreign ministry and embassy staff.

#### Specifically expanding atmospheric science is critical to solve ozone depletion – the brink is now

**NOAA** National Oceanic and Atmospheric Administration **2013** Stratospheric Ozone Layer Depletion and Recovery http://www.esrl.noaa.gov/research/themes/o3/ ajh

In each year beginning in the early 1980s the stratospheric ozone layer over Antarctica has thinned dramatically and abnormally during springtime. Smaller decreases in stratospheric ozone amounts also have been observed over this same period in most other regions of the stratosphere. Subsequent study by scientists, including those from NOAA, revealed that the decline in ozone was attributable to accumulation of certain ~~human~~-made chemicals in the atmosphere. NOAA's role as a steward of the atmospheric environment has enabled it to play a central role in enhancing our understanding of the ozone layer and ozone layer depletion, and in gauging the effectiveness of measures taken to restore the ozone layer to its original strength. NOAA is charged to track the amount of ozone in the stratosphere (referred to here as the "thickness" of the stratospheric ozone layer, and the atmospheric burden of ozone-depleting compounds and their alternatives. NOAA additionally provides fundamental studies of the atmosphere and atmospheric processes to further our understanding of stratospheric ozone depletion and of the potential for recovery the ozone layer. Mass fraction of submicron particles found in different areas of the world.Source: Scientific Assessment of Ozone Depletion: 2002, World Meteorological Organization, Global Ozone Research and Monitoring Project, Report No. 47 Antarctic "ozone hole". Total ozone values are shown for high southern latitudes as measured by a satellite instrument. The dark regions over the Antarctic continent show the severe ozone depletion now found in every spring. Minimum values of total ozone inside the ozone hole are close to 100 Dobson units (DU) compared with normal springtime values of about 300 DU [...]. In late spring or early summer (November- December) the ozone hole disappears as ozone-depleted air is displaced and diluted by ozone-rich air from outside the ozone hole. What is the Stratospheric Ozone Layer and Ozone Layer Depletion? Most ozone is found in a layer more than 10 kilometers (6 miles) above the Earth. This stratospheric ozone layer prevents the Sun's harmful, high-energy radiation from reaching Earth's surface. Ozone in the stratosphere is constantly being created and destroyed by the action of light and photochemistry. The thickness of the ozone layer depends upon the balance of many different processes. The accumulation of chlorofluorocarbons and other ozone-depleting gases in the atmosphere as a result of ~~human~~ activities have altered this balance so that the ozone layer has become depleted. The depletion has been dramatic over certain regions of the globe since the 1980s, such as above Antarctica during September- October, but is less severe in other regions. Why is it important? While ozone is only a very small part of the atmosphere (<0.001%), it plays a critical role in preventing high-energy solar radiation from reaching Earth's surface. The ozone layer acts as a shield for the planet that prevents dangerous radiation from reaching the biosphere, where ~~human~~s, plants, and animals reside. The small amount of this high energy, ultraviolet radiation that normally reaches Earth's surface is responsible for sunburn, skin cancer, cataracts, and damage to genetic material. The depletion of ozone in the ozone layer results in increased amounts of this damaging radiation reaching Earth's surface and an increased occurrence of these problems in ~~human~~s and other living beings. Stratospheric Ozone Background Information 20 Questions and Answers About Ozone What do we know about ozone depletion and recovery? The stratospheric ozone layer has become substantially depleted throughout much of the globe since the 1980s because of enhanced ~~human~~ production and use of ozone- depleting chemicals, such as chlorofluorocarbons, halons, and others, during the 20th century. UV radiation increases in areas where the ozone layer has thinned. Ozone-depleting chemicals include those that contain chlorine or bromine and that are not easily removed from the atmosphere by chemical degradation or dissolution in clouds and rain. Atmospheric observations of these chemicals during the latter part of the 20th century showed dramatic increases that could be directly traced to the amounts produced by ~~human~~s. By 1980, the amounts of chlorine and bromine from these chemicals soon far surpassed the smaller amounts of atmospheric chlorine and bromine arising from natural processes. The abnormally high quantities of atmospheric chlorine and bromine began altering the balance of ozone in the stratosphere so as to dramatically thin the ozone layer. Since the 1980s the most severe ozone layer depletion has been regularly observed over Antarctica during spring, when ozone levels drop by over 95% and UV radiation reaching Earth's surface increases substantially. Less intense depletion of ozone occurs above the Arctic and in mid-latitudes of both hemispheres. Global total ozone changes.Source: Scientific Assessment of Ozone Depletion: 2002, World Meteorological Organization, Global Ozone Research and Monitoring Project, Report No. 47 Global total ozone changes. Global total ozone values decreased by an average of a few percent in the last two decades, as measured by satellite instruments. In the top panel, global ozone changes are compared with average global ozone found in the period of 1964 to 1980. Between 1980 and 2000, the largest decreases occurred following the volcanic eruption of Mt. Pinatubo in 1991. In the 1997 to 2001 period global ozone was reduced by about 3% from the 1964- 1980 average. In the bottom panel, ozone changes between 1980 and 2000 are compared for different latitudes. The largest decreases have occurred at the highest latitudes in both hemispheres because of the large winter/spring depletion in polar regions. The losses in the Southern Hemisphere are greater than those in the Northern Hemisphere because of the greater losses that occur each year in the Antarctic stratosphere. Long-term changes in the tropics are much smaller because reactive halogen gases are not abundant in the tropical lower stratosphere. As a result of the discovery of ozone depletion and the scientific advances that delineated its causes, efforts to reduce the production, and ultimately the atmospheric concentrations, of ozone-depleting chemicals were begun in the late 1980s through the ratification of the Montreal Protocol on Substances that Deplete the Ozone Layer by many countries across the globe. This international Protocol and its subsequent revisions and amendments have resulted in a turnaround in the atmospheric abundance of most ozone-depleting chemicals. While atmospheric levels of ozone-depleting chemicals were rapidly increasing before the Protocol was ratified, emissions of nearly all of these chemicals have declined substantially and atmospheric levels of most of these gases have decreased in the intervening 2 decades. Measurements show that depletion of the ozone layer steadily worsened during the 1980s and most of the 1990s, but more recently as atmospheric amounts of chlorine and bromine have stabilized, a further worsening of ozone depletion appears to have been avoided. In the mid-latitude stratosphere, for example, the decreases in the ozone layer seen in the 1980s and 1990s have not continued. Continued declines in ozone-depleting gases are expected to allow for a recovery of the ozone layer, but not until the middle of the 21st century. The long time scale for this recovery arises because ozone depleting gases such as chlorofluorocarbons are only removed from the atmosphere by natural processes at very slow rates. Halogen source gas changes.Source: Scientific Assessment of Ozone Depletion: 2002, World Meteorological Organization, Global Ozone Research and Monitoring Project, Report No. 47 Halogen source gas changes. The rise in effective stratospheric chlorine values in the 20th century has slowed and reversed in the last decade (top panel). Effective chlorine values combine the measured or projected abundances of chlorine-containing gases with those of brominecontaining gases in a way that properly accounts for the greater effectiveness of bromine in depleting stratospheric ozone. As effective chlorine decreases in the 21st century, the potential for ozone depletion from halogen gases will also decrease. The decrease in effective chlorine values is a result of reductions in individual halogen source gas emissions. The emissions decreased because of the Montreal Protocol, which restricts production and consumption of manufactured halogen gases. The changes in the atmospheric abundance of individual gases are shown in the lower panels using a combination of direct atmospheric measurements, estimates of historical abundance, and future projections of abundance. The increases of CFCs, along with those of CCl4 and CH3CCl3, have either slowed significantly or reversed in the last decade. HCFCs, which are being used as CFC substitutes, will continue to increase in the coming decades. Some halon abundances will also grow in the future while current halon reserves are being depleted. Smaller relative decreases are expected for CH3Br in response to restrictions because it has substantial natural sources. CH3Cl has large natural sources and is not regulated under the Montreal Protocol. Contributions to International Efforts United Nations Environment Programme Scientific Assessment of Ozone Depletion International Panel on Climate Change (IPCC) World Meteorological Organization Global Atmospheric Watch (WMO/GAW) What don't we know? Progress continues on reducing atmospheric amounts of chlorine and bromine so as to allow for the recovery of the ozone layer. Continued declines in emissions of chlorine and bromine gases are necessary for a full recovery of the ozone layer- but will occur only with strict adherence to the restrictions outlined in the fully revised and amended Protocol. Furthermore, future levels of bromine and chlorine depend upon natural processes removing these gases from the atmosphere as they have in the past, despite changes in atmospheric temperatures, circulation, etc. Hence, there exists uncertainty in how the levels of bromine and chlorine will change in the future. If by 2050 bromine and chlorine returned to the levels present in 1980 and every other aspect of the atmospheric environment were unchanged, we would expect a full recovery of the ozone layer. Other aspects (temperature, winds, etc.) of the atmospheric environment and chemicals other than halocarbons can also influence the ozone layer. Changes in these features have been observed and will undoubtedly continue to change in the future. Because the interactions between ozone, temperature, mixing rates, water vapor (and other chemicals) are complex and multi-faceted, accurate predictions of the future ozone layer's health in the face of predicted or unexpected changes are difficult. Changes in ozone depletion may also affect climate change, and many of the chemicals involved in ozone depletion and their substitutes also can influence climate. These interactions at this time are very uncertain. Efforts are currently underway to explore the range of potential future atmospheric conditions and how they might influence the health of the ozone layer. What is NOAA's role? NOAA is responsible for monitoring the stratospheric ozone layer and ozone-depleting gases and it plays a large role in making the fundamental measurements of other atmospheric variables (water vapor, nitrous oxide, aerosols, etc.) that influence the ozone layer. NOAA scientists are leading efforts in assessing alternative chemicals for possible use as replacements to ozone depleting gases through laboratory study. NOAA is also responsible for synthesizing this information to allow for a comprehensive picture of the ozone layer, its changes, and how it might change in the future. As a result of these activities, NOAA has led the effort to guide the recovery of the ozone layer, to ensure the recovery proceeds as expected, and to note areas or action that might allow a faster recovery or hinder recovery. Measurements of ozone-depleting gases provide a means by which adherence to international protocols can be assessed. Measurements of ozone allow one to discern if the policy actions are having their desired effect. Studies of potential climate change effects (e.g., changes in temperature, circulation, or the abundance of other chemicals) allow for much less ambiguity in accurately attributing any observed changes in the ozone layer to their appropriate cause. These NOAA activities constitute a large part of the global scientific effort to understand stratospheric ozone depletion and recovery. NOAA's scientists not only are involved in maintaining a large portion of the world air sampling and measurement network, but also provide the calibration necessary for an integrated network and serve on several advisory groups and expert committees for assuring quality control, improving understanding, and identifying future needs. Only through careful management and interpretation of accurate, high-resolution measurements can we manage our environmental resources efficiently and effectively. What will we need to know in the future? Ozone depletion is still at its peak-ozone levels in many regions of the global are as low as they have ever been. Indications of a recovery are beginning to be seen, though we've got a long way to go before the problem can be regarded as solved. Continued monitoring and process studies of ozone and ozone-depleting gases are required if we hope to be able to discern if the ozone layer is recovering as expected, or whether additional actions are necessary to ensure the recovery of the ozone layer. Continued scientific advances in understanding processes and their simulation in atmospheric models are needed to understand how secondary influences will affect ozone. This is particularly important as the burdens of Cl and Br diminish. These include the influences of a changing climate, altered air mixing and transport rates, energy exchange, and changes in the composition of the atmosphere (e.g., water vapor, methane, nitrous oxide, aerosols, etc.), all of which can influence stratospheric ozone. Only through additional study and incorporation in improved models will we accurately predict how the interplay of the multitude of factors affecting stratospheric ozone layer will respond to declines in chlorine and bromine. What are the benefits for society of NOAA's activities? NOAA's activities are focused on ensuring a recovery of the ozone layer so that it once again provides protection to all life from the Sun's harmful UV radiation. These activities can guarantee that the efforts heal the ozone layer stay on course and do not become sidetracked by unknown and unforeseen events or occurrences. Through its meticulous monitoring of the atmospheric composition and scientific expertise in understanding processes and modeling, as well as the search for CFC alternatives, NOAA provides much of the global scientific foundation for understanding the ozone layer and its changes.

#### New developments trump recovery – prefer our ev

Sharon **Begley** writer at the Smithsonian mag, cites Jim Anderson an atmospheric science researcher, phd, at Harvard, and Kerry Emanuel, an atmospheric scientist at MIT, “The Ozone Problem is Back – And Worse Than Ever” **2013**

The rest of the world may have thought the ozone problem had been solved, but Anderson wasn’t so sure. He persisted in his high-altitude research forays. ER-2 flights from Bangor, Maine, in 1992, found “extremely high ClO over the United States,” he recalls. In 2000, flights from Sweden showed that “the arctic was beginning to emulate” the “massive ozone loss” over Antarctica, as he put it. (The Sweden mission was slightly delayed when a Russian general, who was scheduled to fly in a DC-8 chase plane with Anderson as the spy plane flew over Russia, vanished briefly. Anderson thought he had been going to the head, but the general was taking forever. It turned out he was conferring by phone with officials in the Kremlin, telling them one last time that the U-2 they’d soon notice in Russia’s skies was doing science, not espionage, and to please not shoot it down.) Those discoveries should have served as a wake-up call that, for all the good the Montreal Protocol did, ozone loss was not a thing of the past. “But NASA [which had funded much of Anderson’s work] said we’re declaring victory against ozone loss and going after climate change by studying clouds,” he says. Among the many unknowns about how climate will change in a world warmed by a blanket of greenhouse gases—mostly carbon dioxide from burning fossil fuels—is whether clouds will slow or accelerate global warming. Anderson decided to tackle one piece of that puzzle: the formation of cirrus clouds. Clouds, of course, are made of water vapor. On summertime flights to measure water vapor starting in 2001, Anderson’s team kept getting “deadly boring” results, the same 4.5 to 5 parts per million of water in the stratosphere. In 2005 and 2007, however, flights over Florida and then Oklahoma found “to our shock and surprise,” Anderson says, that thunderstorms were injecting water molecules as high as 12 miles into the stratosphere, reaching the ozone layer. It wasn’t a rare event, either: About half the flights found the high-altitude water. As Anderson and his colleagues wrote with the usual academic understatement in Science last summer, “What proved surprising is the remarkable altitude to which large concentrations of water vapor are observed to penetrate.” “I went to NASA and said we have a big problem here,” says Anderson. Go away, the agency told him; we’ve moved on, now that the world had solved the ozone problem by phasing out CFC production. Anderson persisted (again) and began writing more and more insistent letters up the NASA chain of command. He finally got a sympathetic hearing from Ken Jucks, manager for the agency’s Upper Atmosphere Research Program. Together, they wrested enough financial support for Anderson to keep his team together and analyze what the raw data from the flights were trying to tell him. What happens is that the strong thunderstorms—those about 30 miles across—create powerful updrafts, essentially gaseous elevators that carry warm, humid air miles into the atmosphere. Usually, the gaseous elevator stops short of the stratosphere. But if a storm is strong enough, the updraft can blast through the boundary between the lower atmosphere and the stratosphere, reaching the latter and spreading 60 miles or more in all directions and remaining there for days. The concentration of water in the stratosphere more than triples. The more water, the more ozone loss, through a sequence that begins with the fact that as the air rises, it cools. (To test this, put your hand against the window of an airplane the next time you fly.) The water vapor condenses out as liquid water, much as the steam from your shower turns liquid when it hits a cold bathroom mirror. Condensation releases heat. That raises the temperature of the surrounding air, which contains CFCs left over from the days before they were banned. The heat alters CFC molecules in such a way as to make them more reactive; specifically, sunlight breaks apart the chlorine molecules in CFCs, producing ClO, the same free radical whose detection by Anderson’s team provided the final proof that CFCs destroy ozone over Antarctica. That free radical, Anderson’s latest work showed, is also—thanks to powerful thunderstorms—chomping its way through the ozone layer over the U.S. As a result, ozone is depleted 100 times faster in an area affected by thunderstorms than in an area that is not. About 13 to 21 percent of the ozone is destroyed after four days, with losses of 4 to 6 percent over the next few days. All told, 25 to 30 percent of the ozone over a 60- by 60-mile area could be destroyed, with the effect persisting for weeks. Sunlight eventually replenishes the molecule, converting ordinary oxygen into it; one big remaining question is whether ozone destruction or replenishment will come out ahead. The region the storm-tossed water reaches, 9 to 12 miles up, contains about 20 percent of the ozone column in the summer over the U.S. “The system reacts much more quickly than we expected,” says Anderson. “We don’t know how long that lasts, but it may be many days or weeks.” If the intensity and frequency of powerful summertime thunderstorms increased as a result of climate change, he and his colleagues wrote, then “decreases in ozone and associated increases in UV dosage would also be irreversible”—at least until there are no more manmade chlorine or other ozone-eating chemicals in the atmosphere. In 80 years or so, CFCs from the air conditioner in your 1965 Mustang, the spray cans that were part of your morning grooming and every other source will have finally dissipated, eliminating the threat to ozone. Accordingly, that means we’ll have to hang on for another eight decades with possibly more people dying from skin cancer and more crops wilting under the intense UV rays. To be sure, the idea of ozone-killing storms is not a slam-dunk at this point. The weakest link in the chain of evidence is whether climate change is indeed bringing more powerful and more frequent thunderstorms. “We haven’t a clue whether that’s happening,” says MIT’s Emanuel, “but Jim’s work shows that we better pay attention to the connection” between climate change and thunderstorms. Anderson acknowledges the uncertainty—“we can’t write down a precise equation between carbon dioxide and storms”—but is convinced the link is there, partly because rising levels of greenhouse gases have already been accompanied by weird rainfall patterns: Since the late 1950s, the percentage of rainfall coming in deluges has increased some 70 percent in the Northeast and 30 percent in the Midwest, for instance. Climate scientist James Hansen believes Anderson is right: “What we call ‘moist convection’ will penetrate higher into the atmosphere as the climate becomes warmer,” he says. Anderson’s work brings the science of ozone loss full circle. Years before some scientists suspected that chlorine from CFCs attacked strato­spheric ozone, others warned that supersonic aircraft such as the now-retired Concorde could deplete the ozone layer because its exhaust left water molecules in the stratosphere. Jim Anderson showed that something much more common—the thunderstorms that characterize American summers as reliably as watermelon and hot dogs—can provide the ozone-destroying water. “We thought we’d solved the problem of ozone depletion,” says Anderson, “but we haven’t. If anything, it could be made much worse than we thought by climate change.”

#### Independently that results in extinction

FES, 9 [“The Ozone Layer”, 2-17-09, http://festiveearth.com/index27739.pdf?option=com\_content&do\_pdf=1&id=96]

The ozone layer is essential for ~~human~~ life.  It is able to absorb much harmful ultraviolet radiation, preventing penetration to the earths surface.  Ultraviolet radiation (UV) is defined as radiation with wavelengths between 290-320 nanometers, which are harmful to life because this radiation can enter cells and destroy the deoxyribonucleic acid (DNA) of many life forms on planet earth.  In a sense, the ozone layer can be thought of as a UV filter or our planets built in sunscreen (Geocities.com, 1998).  Without the ozone layer, UV radiation would not be filtered as it reached the surface of the earth.  If this happened, cancer would break out and all of the living civilizations, and all species on earth would be in jeopardy. Thus, the ozone layer essentially allows life, as we know it, to exist.

#### Specifically it kills phytoplankton

Charles **Welch** Ozone Hole Consequence, cites, Dr Patrick Neale, of the Smithsonian Environmental Research Center , researcher at Ozone Hole Inc, received an award from UN environmental protection division, pretty cool **2013** <http://www.theozonehole.com/consequences.htm> ajh

The Southern Ocean is one of the world's most productive marine ecosystems, home to huge numbers of penguins, seals, and bottom plants, and a major supplier of nutrients carried to other parts of the world by undersea currents. Little is known about the effect of UV-B on marine life, particularly the microscopic algae called phytoplankton that form the foundation of the undersea food chain. These tiny plants capture the sun's energy through photosynthesis, providing food for microscopic animals. phytoplankton images They are eaten by krill, which sustain the Antarctic's abundant seals, penguins, and baleen whales. Antarctic Krill Photo Courtesy of http://www.ecoscope.com Less phytoplankton means less food for these animals to eat. It is estimated that a 16 % ozone depletion could result in further losses in Phytoplankton, which would lead to a loss of about 7 million tons of fish per year. With the ~~human~~ food supply already strained due to demands of an ever-increasing population, small reductions resulting from UV damage may be disastrous to many people, especially the poor and indigenous people. UV Rays enter the ~~human~~ body Researchers say it's clear that UV-B harms Antarctic microbes. Dr Patrick Neale, of the Smithsonian Environmental Research Center, has predicted that phytoplankton photosynthesis declines by as much as 8.5 per cent under the worst conditions. DNA It also damages the DNA of marine bacteria and the larvae of starfish and urchins, they say. And it even alters ocean chemistry, creating potentially dangerous substances in the water itself. "This refers to the fact that UV radiation is involved in a number of photochemical reactions in seawater (including the hydrolysis/splitting of water molecules) that produce radicals (hydroxyl, peroxide, superoxide, etc.). These radicals are very reactive and can cause biological damage by oxidizing biological molecules. It's really dramatic what the changes in ozone levels will do to rates of DNA damage and inhibited development," says biologist Deneb Karentz of the University of San Francisco. "If you have a 30 per cent decline in ozone, that doesn't mean a 30 per cent decline in a given biological process - it could be a lot more than that". Experts predict that an estimated 10 % reduction in the ozone layer will result in a 25 % increase in non-melanoma skin cancer rates for temperate latitudes by the year 2050.

#### Extinction

Magda **Fahsi** Ph.D., Mint Press Europe correspondent and investigative reporter, cites Chris Bowler, PhD, director of research at the National Centre for Scientific Research January 3, **2013** “The Fabulous History Of Plankton And Why Our Survival Depends On It” <http://www.mintpressnews.com/the-fabulous-history-of-plankton-and-why-our-survival-depends-on-it/44732/> ajh

Take a drop of ocean water. Just a simple drop of water, you may think? You’d be wrong. That tiny drop is actually full of life. When one thinks about marine life, one has often in mind fish or whales or dolphins … but these only represent 2 percent of the oceans’ living organisms. The other 98 percent is made up of micro-organisms of all kinds whose generic name is plankton. Now, you may remember that, as a child, you were taught that plankton is a whale’s favorite meal. Forget about the whales. Plankton is much more than that; it is about life on Earth itself. First, because without them, we as ~~human~~ beings would not be here; and second, because without them, we’d probably disappear. So we’d better be aware of what happens to them, including what we do to them. This is the reason why a French schooner called Tara spent two and a half years from September 2009 to March 2012 sailing around the globe: to provide scientists with more information on the current status of this invisible world that populates the oceans. It represented 938 days of sailing in total, 62,000 miles travelled, 32 countries visited and 126 scientists from different nationalities and all kind of disciplines – genomics, biology, oceanography, biophysics, genetics, biogeochemistry and biogeography – taking turns on board to collect more than 30,000 samples of plankton. Chris Bowler is one of the scientific coordinators of the Tara Oceans expedition who spent some time on board the Tara. A British scientist, currently director of research at the National Centre for Scientific Research (CNRS) in France, he devotes his life to studying marine micro-organisms. When he speaks about them, it feels as if he were opening a door right in front of you to an entirely new world. He knows how to explain in a vivid and lively manner why plankton is vital for the survival of ~~human~~ beings on Earth. He takes you to the most fascinating journey of micro-organisms to illustrate the vital role they have played in the past and will continue to play for our future. “Plankton has done incredible things in the past,” he starts. “These tiny living organisms, when they die, sediment at the bottom of the oceans. With time, the accumulated sediments generate different kinds of rocks like limestone, chalk and opal. We now find rock structures all over the world composed of billions of these microscopic organisms, such as the white cliffs of Dover in England, or the Sisquoc formation in Lompoc, Santa Barbara. Most of northern Europe is actually of planktonic origin.” Incidentally, this is also how fossil fuels like oil were formed: through the sedimentation over millions and millions of years of dead micro-organisms to the ocean floor. Not only that: “Plankton also generated the air we breathe,” Bowler goes on. “Through photosynthesis, these micro-organisms took the carbon dioxide (CO2) from the atmosphere and learned how to fix it. This is how oxygen was originally generated on Earth. And this is what permitted the emergence of more complex forms of life, like animals and ~~human~~s.” In other words, without oxygen-producing plankton, ~~human~~s would never have seen the light of day. Tiny, but important But what exactly are these microorganisms? “Well,” Bowler explains, “there are different sorts. First, we have what we call the protists, mainly the phytoplankton, if you want. There are up to 10 million of them in every liter of seawater. Then we have the metazoans, like the zooplankton, which graze on the protists. We also have bacteria – up to 1 billion/liter – and viruses – up to 10 billion/liter. These viruses are not dangerous for ~~human~~ beings, only for the phytoplankton and the zooplankton. They have an important regulatory role because they maintain the turnover in the system. Nature does not tolerate excess, it likes equilibrium between species. This means that as soon as one species becomes dominant, nature finds a way to eliminate it.” The only exception to that rule of nature is … man. Although it is obvious that man has become largely dominant on Earth and has done huge damages to other species and to life on Earth itself, nature has not managed to keep up and has not – yet? – found a way to eliminate him. But “through our pollution, our destruction of the environment and our burning of fossil fuels, we are busy with it ourselves,” Bowler comments. “For despite the huge insult men have done to Earth, most life will go on regardless, one way or another. The species that is most at risk is us. So what we are actually busy doing is killing ourselves.” Today, marine micro-organisms still play two vital roles for the survival of ~~human~~ beings. First, and this is probably the most obvious one, they are at the base of the food chain. They provide food to the fish which we eat. Second, they still generate half of the oxygen on the planet, removing CO2 from the atmosphere in the process. We know why this is so important: Carbon dioxide, being a greenhouse gas, is contributing to the global warming of the Earth. Hence the importance of reducing its presence in the atmosphere. “That forests are the first lung of our planet is well-known; what is much less known is that oceans constitute the second. It is like an invisible forest in the oceans,” says Bowler. How does plankton do that? “Micro-organisms suck in the CO2 from the air and create organic carbon to grow and proliferate,” Bowler explains. “And when they die, some of them sink to the bottom of the oceans, taking this carbon dioxide with them. This is what is called the carbon pump and it is one important way of taking CO2 out of the atmosphere. And the bigger these micro-organisms are, the easier and the faster they sink to the bottom. In other words, the heavier they are, the more effective they are in taking CO2 down to the ocean depths.” This means that if pollution or other ~~human~~ activities lead to the extinction of the big guys and they are replaced by a lot of smaller ones, these will be less effective in taking the carbon dioxide down to the bottom of the ocean. And so global warming may accelerate as a consequence. The Tara taking some samples from the ocean. (Photo S. Bollet - Tara Expeditions) Changes in these unique ecosystems could therefore have enormous consequences for life on our planet. And this is why the work done by the Tara Oceans expedition is so important.

### Contention 2 is Biotech

#### Tropical diseases are emerging now – lack of studies make them uniquely dangerous

**TECD** Nagasaki University Graduate School of Biomedical Sciences Doctoral Leadership ProgramWhat are "Tropical and Emerging Communicable Diseases **2013** http://www.tecd.prj.nagasaki-u.ac.jp/en/program/background.html

Tropical region infectious diseases have now become a problem for all ~~human~~ity because of rapid mobility Tropical region infectious diseases such as malaria and trypanosomiasis have high mortality rates and are a constant threat in developing countries. Dengue fever infects an estimated 50 to 100 million each year. Of these 500,000 develop severe illness and about 12,500 die. Distribution of countries or areas at risk of dengue transmission, worldwide, 2008） World Health Organization(WHO) from "Working to overcome the global impact of neglected tropical diseases" At the same time, these traditional diseases are having an impact, new and emerging infectious diseases are also spreading. Examples include SARS (severe acute respiratory syndrome) and avian influenza. Infections with avian influenza have been confirmed since November 2003 in Southeast Asia, the Middle East and Africa, and more than half of those infected have died. Unlike malaria and AIDS, which are decreasing with the development of treatments, there are tropical infectious diseases that haven’t been studied enough. These are known as neglected tropical diseases (NTDs). Avian influenza (H5N1) outbreak countries and confirmed cases in ~~human~~s (since November, 2003) WHO has confirmed 620 Avian Influenza (H5N1) cases with 384 deaths as of February 15th, 2013. WHO data is from the official homepage of Ministry of Health, Labour and Welfare. NTDs and emerging infectious diseases are concentrated in the tropical regions, where about 80% of the world's population live. However, these diseases are not only a problem for developing countries, they are becoming a problem for developed countries as well. Economic globalization has accelerated the movement of people who then act as vectors in the rapid spread of these diseases across borders. Dengue fever which had been thought to be confined to the tropics appeared in France and Portugal in the 2000s. People often use unsanitary lake water for drinking and washing People often use unsanitary lake water for drinking and washing (Lake Victoria, Western Kenya) Measures against NTDs were one of the themes of the Toyako Summit in 2008, and NTD’s were established as an important international issue. We now realize that once a major outbreak occurs, it could lead to global economic stagnation, as a result of workforce disruption. In order to stem the damage caused by infectious diseases, research and development for early detection and outbreak prevention is important. However, developing countries in tropical regions have insufficient economic bases to combat this problem. This lack of defense could lead to a rapid spread if an outbreak occurred. Cooperation between countries in case of outbreaks is essential to prevent the rapid spread of infections, because pathogens propagate regardless of borders.

#### They go global

Fabiana **Frayssinet**. Has been a correspondent since 1989 in Central America, and since 1996 in Brazil, where she served as a contributor for various international media outlets in radio, print and television, including CNN en Español, IPS, UNIVISION, Telefé de Argentina, Radio Suecia and Radio Nederland. **2012** http://www.ipsnews.net/2012/09/scientists-debate-climate-change-impacts-on-tropical-diseases/

More intense rainfall, rising temperatures and climate-driven migration of ~~human~~ and animal populations due to repeated drought all affect the spread of tropical diseases. These changes, already the focus of study by climatologists, are now also a challenge increasingly taken up by health experts and officials. The impact of climate change on ~~human~~ health generated debate among the experts attending the 18th International Congress on Tropical Medicine and Malaria, held Sept. 23-27 in Rio de Janeiro. On one side of the debate stands researcher Ulisses Confalonieri, of Brazil’s state-run Oswaldo Cruz Foundation (Fiocruz), who argues that the press often oversimplifies a very complex issue. Global warming may be affecting the occurrence and spread of tropical diseases carried by vectors like the Aedes aegypti mosquito. Credit: Jentavery/CC BY 2.0 On the other side, the president of the Brazilian Society of Tropical Medicine (SBMT), Carlos Henrique Costa Nery, told IPS that “it is not outrageous to say that climate change has inevitable consequences for tropical diseases.” Tropical diseases, which affect many developing countries, “represent an enemy that takes advantage of social and economic fragility,” according to the organisers of the congress: the International Federation for Tropical Medicine (IFTM), the SBMT, and Fiocruz. These diseases are caused by viruses, bacteria and parasites, and affect more than one billion people, mainly in the tropics, where the most vulnerable developing world populations are concentrated. But the map of tropical diseases like malaria, Chagas’ disease, sleeping sickness, leishmaniasis, schistosomiasis and dengue fever, is starting to change. Tropical diseases transmitted by vectors like mosquitoes, flies, ticks or snails are directly affected by conditions in the ecosystems they inhabit, such as changes in humidity, water levels, temperature or rainfall, experts explain. “Global warming is ‘tropicalising’ subtropical regions; rising temperatures could bring an explosion of parasite and insect vectors that are expanding into North America, the Southern Cone of South America, Australia and New Zealand,” Costa Nery said. One sign of this, said the president of the SBMT, is the spread of leishmaniasis in Europe by travelling persons and dogs. He explained that the disease, which is endemic in southern Europe, could continue to spread northward if temperatures keep rising. At the same time, climate variation in the tropics and its effects on the frequency of flooding and drought “could also modify the dynamic of the transmission of diseases,” with the emergence of vectors that alter the population’s immunity and resistance. Flooding, for example, can favour the spread of insect-spread diseases like yellow fever, dengue or malaria. “This affects the ecology of insects,” Costa Nery said. Drought has a more indirect impact. Because of the resultant food shortages, people become more vulnerable to infectious agents such as the tuberculosis bacterium. In Northeast Brazil and other regions of Latin America, and in Africa, drought also fuels the rural exodus of people, which triggers a chain reaction. As cities are unable to provide for the flood of new arrivals, slums grow up on the outskirts, where the lack of sanitation, clean water, and proper garbage disposal creates a breeding ground for disease, “both infectious and non-infectious,” Costa Nery said. He added that while the role of climate change in some of the effects seen in the realm of disease is still speculative, it has been documented in some instances, such as the case of leishmaniasis in Europe. However, there is agreement among experts that the phenomenon is difficult to explain in an isolated manner. In the case of leishmaniasis, factors to be taken into account include the international circulation of air, land and maritime transport vehicles, which can “carry vectors or infected individuals,” Costa Nery said. Confalonieri acknowledged that the behaviour patterns of many tropical diseases have changed in the last few decades. Visceral leishmaniasis, or kala azar, a disease typically found in rural areas, is now commonly seen in urban areas. And Chagas disease, which is basically transmitted by the vinchuca or kissing bug, can now also spread through the consumption of uncooked food contaminated with the faeces of infected bugs. But the scientist said the new shape of the map of tropical diseases is the result of “a situation that is much more complex than it would initially seem.” “It is necessary to study not only the climate, but other environmental factors as well,” such as deforestation, garbage treatment, the conversion of natural vegetation, the mobility of the population, socioeconomic factors, and sanitation, as well as changes in agricultural production and eating habits, said Confalonieri. The Fiocruz scientific researcher said the challenge today is to determine whether the climate changes seen so far have actually been a factor in the changes observed on the health front. But the few studies carried out have been isolated, he said. One study, led by geographer Francisco Mendonça of the Federal University of the southern Brazilian state of Paraná, focused on dengue fever, transmitted by the Aedes aegypti mosquito. The team observed that there were three dengue epidemics in southern Brazil in the last decade, which coincided with the hottest years. In the past, conditions in that subtropical part of the country were not conducive to the breeding of the Aedes aegypti mosquito, which needs warm temperatures. “This means dengue could expand more if temperatures rise,” Mendonça told IPS. Mendonça’s team also created an early warning system, to alert the population about the risk of a dengue outbreak, based on weather conditions, especially high temperatures and the frequency and intensity of rains. The early warning system, which posts updates on a government web site, indicates which periods are more favourable to the breeding of the Aedes aegypti mosquito and to the spread of the virus causing the disease, which can be fatal in its most severe, haemorrhagic form. Based on this data, the Paraná secretariat of health determines where monitoring and control measures need to be stepped up. Confalonieri, meanwhile, is getting ready to travel with a team of scientists from Peru, Ecuador and the United States to the Amazon region, to study the incidence of malaria in different settings that have been modified by ~~human~~ activity such as land use and the building of roads.

#### The result is extinction

-zoonosis (spreading from animals to ~~human~~s) makes spread unpredictable and extremely likely

-outbreak is nearly inevitable within five years – it will begin among poor populations

-early detection is key because spread is fast

-globalization makes spread very fast

-cytokine storms (positive feedback loops where a virus initiates an immune system overreaction that causes death through fever and vomiting – this doesn’t kill the disease but only the host which makes burnout theory moot)

-population growth makes it likely

-we aren’t genetically diverse enough for a sustainable population to be immune

-increased deforestation and urban expansion brings people into areas with higher probability of spread

-previous zoonotic viruses couldn’t spread by air – flu could be spread by air

-symptoms won’t appear until the host is infectious

-only detection solves

Naish 12 (John Naish, writer for Daily Mail, citing John Oxford, professor of virology at Queen Mary’s School of Medicine and Dentistry, Scientific Director of Retroscreen Virology Ltd, considered to be the leading expert on disease and viral outbreaks, 10-14-12, “The Armageddon virus: Why experts fear a disease that leaps from animals to ~~human~~s could devastate mankind in the next five years,” [http://www.dailymail.co.uk/sciencetech/article-2217774/The-Armageddon-virus-Why-experts-fear-disease-leaps-animals-~~human~~s-devastate-mankind-years.html](http://www.dailymail.co.uk/sciencetech/article-2217774/The-Armageddon-virus-Why-experts-fear-disease-leaps-animals-humans-devastate-mankind-years.html)) gz

When the Health Protection Agency warned the world of this newly- emerging virus last month, it ignited a stark fear among medical experts.¶ Could this be the next bird flu, or even the next ‘Spanish flu’ — the world’s biggest pandemic, which claimed between 50 million and 100 million lives across the globe from 1918 to 1919?¶ In all these outbreaks, the virus responsible came from an animal. Analysts now believe that the Spanish flu pandemic originated from a wild aquatic bird.¶ The terrifying fact is that viruses that manage to jump to us from animals — called zoonoses — can wreak havoc because of their astonishing ability to catch us on the hop and spread rapidly through the population when we least expect it. ¶ One leading British virologist, Professor John Oxford at Queen Mary Hospital, University of London, and a world authority on epidemics, warns that we must expect an animal-originated pandemic to hit the world within the next five years, with potentially cataclysmic effects on the ~~human~~ race.¶ Such a contagion, he believes, will be a new strain of super-flu, a highly infectious virus that may originate in some far-flung backwater of Asia or Africa, and be contracted by one person from a wild animal or domestic beast, such as a chicken or pig. ¶ By the time the first victim has succumbed to this unknown, unsuspected new illness, they will have spread it by coughs and sneezes to family, friends, and all those gathered anxiously around them.¶ Thanks to our crowded, hyper-connected world, this doomsday virus will already have begun crossing the globe by air, rail, road and sea before even the best brains in medicine have begun to chisel at its genetic secrets. Before it even has a name, it will have started to cut its lethal swathe through the world’s population.¶ If this new virus follows the pattern of the pandemic of 1918-1919, it will cruelly reap mass harvests of young and fit people. ¶ They die because of something called a ‘cytokine storm’ — a vast overreaction of their strong and efficient immune systems that is prompted by the virus.¶ This uncontrolled response burns them with a fever and wracks their bodies with nausea and massive fatigue. The hyper-activated immune system actually kills the person, rather than killing the super-virus.¶ Professor Oxford bases his prediction on historical patterns. ¶ The past century has certainly provided us with many disturbing precedents. For example, the 2003 global outbreak of Sars, the severe acute respiratory syndrome that killed nearly 1,000 people, was transmitted to ~~human~~s from Asian civet cats in China.¶ In November 2002, it first spread among people working at a live animal market in the southern Guangdong province, where civets were being sold. ¶ Nowadays, the threat from such zoonoses is far greater than ever, thanks to modern technology and ~~human~~ population growth. Mass transport such as airliners can quickly fan outbreaks of newly- emerging zoonoses into deadly global wildfires. ¶ The Sars virus was spread when a Chinese professor of respiratory medicine treating people with the syndrome fell ill when he travelled to Hong Kong, carrying the virus with him. ¶ By February 2003, it had covered the world by hitching easy lifts with airline passengers. Between March and July 2003, some 8,400 probable cases of Sars had been reported in 32 countries.¶ It is a similar story with H1N1 swine flu, the 2009 influenza pandemic that infected hundreds of millions throughout the world. It is now believed to have originated in herds of pigs in Mexico before infecting ~~human~~s who boarded flights to myriad destinations. ¶ Once these stowaway viruses get off the plane, they don’t have to learn a new language or new local customs. ¶ Genetically, we ~~human~~s are not very diverse; an epidemic that can kill people in one part of the world can kill them in any other just as easily. ¶ On top of this, our risk of catching such deadly contagions from wild animals is growing massively, thanks to ~~human~~kind’s relentless encroachment into the world’s jungles and rainforests, where we increasingly come into contact for the first time with unknown viral killers that have been evolving and incubating in wild creatures for millennia.¶ This month, an international research team announced it had identified an entirely new African virus that killed two teenagers in the Democratic Republic of the Congo in 2009. ¶ The virus induced acute hemorrhagic fever, which causes catastrophic widespread bleeding from the eyes, ears, nose and mouth, and can kill in days.¶ A 15-year-old boy and a 13-year-old girl who attended the same school both fell ill suddenly and succumbed rapidly. A week after the girl’s death, a nurse who cared for her developed similar symptoms. He only narrowly survived.¶ The new microbe is named Bas-Congo virus (BASV), after the province where its three victims lived. It belongs to a family of viruses known as rhabdoviruses, which includes rabies. ¶ A report in the journal PLoS Pathogens says the virus probably originated in local wildlife and was passed to ~~human~~s through insect bites or some other as-yet unidentified means. ¶ There are plenty of other new viral candidates waiting in the wings, guts, breath and blood of animals around us. You can, for example, catch leprosy from armadillos, which carry the virus in their shells and are responsible for a third of leprosy cases in the U.S. ¶ Horses can transmit the Hendra virus, which can cause lethal respiratory and neurological disease in people. ¶ In a new book that should give us all pause for thought, award-winning U.S. natural history writer David Quammen points to a host of animal-derived infections that now claim lives with unprecedented regularity. The trend can only get worse, he warns.¶ Quammen highlights the Ebola fever virus, which first struck in Zaire in 1976. The virus’s power is terrifying, with fatality rates as high as 90 per cent. The latest mass outbreak of the virus, in the Congo last month, is reported to have killed 36 people out of 81 suspected cases.¶ According to Quammen, Ebola probably originated in bats. The bats then infected African apes, quite probably through the apes coming into contact with bat droppings. The virus then infected local hunters who had eaten the apes as bushmeat. ¶ Quammen believes a similar pattern occurred with the HIV virus, which probably originated in a single chimpanzee in Cameroon. ¶ Studies of the virus’s genes suggest it may have first evolved as early as 1908. It was not until the Sixties that it appeared in ~~human~~s, in big African cities. By the Eighties, it was spreading by airlines to America. Since then, Aids has killed around 30 million people and infected another 33 million.¶ There is one mercy with Ebola and HIV. They cannot be transmitted by coughs and sneezes. ‘Ebola is transmissible from ~~human~~ to ~~human~~ through direct contact with bodily fluids. It can be stopped by preventing such contact,’ Quammen explains. ¶ ‘If HIV could be transmitted by air, you and I might already be dead. If the rabies virus — another zoonosis — could be transmitted by air, it would be the most horrific pathogen on the planet.’¶ Viruses such as Ebola have another limitation, on top of their method of transmission. They kill and incapacitate people too quickly. In order to spread into pandemics, zoonoses need their ~~human~~ hosts to be both infectious and alive for as long as possible, so that the virus can keep casting its deadly tentacles across the world’s population.¶ But there is one zoonosis that can do all the right (or wrong) things. It is our old adversary, flu. It is easily transmitted through the air, via sneezes and coughs. ¶ Sars can do this, too. But flu has a further advantage. As Quammen points out: ‘With Sars, symptoms tend to appear in a person before, rather than after, that person becomes highly infectious. ¶ ‘That allowed many Sars cases to be recognised, hospitalised and placed in isolation before they hit their peak of infectivity. But with influenza and many other diseases, the order is reversed.’¶ Someone who has an infectious case of a new and potentially lethal strain of flu can be walking about innocently spluttering it over everyone around them for days before they become incapacitated.¶ Such reasons lead Professor Oxford, a world authority on epidemics, to warn that a new global pandemic of animal-derived flu is inevitable. And, he says, the clock is ticking fast.¶ Professor Oxford’s warning is as stark as it is certain: ‘I think it is inevitable that we will have another big global outbreak of flu,’ he says. ‘We should plan for one emerging in 2017-2018.’¶ But are we adequately prepared to cope? ¶ Professor Oxford warns that vigilant surveillance is the only real answer that we have. ¶ ‘New flu strains are a day-to-day problem and we have to be very careful to keep on top of them,’ he says. ¶ ‘We now have scientific processes enabling us to quickly identify the genome of the virus behind a new illness, so that we know what we are dealing with. The best we can do after that is to develop and stockpile vaccines and antiviral drugs that can fight new strains that we see emerging.’¶ But the Professor is worried our politicians are not taking this certainty of mass death seriously enough. ¶ Such laxity could come at a ~~human~~ cost so unprecedentedly high that it would amount to criminal negligence. The race against newly-emerging animal-derived diseases is one that we have to win every time. A pandemic virus needs to win only once and it could be the end of ~~human~~kind.

#### Additionally, Agricultural biotech solves extinction

Trewavas 2K – Institute of Cell and Molecular Biology at the University of Edinburgh (Anthony, “GM Is the Best Option We Have,” 6/5/2000, www.agbioworld.org/biotech-info/articles/biotech-art/best\_option.html)\*This evidence is modified to respect Jewish history

In 535A.D. a volcano near the present Krakatoa exploded with the force of 200 million Hiroshima A bombs. The dense cloud of dust so reduced the intensity of the sun that for at least two years thereafter, summer turned to winter and crops here and elsewhere in the Northern hemisphere failed completely. The population survived by hunting a rapidly vanishing population of edible animals. The after-effects continued for a decade and ~~human~~ history was changed irreversibly. But the planet recovered. Such examples of benign nature's wisdom, in full flood as it were, dwarf and make miniscule the tiny modifications we make upon our environment. There are apparently 100 such volcanoes round the world that could at any time unleash forces as great. And even smaller volcanic explosions change our climate and can easily threaten the security of our food supply. Our hold on this planet is tenuous. In the present day an equivalent 535A.D. explosion would destroy much of our civilisation. Only those with agricultural technology sufficiently advanced would have a chance at survival. Colliding asteroids are another problem that requires us to be forward-looking accepting that technological advance may be the only buffer between us and annihilation. When people say to me they do not need GM, I am astonished at their prescience, their ability to read a benign future in a crystal ball that I cannot. Now is the time to experiment; not when a holocaust is upon us and it is too late. GM is a technology whose time has come and just in the nick of time. With each billion that mankind has added to the planet have come technological advances to increase food supply. In the 18th century, the start of agricultural mechanisation; in the 19th century knowledge of crop mineral requirements, the eventual Haber Bosch process for nitrogen reduction. In the 20th century plant genetics and breeding, and later the green revolution. Each time population growth has been sustained without enormous loss of life through starvation even though crisis often beckoned. For the 21st century, genetic manipulation is our primary hope to maintain developing and complex technological civilisations. When the climate is changing in unpredictable ways, diversity in agricultural technology is a strength and a necessity not a luxury. Diversity helps secure our food supply. We have heard much of the precautionary principle in recent years; my version of it is "be prepared".

#### And soil erosions is at a brink

Professor John **Crawford** of the University of Sydney. **2013** [What If the World’s Soil Runs Out? Pg. 1]

It’s a strange notion, but some experts fear the world, at its current pace of consumption, is running out of useable topsoil. The World Economic Forum, in collaboration with TIME, talked to University of Sydney professor John Crawford on the seismic implications soil erosion and degradation may have in the decades to come. Is soil really in danger of running out? A rough calculation of current rates of soil degradation suggests we have about 60 years of topsoil left. Some 40% of soil used for agriculture around the world is classed as either degraded or seriously degraded – the latter means that 70% of the topsoil, the layer allowing plants to grow, is gone. Because of various farming methods that strip the soil of carbon and make it less robust as well as weaker in nutrients, soil is being lost at between 10 and 40 times the rate at which it can be naturally replenished. Even the well-maintained farming land in Europe, which may look idyllic, is being lost at unsustainable rates. Why haven’t we heard more about this? Probably because soil isn’t sexy. People don’t always think about how it’s connected with so many other things: health, the environment, security, climate, water. For example, agriculture accounts for 70% of our fresh water use: we pour most of our water straight onto the ground. If soil is not fit for purpose, that water will be wasted, because it washes right through degraded soil and past the root system. Given the enormous potential for conflict over water in the next 20-30 years, you don’t want to exacerbate things by continuing to damage the soil, which is exactly what’s happening now.

#### Extinction

**Leahy 8** (Stephen, Environmental Journalist, Citing Andreas Arnalds, Assistant Director – Soil Conservation Service of Iceland, Ph.D. in Grazing Management and Soil Conservation – Colorado State University, M.Sc. in Rangeland Ecology – Washington State University, B.Sc. in Agricultural Science – Agricultural University of Iceland, “Peak Soil”, Earth Island Journal, <http://www.earthisland.org/journal/index.php/eij/article/peak_soil/>)

We are overlooking soil as the foundation of all life on Earth,” says Andres Arnalds, assistant director of the Icelandic Soil Conservation Service. Arnalds is an eloquent spokesperson for the unheralded emergency of soil erosion, a problem that is reducing global food production and water availability, and is responsible for an estimated 30 percent of the greenhouse gases emissions. “Land degradation and desertification may be regarded as the silent crisis of the world, a genuine threat to the future of ~~human~~kind.” Arnalds is dead serious when he calls soil erosion a crisis. Each year, some 38,000 square miles of land become severely degraded or turn into desert. About five billion acres of arable land have been stripped of their precious layer of topsoil and been abandoned since the first wheat and barley fields were planted 10,000 years ago. In the past 40 years alone, 30 percent of the planet’s arable land has become unproductive due to erosion, mainly in Asia and Africa. At current erosion rates, soils are being depleted faster than they are replenished, and nearly all of the remaining 11 billion acres of cropland and grazing land suffer from some degree of erosion. Most of this erosion is simply due to plowing, removal of crop residues after harvest, and overgrazing, which leaves soil naked and vulnerable to wind and rain. It is akin to tire wear on your car — a gradual, unobserved process that has potentially catastrophic consequences if ignored for too long. Arnalds has seen our perilous future crisis by looking into the past. Eleven hundred years ago, the first Icelandic settlers came to a cold island mostly covered by forests and lush meadows, and blessed with deep volcanic soils. In a pattern repeated around the world, settlers cleared the forests and put too many animals on the meadows, until 96 percent of the forest was gone and half the grasslands destroyed. By the 1800s, Iceland had become Europe’s largest desert; the people starved, and the once prosperous country became one of the world’s poorest. “Once soil is gone, you can’t get it back,” Arnalds says. “It’s a non-renewable resource.” Nickel and Dimed to Death No one knows how much food-producing land will be left by 2050, when another three billion people are expected to join the current global population of 6.5 billion. What we do know is that right now, 99 percent of ~~human~~ food calories come from the land. Global food production has kept pace with population growth thus far thanks chiefly to the extensive use of chemical fertilizers. But food production per acre of land is starting to decline, primarily due to loss of productive land and water shortages. The latter is often the result of soil erosion because soil and vegetation act as a sponge that holds and gradually releases water. And that soil erosion, in turn, is exacerbated by chemical farming practices that over time break down soil structure. Add to these challenges climate change’s impact on soil erosion and the competition between growing food and producing biofuels, and it’s frightening to consider the challenge of feeding nine billion people when nearly one billion go hungry right now. Arnalds summarizes the challenge: More food will have to be produced within the next 50 years than during the last 10,000 years combined. “Securing food in many places will become a crisis of rapidly growing proportions.” Erosion largely goes unnoticed by farmers as it “nickels and dimes you to death,” says David Pimentel, an ecologist at Cornell University who has conducted extensive research on the subject. Even if there were no ~~human~~s on the planet, soils would still erode. The soil formation from the weathering of rock and the breakdown of plants, however, would be faster than the erosion rate; it takes roughly 500 years to create one inch of soil. Once ~~human~~s remove natural vegetation, soil is exposed to raindrops that easily dislodge it, washing soil particles into creeks, streams, rivers, and eventually into the ocean. One rainstorm will wash away .04 inches of soil. This may not seem like much, but over one acre of land that fraction of an inch adds up to tons of topsoil. Wind also disrupts soil, and can transport dust huge distances. Dry and windy conditions blew nearly two inches of topsoil off Kansas farmlands during the winter of 1995–96. Contrary to common belief, the topsoil loss in Kansas didn’t end up being neatly deposited on farms in neighboring states. More than 60 percent ended up clogging ditches, streams, rivers, and lakes. That makes waterways more prone to flooding (further exacerbating erosion) and contaminates them with fertilizer and pesticide residues, Pimentel says. Every rainy day or windy night steals a thin layer of soil from any exposed piece of ground until there is little left but sand and rock. “Iowa has some of the best and deepest soils in the world,” Pimentel says, “and they’ve lost nearly 50 percent in the last hundred years.” Erosion’s potential threat to ~~human~~ity remains largely ignored by the world community. When soil experts from around the world met in Selfoss, Iceland in August 2007, they concluded that an international treaty is needed to spur countries into taking action to protect their soils. The soil scientists proposed that, at the very least, soil ought to have its own year — “The International Year of Land Care” — to focus the world’s attention on soil stewardship.

### Contention 3 is Solvency

#### Current restrictions for scientists impair effective engagement

Lempinen 12 – AAAS reporter, AAAS is The AAAS Center for Science Diplomacy is guided by the over-arching goal of using science to build bridges between countries and to promote scientific cooperation as an essential element of foreign policy. Since its establishment in 2008, the Center has been particularly interested in identifying opportunities for science diplomacy to serve as a catalyst between societies where official relationships might be limited and to strengthen civil society interactions through partnerships in science and technology. In 2012, the Center launched a new open-access, quarterly publication, Science & Diplomacy, as a forum for policy discourse at the nexus of scientific cooperation and foreign policy. (Edward, “Oceans, Weather, Health—U.S. Researchers Explore Potential Collaboration with Cuban Colleagues”, May 1, 2012, <http://www.aaas.org/news/releases/2012/0501cuba.shtml> HW)

They are next-door neighbors, sharing all the amenities and challenges of the neighborhood—oceans teeming with life, the risk of tropical diseases, a changing climate that may be giving rise to bigger and more frequent hurricanes. And yet, because the neighbors are barely on speaking terms, they cannot share the opportunities and the responsibilities that come with solving the challenges. Today, however, scientists in both Cuba and the United States are exploring whether a thaw in relations between the two nations could allow for a range of new or expanded joint research projects that could bring benefits to both nations and others in the Caribbean Basin. Recent visits and consultations facilitated by AAAS and the Academia de Ciencias de Cuba (Academy of Sciences of Cuba) underscored that both sides see potential for substantive science collaboration. “The recent visits showed that the Cuban mindset is really ready to reach out,” said Peter Agre, a Nobel laureate in chemistry and a former president of AAAS, who returned in March from his third visit to the nation. “The scientists would have no trouble working together... The Cubans are understandably proud of their science, and they see us very positively. I would anticipate if we could normalize relations and do science as a starting point, then really good things could happen.” “The possibility of open scientific exchange between researchers in Cuba and the U.S. can only bring increased benefits for both scientific communities, and of course, for the people in their respective countries,” said Sergio Jorge Pastrana, foreign secretary of the Academia de Ciencias de Cuba. “The kind of scientific development that took place in Cuba for the last half-century has produced original results that have been internationally recognized as being in the frontiers of knowledge in several fields. Science, along with technology and innovation, has produced outcomes that are important for societies not only in Cuba and the United States, but in neighboring countries of the Caribbean, and for sustainable development everywhere.” Vaughan C. Turekian, director of the AAAS Center for Science Diplomacy, said that researchers from both nations have focused on science, not on the politics that have divided the two nations for a half-century. “Especially on the environmental side, there is not an issue that we discussed that doesn’t have direct implications and impact both on Cuba and the United States,” said Turekian, who also serves as AAAS’s chief international officer. “Given the proximity, when you’re talking about atmospheric or marine science, if it travels to Cuba, it travels to the Southeast coast of United States, too. If it spawns off the coast of Cuba, it is caught or affected by currents that go into the United States.” The AAAS Center for Science Diplomacy organized an initial three-day visit to Cuba in November 2009, with Agre, then the AAAS president, and seven other U.S. science leaders. AAAS helped to facilitate a second visit last December, with 18 independent scientists traveling to the island for informal talks centered on marine science, atmospheric science, environmental change, conserving biodiversity at large scales, sustainable fisheries, and capacity-building. Agre, who heads the Johns Hopkins Malaria Research Institute, returned to Cuba in March to speak at [Biotechnology Havana 2012](http://biomed.cigb.edu.cu/), an international congress that focused on medical applications of biotech. Since the early 1960s, just after the Cuban revolution, the two neighbors have been locked in a Caribbean cold war; though they are just 90 miles apart, the relationship has been characterized by economic and cultural barriers, sometimes sharp political conflict, and broad dimensions of mistrust. Advocates see science diplomacy as a way to do important research with value for all sides, and to build constructive engagement in a non-political environment. History dating back well over 100 years suggests that Cuba and the United States are “natural scientific partners,” Pastrana said in an April email interview. “As both science communities were establishing their own scientific institutions during the 19th century, many scientists and scholars from both countries started links of exchange, discussion and cooperation,” he said. “The relations of Cuban scientific research centers, as well as of many scientists and scholars, with the Smithsonian Institution, universities like Harvard, Columbia or Yale, go way back and, in many ways, have been important for both sides for a very long time. “Some of those links have never disappeared, and have continued over particularly difficult moments, overcoming political hurdles, to produce important publications, collections, and scientific results that are of benefit to the peoples in both countries.” The recent engagements have allowed AAAS and other scientists to further develop their ties with Pastrana and Fidel Ángel Castro Díaz-Balart—Fidel Castro’s oldest son—a nuclear physicist and leader in his nation’s science policy community. The December trip also included a special side event: Agre and Alan Robock, a Rutgers atmospheric scientist, were invited to a three-hour meeting with former Cuban leader Fidel Castro, Castro’s wife, and his sons Fidel and Antonio, an orthopedic surgeon. “The meeting with Fidel was really interesting,” Agre said. “It was about the past. He spoke about his family, growing up... He described the Revolution, the Bay of Pigs, the missile crisis. It was a much different perspective than I expected. “I mostly listened. If I meet him again—and I don’t know if I will—he asked me to bring him my research papers. But the fact that he and I sat in the same room—he didn’t see me as an enemy. I’m a scientist, born the same year as his son.” But the central focus of the Cuban meetings was science, and informal scientist-to-scientist consultations and discussions. They focused on common interests and on the prospects—and challenges—of working together. “There’s a definite pride in the work they do there, and the research they do,” said Joanne Carney, director of the AAAS Office of Government Relations. “When we talk about collaboration, they really want honest collaboration and partnership, as opposed to funding or resources. They definitely are interested in pursuing areas of mutual interest.” Malaria and the Caribbean Both Turekian and Agre cited malaria as one area where the U.S. scientists might learn much from Cuba. And that might tie in to an interest shared by both countries in working to support health and ~~human~~ development in the impoverished Caribbean nation of Haiti. “Malaria is endemic in Haiti,” Agre said. “It was endemic in Cuba, but one of the objectives of the revolution was to eliminate malaria—and they achieved that. How did they do it? That’s something I would like to pursue.... In Cuba, vaccinations and prevention are a high priority.” Unchecked malaria or other diseases in Haiti can be a destabilizing factor even for neighboring nations, Turekian said. “It leads to a lot of people moving back and forth, and it reduces Haiti’s internal strength and stability,” he explained. “So Cuba and the United States could have mutual interests in working on this.” So too with post-traumatic stress disorder (PTSD), added Agre. Because of hurricanes, earthquakes, crime and other ~~human~~ disasters, PTSD is widespread in Haiti. “The Cubans have an interest in that, and we have an interest in that,” he said. “We could work on it together.” Atmospheric Science Atmospheric research is another area where Cuba and the United States share tangible common interests. Hurricanes and other storms go over Cuba en route to the United States. Clues gained from atmospheric conditions over the Caribbean can give insights—and perhaps early warning—about tornados in Oklahoma and Arkansas, or storms in Chicago and New York. It is an area of particular interest for Turekian, an atmospheric geochemist. “There is no doubt that real atmospheric science involving Cuba—measurements, understanding of atmospheric conditions—is important not only for better understanding of transport of African dust, but also for getting a handle on how atmospheric conditions and dynamics affect the Gulf of Mexico and the southeastern United States,” he said. “Given that tornadoes are driven by really complicated dynamics that involve large amounts of warm air coming up through the Gulf and interacting with cold fronts, any data we can gain can mean lives saved.... But you can’t hope to understand things like storms as they affect the Southeast Coast of the United States without having better joint cooperation between scientists in the U.S. and Cuba, and without research, instruments, and calibration to measure dynamics that affect us both.” Still, both Turekian and Robock suggested that official mistrust and the trade embargo combine to make such collaboration on climate research difficult, if not impossible. Robock, in an interview, outlined efforts by the [National Center for Atmospheric Research](http://ncar.ucar.edu/) in Boulder to install global positioning system devices in the central Cuban city of Camaguey. The GPS devices receive signals from satellites; microwave signals are affected by transmission through the atmosphere, and depending on the density of the atmosphere, that allows for insights on weather and climate change. There are nearly 100 such devices in the Caribbean, Robock explained, but Cuba, though one of the largest land masses in the Caribbean, hosts none of them. “Basic weather data are already shared by all the countries of the world,” he said. “But taking specific measurements there with the GPS would be useful to Cubans and to the larger community. It gives you better information about the state of the atmosphere—temperature, humidity, soil moisture. That’s what you need to start a weather forecast model.” But the Cuban military is wary of the GPS devices, and the nation has not approved the installation. At the same time, the U.S. embargo of Cuba makes it impossible for Cuban scientists to come to the United States for even a week-long course in how to use a computer climate model. “Scientists from both countries want to work together,” Robock said. “We’ll do the best we can... but there are significant limitations.” “From the scientific standpoint,” Turekian added, “this is about the ability to go to a place to make measurements so that we can better understand hurricanes and other conditions that affect the Caribbean and the southeastern United States. To do that, we need relationships and protocols so that Americans and the Cubans together can benefit from measurements in Cuba.” Marine Science Coral reefs in much of the Caribbean have sustained significant damage from ~~human~~ activity—over-fishing, climate change, oil spills, and other pollution. But off of Cuba’s coasts, says marine scientist Nancy Knowlton, the reefs have been less exposed to development, and they’re in better health. Knowlton is the Sant Chair for Marine Science at Smithsonian Institution and senior scientist emeritus at Smithsonian Tropical Research Institute. She’s worked in fields of marine biodiversity and ecology; coral reefs are her specialty. Save for a cruise that stopped in Guantanamo, she’d never been to Cuba, but on her visit in December, she was deeply impressed with opportunities for research in the Cuban reefs and by the marine science already underway there. “There are amazing habitats, much less impacted by people than most places in Caribbean, in terms of over-fishing and that sort of thing,” she said. “And there’s a large community of marine biologists there, many with shared interest in biodiversity and conservation.” For Knowlton, the Cuban reefs are like “a window in time,” allowing researchers a view of what healthy reefs looked like in an era past. “They give you a baseline as to what a healthy fish community should look like,” she explained. And that gives greater insight into other Caribbean reefs where damage is more pronounced. “So there are a lot of things to learn from Cuban marine scientists,” she said. “And there are a lot of reasons for Cubans to come here, or for Cubans to come and work at the Smithsonian. There’s a huge potential for interchange because there are so many shared interests.” Small Steps, Significant Potential Those shared interests appear to extend across many fields. Carney, whose parents were born in Cuba, met in December with Cuban counterparts who study and help shape government science and technology policy. “From my own perspective in talking to their scientists, I was struck by some of the similarities between our communities,” Carney said. The Cubans “face challenges in policy decisions regarding research priorities, and how to balance between basic research and applied research. They provide universal health care, and so life science research is a bit more targeted, a bit more applied. But looking forward, you want to balance the applied portion with the basic research. “It’s interesting that we’re both faced with similar issues, even though our systems are different.” Scientists from both countries are aware, of course, of the considerable obstacles that stand in the way of full collaboration. Visas and the U.S. embargo are obvious problems. But where scientists in a wealthy nation like the United States take digital and Internet resources for granted, bandwidth in Cuba can be so limited that it’s difficult or impossible to exchange data. Given those constraints, the immediate prospects for full, constructive engagement between science communities are slender at best. And yet Robock, Carney, and others said the visits have made clear that working with Cuban scientists is easier than it might appear. “Any academic can go to Cuba and spend money without restriction,” Robock explained. “You need a license from the U.S. Treasury Department to spend money, but as a researcher, you are subject to the existing general license. So many more Americans could go to Cuba and start doing science with them—but they don’t know that they can.” One of the ideas to emerge from the discussions, Carney said, was a Web resource page that would provide such practical information to both scientific communities. These may be small steps, but they have a significant value in helping to build the foundation for collaboration among researchers in Cuba and the United States. Though the formal relationship between the two nations has long been strained, the scientists are betting on better times ahead, even if they don’t know exactly when. “While it’s been the same for 50 years, it will change—political relationships always do,” said Turekian. “Whenever that relationship changes, you want to be in place where you have the groundwork laid and relationships built so you can take advantage of areas where science cooperation can actually contribute to both countries.” In the meantime, efforts will continue, building on the collegiality that visitors to the island have shared with their hosts. “Everyone who was there was a pretty good science diplomat,” said Knowlton. “There was no uneasiness—there was a lot of curiosity on both sides to meet people and find out what people are doing.... Everyone was going out of their way to be gracious. That’s important—you have to be willing to listen as well as to talk. It was lovely. I’d really like to go back.” Added Agre: “Non-governmental science and AAAS have a tremendously important role to play. More than ever, science is a way for us to break barriers between adversaries. It’s a constructive way for the world to move ahead.” Pastrana, too, sounded an ambitious note for the future. “Any hurdle that comes in the way of international exchange in science is limiting its capacity to be of help for increasing the resilience of this world’s environments,” he said. “Only the knowledge, technologies, and products that come from scientific developments could provide the tools for societies to be able to continue ~~human~~ development in harmony with the only planet that sustains them so far, which has been abused for the last half-century far beyond its capacity to cope with such abuse. “Let us be in favor of scientists and their open communication everywhere. In this way, they would be able to contribute to the sustainability of ~~human~~ societies on planet Earth.”

#### The plan results in academic exchanges and information sharing – it builds a model for scholarship and information sharing

Johnson 12 – CSIS, a senior fellow and director of the Americas Program at the Center for Strategic and International Studies, a Washington, D.C.-based think tank. He has more than 20 years of experience in Western Hemisphere affairs spanning policymaking, policy advocacy, and public affairs in the Department of Defense, the Washington policy community, and the State Department. From 2007 to 2009, Johnson served as deputy assistant secretary of defense for Western Hemisphere affairs, overseeing the development and execution of policies, strategies, and programs governing hemispheric defense and security ties. From 1999 to 2006, Johnson served as a senior foreign policy analyst at the Washington-based Heritage Foundation, testifying before Congress and authoring studies on U.S. policy as well as Latin American politics, trade, development, and security. His commentaries have appeared in the Wall Street Journal, Miami Herald, Business Week, and Diario Las Américas. His broadcast appearances have included CNN en Español, Univisión, Telemundo, C-SPAN, and MSNBC. He is the author of Iran’s Influence in the Americas. (Stephen, “U.S.-Cuba Academic and Science-Based Exchanges”, August 2012, <http://csis.org/files/publication/120821_Johnson_U.S.-CubaExchanges_Web.pdf>, HW)

Since the early days of official U.S. public diplomacy at the outset of the Cold War, promoting dialogue with citizens of foreign nations has been a way to build bridges of understanding and defuse tensions. The Fulbright Exchange Program, which dates from 1946, and more recent U.S. International Visitor Programs have exposed individuals, some who later became national leaders, to American life and its democratic values. Exchanges with friendly countries are easy and help strengthen existing ties. Exchanges with hostile nations are sometimes nearly impossible but develop inroads that can lead to better relations. To the extent that the U.S. government can finance much of these activities, Americans consider it good public policy, even though such long-term investments can take decades to pay off. Pursuing exchange opportunities with Cubans follows this logic, but with a twist. Current U.S. rules allow purposeful travel on the part of academics, students, medical professionals, and journalists. Over the past decade, as many as 2,500 American students a year have studied in Cuba. However, travel for Cubans to the United States is extremely limited. Since the revolution that replaced a petty dictator with a repressive, totalitarian government in 1959, the population has served as a captive labor force in which all able adults were expected to work for the state. In the past two years, that situation has begun to change as a result of the shift in leadership from Fidel Castro to his brother Raúl. The twist is that Cuban authorities remain deeply suspicious of any U.S. government involvement in exchanges and still worry about letting citizens travel to countries where they may be tempted to stay. While lifting the U.S. ban on tourism to Cuba might put feet on the ground and increase chances for superficial encounters, exchanges afford some measure of control and open the door to relationships that may result in deeper understanding. While artistic and sports exchanges are probably the most familiar, they usually provide only modest exposure, whereas academic exchanges can involve intense discussions and personal interactions. Literature, social science, and economics are safe subjects that generate interesting debates. If they are designed to prevent leakage of sensitive technology, medical, scientific, and technological exchanges can be mutually beneficial and enable further cooperation in such areas as environmental protection, disaster response, and public health. Conferences and study opportunities that take place in the United States afford the best possibility for enabling Cubans to experience American life and be exposed to democratic values. One caveat must be clearly understood: for the most part, Cuban exchange participants do not represent a broad cross-section of society. Rather, they are government employees, selected on the basis of loyalty to the state. Still, this segment of Cuban society should not be ignored. As it turns out, the United States and Cuba have a long history of exchanges, ranging from short-term collaboration to long-standing partnerships. From the early twentieth century, the two countries have shared information in fields ranging from meteorology to dentistry. However, decades of tension followed the rise of Cuba’s Soviet-style dictatorship and the break in bilateral relations. Still, a substantial number of education and science-based initiatives have been attempted since 1961, meeting with success and failure, depending on the political and social climate at the time. It is worth noting that U.S. advocates of science exchanges have pursued initiatives with other closed societies, including Iran, North Korea (Democratic People’s Republic of Korea, or DPRK), Syria, and Myanmar. Most have faced significant challenges in arranging visits to partner countries. Nonetheless, these advocates have helped establish relationships between U.S. and partner country participants that could be expanded when political relations improve. Such relationships include information sharing on topics such as health and medicine, agriculture, forestry, and technology and have contributed lessons on how to facilitate and plan scholarly exchanges in similar situations. Also noteworthy are barriers that both the United States and Cuba impose on meetings. U.S. restrictions are grounded in legislation that tasks the Department of the Treasury’s Office of Foreign Assets Control (OFAC) to regulate financial transactions and travel. A party desiring an exchange with Cubans must find a Cuban partner organization and work with the government. Visas for licensed American travelers to visit Cuba legally and exit permits for Cubans to travel to external locations are difficult but not impossible to obtain. Practical impediments include expenses that most Cubans are not able to pay. U.S. migration policies that welcome Cuban asylum seekers coupled with economic opportunities unmatched on the island have also led Cuban authorities to insist on picking participants they believe are likely to remain loyal to the regime and return to the island. Until those situations change, best practices for conducting successful exchanges include observing equality in participant numbers and professional status. Agendas for conferences should be developed jointly to avoid sensitive subjects—a precaution that is especially important for events taking place in Cuba, where freedom of expression is restricted. A recent Latin American studies conference in San Francisco broke this guideline and featured Raúl Castro’s daughter, who said she would vote to reelect President Obama, highlighting the fact that political observations by a U.S. exchange participant would not be tolerated in Cuba.1 Finally, for study opportunities in the United States. For the time being, prospects remain modest for meaningful exchanges as well as study opportunities for Cubans in the United States. However, properly structured, they might yield beneficial results in building friendly contacts and mutual understanding with Cuba’s younger generations and perhaps future leaders. This is one area where the United States could take measures such as lowering U.S. visa fees, should the regime’s foreign travel restrictions change. Changes in migration policies that grant automatic residency may not be practical until Cuba implements basic ~~human~~ rights guarantees. Although U.S. regulations are strict and Cuban travel barriers are difficult to overcome, academic exchanges that result in visits to the United States do occur on an infrequent basis and have the potential to expand if U.S. educational institutions and associations work within restrictions and guidelines, seek Cuban partners, and pay expenses. Cuba has hindered exchanges for the past 50 years. Let us celebrate our mutual anniversaries by starting a new era of scientific cooperation.

#### Its a visible single of leadership - sparks broader diplomatic efforts

**AAAS 2010** [Agre, Pickering: Science Diplomacy a “Critical Tool” in U.S. Foreign Policy http://www.aaas.org/news/releases/2010/0212oped\_sun.shtml]

While the United States has made promising steps in science diplomacy, including the recent appointment of the first-ever science envoys, the White House, the State Department, and Congress must do far more to expand links between U.S. and foreign scientific communities, according to AAAS President Peter Agre and Ambassador Thomas R. Pickering. Read the full commentary in the Baltimore Sun by Ambassador Thomas R. Pickering and Nobel laureate Peter Agre, the president of AAAS. Read the new bipartisan statement on science diplomacy by the Partnership for a Secure America. Learn more about the AAAS Center for Science Diplomacy. Agre and Pickering, who served as under secretary of state from 1997 to 2000, urge more emphasis on science diplomacy in an op-ed published 9 February in The Baltimore Sun. They are among more than two dozen prominent political and scientific leaders to sign a bipartisan statement by the Partnership for a Secure America that asks the United States to use its scientific and technological strength to deepen international partnerships and tackle global challenges. Science diplomacy helped open the door for wider cooperation between the United States and China in the 1970s and now offers new opportunities for building trust and understanding between societies where government-to-government contacts may be strained, Agre and Pickering write. In December, Agre and five other Americans representing leading scientific organizations met with their counterparts in North Korea. In November, Agre led a non-governmental delegation of scientists who visited with counterparts in Cuba. Such visits can encourage more scientific cooperation on a global scale. At the same time, the values of science—transparency, vigorous inquiry and respectful debate—also can support peaceful conflict resolution and improved international relations. “The U.S. government is off to a good start in leveraging science diplomacy, with 43 bilateral umbrella science and technology agreements now in force,” Agre and Pickering write. They commend President Barack Obama for his June speech in Cairo that included the announcement of a new fund to support technological development in Muslim-majority countries. They also applaud the appointment of three science envoys, including Bruce Alberts, the editor of Science, to foster new partnerships and address common challenges, especially with Muslim-majority countries.

#### Specifically Cuban science cooperation is key to effective Atmospheric Science

**Lempinen, 12** – Researcher at the American Association for the Advancement of Science, Public Information Officer at The World Academy of Sciences, cites the best nuclear author person ever Mr. Robock (Edward W., “Oceans, Weather, Health—U.S. Researchers Explore Potential Collaboration with Cuban Colleagues” *American Association for the Advancement of Science,* 1 May 2012 http://www.aaas.org/news/releases/2012/0501cuba.shtml)ahayes

Atmospheric research is another area where Cuba and the United States share tangible common interests. Hurricanes and other storms go over Cuba en route to the United States. Clues gained from atmospheric conditions over the Caribbean can give insights—and perhaps early warning—about tornados in Oklahoma and Arkansas, or storms in Chicago and New York. It is an area of particular interest for Turekian, an atmospheric geochemist. “There is no doubt that real atmospheric science involving Cuba—measurements, understanding of atmospheric conditions—is important not only for better understanding of transport of African dust, but also for getting a handle on how atmospheric conditions and dynamics affect the Gulf of Mexico and the southeastern United States,” he said. “Given that tornadoes are driven by really complicated dynamics that involve large amounts of warm air coming up through the Gulf and interacting with cold fronts, any data we can gain can mean lives saved.... 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But off of Cuba’s coasts, says marine scientist Nancy Knowlton, the reefs have been less exposed to development, and they’re in better health. Knowlton is the Sant Chair for Marine Science at Smithsonian Institution and senior scientist emeritus at Smithsonian Tropical Research Institute. She’s worked in fields of marine biodiversity and ecology; coral reefs are her specialty. Save for a cruise that stopped in Guantanamo, she’d never been to Cuba, but on her visit in December, she was deeply impressed with opportunities for research in the Cuban reefs and by the marine science already underway there. “There are amazing habitats, much less impacted by people than most places in Caribbean, in terms of over-fishing and that sort of thing,” she said. “And there’s a large community of marine biologists there, many with shared interest in biodiversity and conservation.” For Knowlton, the Cuban reefs are like “a window in time,” allowing researchers a view of what healthy reefs looked like in an era past. “They give you a baseline as to what a healthy fish community should look like,” she explained. And that gives greater insight into other Caribbean reefs where damage is more pronounced. “So there are a lot of things to learn from Cuban marine scientists,” she said. “And there are a lot of reasons for Cubans to come here, or for Cubans to come and work at the Smithsonian. There’s a huge potential for interchange because there are so many shared interests.” Small Steps, Significant Potential Those shared interests appear to extend across many fields. Carney, whose parents were born in Cuba, met in December with Cuban counterparts who study and help shape government science and technology policy. “From my own perspective in talking to their scientists, I was struck by some of the similarities between our communities,” Carney said. The Cubans “face challenges in policy decisions regarding research priorities, and how to balance between basic research and applied research. They provide universal health care, and so life science research is a bit more targeted, a bit more applied. But looking forward, you want to balance the applied portion with the basic research. “It’s interesting that we’re both faced with similar issues, even though our systems are different.” Scientists from both countries are aware, of course, of the considerable obstacles that stand in the way of full collaboration. Visas and the U.S. embargo are obvious problems. But where scientists in a wealthy nation like the United States take digital and Internet resources for granted, bandwidth in Cuba can be so limited that it’s difficult or impossible to exchange data. Given those constraints, the immediate prospects for full, constructive engagement between science communities are slender at best. And yet Robock, Carney, and others said the visits have made clear that working with Cuban scientists is easier than it might appear. “Any academic can go to Cuba and spend money without restriction,” Robock explained. “You need a license from the U.S. Treasury Department to spend money, but as a researcher, you are subject to the existing general license. So many more Americans could go to Cuba and start doing science with them—but they don’t know that they can.” One of the ideas to emerge from the discussions, Carney said, was a Web resource page that would provide such practical information to both scientific communities. These may be small steps, but they have a significant value in helping to build the foundation for collaboration among researchers in Cuba and the United States. Though the formal relationship between the two nations has long been strained, the scientists are betting on better times ahead, even if they don’t know exactly when. “While it’s been the same for 50 years, it will change—political relationships always do,” said Turekian. “Whenever that relationship changes, you want to be in place where you have the groundwork laid and relationships built so you can take advantage of areas where science cooperation can actually contribute to both countries.” In the meantime, efforts will continue, building on the collegiality that visitors to the island have shared with their hosts. “Everyone who was there was a pretty good science diplomat,” said Knowlton. “There was no uneasiness—there was a lot of curiosity on both sides to meet people and find out what people are doing.... Everyone was going out of their way to be gracious. That’s important—you have to be willing to listen as well as to talk. It was lovely. I’d really like to go back.” Added Agre: “Non-governmental science and AAAS have a tremendously important role to play. More than ever, science is a way for us to break barriers between adversaries. It’s a constructive way for the world to move ahead.” Pastrana, too, sounded an ambitious note for the future. “Any hurdle that comes in the way of international exchange in science is limiting its capacity to be of help for increasing the resilience of this world’s environments,” he said. “Only the knowledge, technologies, and products that come from scientific developments could provide the tools for societies to be able to continue ~~human~~ development in harmony with the only planet that sustains them so far, which has been abused for the last half-century far beyond its capacity to cope with such abuse. “Let us be in favor of scientists and their open communication everywhere. In this way, they would be able to contribute to the sustainability of ~~human~~ societies on planet Earth.”

#### Current sanctions prevent investment in Cuba’s biotechnology on a global scale

**Starr** July 01, **2013**-the codirector of the Center for Science and Medical Journalism and a professor of journalism at Boston University.“THE CUBAN BIOTECH REVOLUTION” <http://nylatinojournal.com/home/business_economics/med_biotech/the_cuban_biotech_revolution.html>)

Faced with economic calamity, Castro did something remarkable: He poured hundreds of millions of dollars into pharmaceuticals. No one knows how - Cuba"s economy, with its secrecy and centralized structure, defies market analysis. One beneficiary was Concepcion Campa Huergo, president and director general of the Finlay Institute, a vaccine lab in Havana. She developed the world's first meningitis B vaccine, testing it by injecting herself and her children before giving it to volunteers. "I remember one day telling Fidel that we needed a new ultracentrifuge, which costs about $70,000," Campa says. "After five minutes of listening he said, 'No. You"ll need 10.'" Campa and her colleagues still have to scrimp and scrounge. Labs are filled with gear from Europe, Japan, and Brazil. The occasional device from the US has traveled the "long way around" - through so many middlemen (and markups) that it may well have circled the globe. Scientists develop their own reagents, enzymes, tissue cultures, and virus lines. Each institute has its own production facility and conducts clinical trials through the state-run hospital system. The Center of Genetic Engineering and Biotechnology, La Habana, Cuba. Photo: Pugwash Conferences on Science and World Affairs Still, if pharma is to become an economic engine, Cuban researchers acknowledge that they"ll have to join the international business community. South-to-south transfers simply don"t raise enough cash. That's where things get complicated. Forty years after it began, Washington's embargo remains a punishing weapon. Not only are US companies banned from doing business with Cuba, but so are their foreign subsidiaries. No freighter that visits a Cuban port may dock in the US for the next six months. For a Cuban product to reach US companies, the makers have to prove a "compelling national interest" to the US Office of Foreign Assets Control. Consolidation in the drug industry has made things worse, says Ismael Clark, president of the Cuban Academy of Sciences. "You"d have a supplier for several years, and suddenly you"d get a letter from the company saying, "We can"t supply you anymore because our firm was bought by an American transnational."" The country has taken a few steps toward bridging the gap. The American drug company SmithKline Beecham (now part of a British transnational) got permission to license Campa's meningitis B vaccine in 1999. The terms of the deal are restrictive. SmithKline pays Cuba in products during clinical trials (now in Phase II in Belgium) and in cash only if the drug proves to be viable.In July, CancerVax, **a California-based biotech company, got federal approval to test a Cuban vaccine that stimulates the immune system against lung cancer cells. CancerVax is the first US business to receive such approval.** CancerVax staffers saw the research at an international conference, and then spent two years lobbying Capitol Hill and Cuban-American interest groups. Still, naïveté remains the real obstacle to a Cuban biotech century. Fidel's pharmacists lack slick brochures and golden-tongued sales staff. Foreigners tend to find Cuba overly bureaucratic, especially when closing a deal. "They just don't get capitalism," a diplomat tells me over coffee in Boston. "The elite may watch American TV and read The Wall Street Journal on the Web, so they have a conversational familiarity. But on a fundamental level they don't get it and don't want to get it. They still think there's something immoral about profit." Borroto, of CIGB, remembers talking to colleagues about using patents to protect their expanding market. That was the moment Castro decided to pop into the lab. "What's all this about patents? You"re sounding crazy!" he said. "We don"t like patents, remember?" Borroto stood his ground. "Even if you"re giving medicine to the third world," he said, "you still need to protect yourself." Borroto knew he had to get better at the game. He sent his staff to Canada to get MBAs, to learn the language of capitalism. Yet concepts like venture capital still escape him. "I can"t understand how 80 percent of the biotech companies in the world make money without selling any products," he says. "How do they do this? Hopeness," he guesses, using a neologism to stress the absurdity. "They sell hopeness." Asked for an annual report - a basic necessity of international business- Agustin Lage, director of the Center for Molecular Immunology, merely says, "You know, we"ve actually been meaning to produce one." Then he smiles and shrugs. It's like Castro said: They don"t really like patents. They like medicine. Cuba's drug pipeline is most interesting for what it lacks: grand-slam moneymakers, cures for baldness, impotence, or wrinkles. It's all cancer therapies, AIDS medications, and vaccines against tropical diseases.

#### Cuba has unique agricultural and medical biotechnology – the plan is key to make it available globally

Juma and Konde 2 (Juma, Calestous, rofessor of the Practice of International Development and Director of the Science, Technology, and Globalization Project at the Harvard Kennedy School; Konde, Victor, Scientific Affairs Officer with the United Nations Economic Commission for Africa; Environment. Jul/Aug2002, Vol. 44 Issue 6, p22. 14p. 9 Color Photographs; “Industrial Applications for Biotechnology: Opportunities for Developing Countries”; EBSCO; KDUB)

Market inclusion through international alliances also is illustrated by Cuban experiences in biotechnology commercialization. It was not until the early 1980s that the Cuban government started to focus policy attention on biotechnology as a source of pharmaceutical products by supporting the creation of research centers.¶ The Centro de Ingenieria Genética y Biotecnologia (CIGB) employs about 1,200 scientists and technicians and has 192 laboratories, equipped with the best instruments from countries such as Japan, Germany, and Sweden. These facilities produce vaccines for meningitis B and hepatitis B and are developing vaccines for HIV, hemophilia, and cholera. In diagnostics, CIGB has produced analytic systems capable of detecting HIV, hepatitis B, herpes simplex, chagás, leprosy, and other diseases. It also has produced probes for plant diseases, about 50 enzymes (some of which are produced only in Cuba), and 160 medical and pharmaceutical products.[ 17]¶ Cuba moved into the commercialization of biotechnology products through the creation of a semiprivate enterprise, Herber Biotech. By 1998, Herber Biotech was recording about $290 million (U.S.) annually in sales of hepatitis B vaccines and pharmaceuticals in 34 countries. Nationally, biotechnology placed just behind tourism, nickel production, and tobacco export in terms of earnings. Now the company is extending its partnerships with other developing countries. In 2001, it established a joint marketing venture with Kee Pharmaceuticals of India that aims to access the Indian market through special pricing and technology transfers. Kee Pharmaceuticals launched cardiostrep, a streptokinase owned by Gerber Biotech and used for the hydrolysis of coronary clots and prevention of heart attacks. The market for cardiostrep is valued at about $11 million per year--and is expected to grow by 30 percent annually.[ 18]¶ Cuba recognizes that participating in the global market involves forging alliances with a wide range of enterprises, especially those that have extensive marketing networks. Cuba's biotechnology industry demonstrates the importance of political leadership on technological matters, domestic funding for research activities, creation of appropriate research institutions, and international alliances for product commercialization. Its future will depend on the degree to which these elements are maintained, especially in the face of worsening economic conditions that might divert resource allocation and political commitment to other sectors.

#### US-Cuba science cooperation is key to solve all tropical disease – more virulent strains of are emerging NOW

Discovery 13

[Discovery News, February 11, 2013, “Could Cuba Help U.S. Fight Tropical Diseases?” [http://news.discovery.com/~~human~~/cuba-help-fight-tropical-diseases-dengue-fever.htm](http://news.discovery.com/human/cuba-help-fight-tropical-diseases-dengue-fever.htm)]

When it comes to issues like the spread of infectious disease, increased collaboration with Cuba may just be good medicine. THE GIST U.S. scientists and doctors are looking to Cuba for help with infectious diseases. Cuban scientists are experts on diseases like dengue fever, which has become more common in the U.S. Political relations with the Communist country and recent shakeups in Congress may stand in the way of cross-country collaboration. In the wake of this month's Republican electoral shakeup in Congress, talk of lifting the U.S. travel ban to Communist Cuba is pretty much off the table. But President Barack Obama still has the executive power to ease the amount of red tape faced by U.S. medical researchers who can travel to the island. For some, such a move might awaken fears of radical socialism, but others say when it comes to issues like the spread of tropical and infectious disease from global warming, increased collaboration with a neighbor is just good medicine. "I think because of climate change, because some of these infectious diseases are coming through in epic forms, collaboration between all countries is more needed than ever," said Gail A. Reed, the International Director of MEDICC, an American non-profit organization working to enhance global health cooperation with Cuba. Hepatitis, chikungunya, bird flu and H1N1 are all diseases that concern U.S. epidemiologists. But dengue fever, the most common of mosquito-born illnesses, is one of the biggest. This summer, the Centers for Disease Control reported that five percent of residents in Key West, Fla. had been exposed to the deadly virus. Dengue was eradicated in the United States in the 1940s, with just a few cases creeping across the U.S.-Mexico border in the 1980s. It is endemic to most of the Caribbean, but not to Cuba. In fact, strong research and preventative measures have won Havana's Pedro Kouri Cuban Tropical Medicine Institute special status as a World Health Organization Collaborating Center for Dengue Study and Control. "In that sense, U.S. scientists are very interested in collaborating with Cuba because they have a history of investigations and successful research not only into the impact but the viral origins," Reed said. That interest dates to before the 1959 Cuban Revolution that brought Fidel Castro to power. In 1889, the American Public Health Association requested that the United States government annex Cuba from Spain to protect Americans from Yellow Fever. Panic over the disease helped fuel the 1898 Spanish American War, says Pedro Orduñez, a Cuban doctor who has published extensively on U.S.-Cuba medical research in both Washington and Havana. "Health in Cuba is the icon of the revolution," noted Orduñez, explaining that Cuba's invention of a broad-based primary care system helped it assert its sovereign identity. That faltered during the 1991 collapse of the Soviet Union, Cuba's main economic backer. Thousands of Cuban rafters set sail for Florida, and many of the Cubans who remained began to suffer epidemics such as optic neuropathy, a temporary blindness associated with certain nutritional deficiencies. As a result, the U.S. government loosened some U.S. travel and trade restrictions on ~~human~~itarian aid. That, in turn, pried open collaborative doors a little further, allowing new organizations such as MEDICC to create U.S.-Cuba medical exchanges. In 2001, Cuba offered full-ride scholarships for up to 500 U.S. students at its Latin American Medical School, and the U.S. government obliged. Dr. Sitembile Sales, a 2010 U.S. graduate of the Latin American Medical School in Havana, is grateful both nations allowed her to access the Cuban government's medical scholarship. She says it gave her invaluable training for crises and epidemics anywhere. During her third year of medicine, she was thrown onto 24-hour hospital rounds for two dengue fever epidemics. "There were meetings with our professors saying this is war, we have an attack … there's no room for mistakes," she told Discovery News. "The good thing is that people never dropped like flies because we never let them get to that point." Obstacles still abound. Sales needed a special student license to travel to Cuba, and a general license that allows American professionals to conduct research there is not as general as it sounds. Researchers must scrutinize every aspect of their trip to make sure their spending and collaborative habits do not infringe upon U.S. sanctions. That means knowing what research equipment they can carry without a separate license, how much money they can spend in country and on what, how their work will be disseminated later, and under what specific contexts they can collaborate with or learn from the Cuban people. For example, researchers have to ask for a different license if they plan to attend a Cuba-sponsored science conference or workshop, and in Cuba, most events are government run. Obtaining a U.S. license for conferences or research equipment involves mounds of paperwork and an answer can take months. Interest groups say these factors slow down the process of participating in projects that would otherwise prove to be a quick and efficient way of obtaining important medical data or learning new methods for curbing an epidemic. Earlier this year, the U.S. Congress had seriously discussed a full lifting of the travel ban, but Cuban-American Congressmen expressed concerns about Americans fueling a tourism industry run by the Cuban government. Now researchers say more Republicans in Congress will further stifle that possibility, but note that Obama could still ease the licensing needed for more extensive medical research. To gauge the likelihood of that possibility, Discovery News reached out to the White House, as well as to Cuban American Congressmen Ileana Ros-Lehtinen, R-Fla., Robert Menendez, D-N.J., Lincoln Diaz-Balart, R-Fla. and Albio Sires, D-N.J. None responded. Jorge Bolaños, the Chief of Mission for the Cuban Interests Section in Washington, did offer Discovery News some thoughts following a lecture he gave at nearby Howard University. "We have no objection to any cooperation," he said, adding that his country was very proud of its ability to stave off epidemics through preventative strategies in spite of serious economic and material deficiencies. "If I'm waiting to get the flu shot, and if I don't go there (to the clinic) for the flu shot, they will go to my house… When you don't go to see the doctor, you suffer the tyranny of the doctor," he joked.

#### Biotech solves soil erosion and earthworms

Fawcett and Towry 02 (Researchers for the CTIC (Conservation Technology Information Center), a non-profit organization dedicated to environmentally responsible and economically viable agricultural decision-making “Conservation Tillage and Plant Biotechnology: How New Technologies Can Improve the Environment By Reducing the Need to Plow”, pgs. 1-4,http://www.whybiotech.com/resources/tps/ConservationTillageandPlantBiotechnology.pdf)//KDUB

There is a strong association between the use of herbicide-tolerant biotech crops and recent improvements in tillage reduction. Four trends support this conclusion: • Weed control is a major consideration when farmers are weighing whether to implement conservation tillage, and several surveys indicate that farmers have more confidence in weed control since the introduction of herbicide-tolerant biotech crops. In some surveys, farmers say herbicide-tolerant crops enabled them to increase the amount of residue they leave on their fields. INTRODUCTION• No-till, the tillage system that most relies on good herbicide performance, has grown more than other reduced tillage systems since 1996, and nearly all the growth has occurred in crops where herbicidetolerance technology is available – soybeans, cotton and canola. (Herbicide-tolerant corn has not been widely adopted due to pending regulatory approval in Europe, nor has no-till corn expanded as rapidly as other crops.) • Farmers who purchase herbicide-tolerant seeds use them disproportionately on their conservation tillage acres. • Farmers who do not purchase herbicide-tolerant seeds are not as likely to participate in conservation tillage. The main reason farmers till their soil is to control weeds, which compete with their crops for space, nutrients and water and can interfere with harvesting equipment. Historically, farmers have plowed under emerged weeds before planting and tilled the soil in preparation for herbicides that prevent additional weeds from emerging. If herbicides failed due to weather conditions, farmers could use additional tillage as a rescue. With herbicide-tolerant crops, farmers allow weeds to emerge with their crops. Then they apply herbicide over the top of their crop, removing the weeds without harming the crop, which has been modified through biotechnology to withstand the herbicide. This improvement in weed control gives increased confidence that weeds can be controlled economically without relying on tillage. It partially explains why no-till farming has been increasing significantly in crops where the technology is available. Many analyses have shown that conservation tillage provides economic benefits by saving time and reducing fuel and equipment costs. Despite these benefits, many farmers were reluctant to commit to a new system in which they saw potential risk of yield reduction due to competition from weeds. The trends since 1996, when herbicidetolerant crops were first introduced, provide a strong indication that improved weed control made possible with the new biotech crops has given growers the confidence to increase their use of conservation tillage, especially no-till.As a significant percentage of agriculture is left untilled, more like the original prairies, the water and soil cycles also will begin to return to a more natural state. Continued adoption of no-till practices will bring additional environmental benefits, which include increasing the amount of topsoil that is saved each year, reducing runoff into streams and further cutting back on fuel use and emissions. Improved weed control available through herbicidetolerant crops will be an important factor in continued adoption of no-till. TILLAGE WAS ONCE NECESSARY Repeated tillage to prepare crop seedbeds and control weeds was an indispensable component of agriculture until the last half of the 20th century. However, excessive tillage causes soil erosion, thus reducing the sustainability of agriculture. For example, 100 years after Iowa was settled, nearly half the original topsoil had eroded.1 Repeated tillage also can reduce soil quality and productivity by destroying soil structure, reducing organic matter content and harming beneficial invertebrates such as earthworms. Sediment eroded from intensively tilled fields fouls aquatic systems, and runoff of water contributes to flooding. Tillage destroys wildlife food sources and reduces surface crop residues that serve as wildlife cover. Edward Faulkner was one of the earliest proponents of eliminating the use of the moldboard plow, the most widely used primary tillage tool until the late 20th century. In his 1943 book, “Plowman’s Folly,”2 he called the plow “the villain in the world’s agricultural drama.” He concluded that plowing crop residues deep into the soil, leaving the soil’s surface bare, reduced the long-term productivity of the soil. Faulkner wrote: “Had we not originally gone contrary to the laws of nature by plowing the land, we would have avoided the problems … the erosion, the sour soils, the mounting floods, the lowering water table, the vanishing wildlife, the compact and impervious soil surfaces.” Although many of Faulkner’s predictions of benefits from what was later to be called “conservation tillage” turned out to be true, poor weed control, experienced when tillage was reduced, prevented most farmers from adopting the systems until the introduction of herbicides. Development of effective herbicides in the 1960s allowed farmers to reduce their dependence on repeated tillage to control weeds. Some eliminated tillage altogether. However, weed control challenges and uncertainties remain. Some problem weeds, such as perennials, remain difficult to control. A few weeds have developed resistance to some popular herbicides. Because most herbicides do not control all weed species present in fields, farmers often apply two, three or more herbicides in combination. Effective weed control with herbicides requires careful identification of weed species and precise application timing. Crop injury may occur if adverse weather conditions reduce crop tolerance, or herbicide residues in the soil injure rotational crops. Soil-applied herbicides may fail if sufficient rainfall does not occur to activate the chemical. Biotechnology has given farmers additional weed control options by facilitating the development of crop varieties tolerant to herbicides, such as glyphosate and glufosinate. These herbicides, rather than preventing weed growth in the soil, are applied to emerged weeds and are effective against a broad spectrum of annual and perennial weeds. They are well-suited to conservation tillage systems because they do not require incorporation with tillage tools. In addition, they are applied at low rates, have low toxicity to animals and degrade rapidly. They cannot, however, be used with crops that have not been made tolerant through biotechnology, because they would have the same detrimental effect on the crop as they have on weeds. As will be discussed later, farmers are using herbicidetolerant crops disproportionately in reduced tillage systems, especially no-till. The majority of such crops are glyphosate-tolerant; therefore, subsequent discussion of herbicide-tolerant crops in this report will focus on glyphosate-tolerant varieties developed through biotechnology.

#### No war – international institutions and societal shifts

**Contreras, 12** – Fellow, Belfer Center for Science and International Affairs, Harvard University (Dominic, citing Steven Pinker, Harvard College Professor and Johnstone Family Professor in the Department of Psychology at Harvard University, citing Joshua A. Goldstein, Professor Emeritus, School of International Service, American University, February 1, 2012, “Winning the War on War?”, Belfer Center for Science and International Affairs, Harvard University, http://belfercenter.ksg.harvard.edu/publication/21707/winning\_the\_war\_on\_war.html?breadcrumb=%2Fproject%2F52%2Fintrastate\_conflict\_program, Hensel)

In a jointly authored December 2011 op-ed in the New York Times, Pinker and Goldstein wrote that “the departure of the last American troops from Iraq brings relief to a nation that has endured its most painful war since Vietnam. But the event is momentous for another reason. The invasion of Iraq was the most recent example of an all-out war between two national armies. And it could very well be the last one.” Speaking at the forum, both echoed their assessment that war is less and less often being used as a tool for societies and states to resolve conflicts, but they differed in their views of what brought about this change. Speaking to the main argument of his book “Winning the War on War: the Decline of Armed Conflict Worldwide,” Goldstein, professor emeritus of international relations at American University, largely credited international institutions for the pacification of the international community, stating that “After World War II we did something new…we founded the United Nations…and we’ve developed this tool, peacekeeping…that has successively, progressively, over a number of years, made it possible to resolve more conflicts without violence, to reduce violence when it has already occurred, and to sustain peace when you’re able to negotiate a peace agreement.” “The international community is not an oxymoron,” Goldstein said, “it actually works.” Pinker, the Johnstone family professor of psychology at Harvard and author of the much heralded book “The Better Angels of Our Nature: Why Violence Has Declined,” concurred with Goldstein’s assessment of a new peace taking hold. But he went a step further, arguing that in addition to the international community promoting peace, interpersonal norms and the development of social restraints have fostered a shift away from violence. Pinker cited “psychological changes through cosmopolitanism and literacy… [and the] expansion of empathy and the consideration of others,” as driving forces in the societal tilt away from war. He also pointed to changing attitudes towards violence as explaining this shift. “Violence is seen as something to be solved and something we can throw our wits against… society sees it as a problem, not a solution,” Pinker said. Pinker and Goldstein both declared that they are not optimists and had approached trends in warfare as pessimists, only reaching their conclusions through rigorous scholarly analysis. Toft and Walt, however, were not so easily convinced that the data bear out the hopeful view. Toft, an associate professor of public policy at the Kennedy School and director of the Belfer Center’s Initiative on Religion in International Affairs, praised both authors and their books, but pointed to what she perceived as a Eurocentric tilt in their data pools. She also cited changing global power dynamics, and wondered if the trend would hold. Responding to Pinker’s argument that societies have become more civilized Walt, the Robert and Renee Belfer professor of international affairs and faculty chair of the Belfer Center’s International Security Program, said, “It’s not obvious to me that the civilizing instinct at the interpersonal level translates to more civilized behavior between states or between states and other people.” Walt pointed to Bosnia and Iraq as examples of cases in which boundary conditions change and violence quickly emerges from seemingly peaceful societies. Devoid of a strong central state, both Yugoslavia after the fall of Tito, and Iraq after the toppling of Saddam both descended into civil war as competing groups vied for control and power. Furthermore, Walt pointed to the post-Cold War U.S. that has gone to war four times through democratic processes and has choosen warfare as a rational and preferred option. The panel largely agreed that global war on the scale of World War I and II is unlikely to occur again, because, according to Goldstein, “trade is now basis of prosperity [whereas] conquering land used to be.” However, they agreed, modern exceptions abound; in some cases the United Nations, which is charged with upholding peace, can sanction war, and in others, states can decide that war is in their interest. Whether or not war is on the way out in the long-term is up for debate, but according to Pinker, “you can’t miss the trend line.”

#### No scenario for escalation -- inevitable incentives for conflict minimization

Quinlan, 9 - distinguished former British defence strategist, former Permanent Under-Secretary of State at the British Ministry of Defence, Prof. @ Wimbledon College and Merton College, Oxford. Director of the Ditchley Foundation, (Sir Michael, Thinking About Nuclear Weapons: Principles, Problems, Prospects, 2009, Pg. 67-69, Google Books)//AH

It was occasionally conjectured that nuclear war might be triggered by the real but accidental or unauthorized launch of a strategic nuclear-weapon delivery system in the direction of a potential adver­sary. No such launch is known to have occurred in over sixty years. The probability of it is therefore very low. But even if it did happen, the further hypothesis of its initiating a general nuclear exchange is far-fetched. It fails to consider the real situation of decision-makers, as pages 63-4 have brought out. The notion that cosmic holocaust might be mistakenly precipitated in this way belongs to science fiction. One special form of miscalculation appeared sporadically in the speculations of academic commentators, though it was scarcely ever to be encountered—at least so far as my own observation went—in the utterances of practical planners within government. This is the idea that nuclear war might be erroneously triggered, or erroneously widened, through a state under attack misreading either what sort of attack it was being subjected to, or where the attack came from. The postulated misreading of the nature of the attack referred in particular to the hypothesis that if a delivery system—normally a missile—that was known to be capable of carrying either a nuclear or a conventional warhead was launched in a conventional role, the target country might, on detecting the launch through its earlywarning systems, misconstrue the mission as an imminent nuclear strike and immediately unleash a nuclear counter-strike of its own. This conjecture was voiced, for example, as a criticism of the pro­posals for giving the US Trident SLBM, long associated with nuclear missions, a capability to deliver conventional warheads. Whatever the merit of those proposals (it is not explored here), it is hard to regard this particular apprehension as having any real-life credibility. The flight time of a ballistic missile would not exceed about thirty minutes, and that of a cruise missile a few hours, before arrival on target made its character—conventional or nuclear—unmistakable. No government will need, and no non-lunatic government could wish, to lake within so short a span of time a step as enormous and irrevocable as the execution of a nuclear strike On the basis of early-warning information alone without knowing the true nature of the incoming attack. The speculation tends moreover to be expressed without reference either to any realistic political or conflict-related context thought to render the episode plausible, or to the manifest interest of the launching country, should there be any risk of doubt, in ensuring—by explicit communication if necessary—that there was no misinterpretation of its conventionally armed launch. It may be objected to this analysis that in the cold war the two opposing superpowers had concepts of launch-on-warning. That seems to be true, at least in the sense that successive US adminis­trations declined to rule out such an option and indeed included in their contingency plans both this and the possibility of launch-under-attack (that is launch after some strikes had been suffered and while the sequence of them was evidently continuing). The Soviet Union was not likely to have had more relaxed practices. But the colossal gravity of activating any such arrangements must always have been recognized. It could have been contemplated only in circumstances where the entire political context made a pre-emptive attack by the adversary plainly a serious and imminent possibility, and where moreover the available information unmistakably indi­cated that a massive assault with hundreds or thousands of missiles was on the way. That was a scenario wholly unlike that implicit in the supposition that a conventional missile attack might be briefly mistaken for a nuclear one. The other sort of misunderstanding conjectured—that of misread­ing the source of attack—envisaged, typically, that SLBMs launched by France or the United Kingdom might erroneously be supposed to be coming from US submarines, and so might initiate a super­power exchange which the United States did not in fact intend. (An occasional variant on this was the notion that 'triggering' in this way might actually be an element in deliberate French or UK deterrent concepts. There was never any truth in this guess in relation to the United Kingdom, and French thinking is unlikely to have been different.) The unreality in this category of conjecture lay in the implica­tion that such a scenario could develop without the US government making the most determined efforts to ensure that Soviet (or now Russian) leaders knew that the United States was not responsible for the attack, and with those leaders for their part resorting, on unproven suspicion, to action that was virtually certain to provoke nuclear counter-action from the United States. There used occasion­ally to be another speculation, that if the Soviet Union suffered heavy nuclear strikes known to come from France or the United Kingdom, it might judge its interests to be best served by ensuring that the United States did not remain an unscathed bystander. But even if that were somehow thought marginally less implausible, it would have been a different matter from misinterpretation of the initial strike. As was noted earlier in this chapter, the arrangements under which nuclear-weapon inventories are now managed are in several impor­tant respects already much less open to concern than they were dur­ing much of the cold war. Worries voiced more recently sometimes relate to 'cyber-attack'—hostile interference, whether by states or by other actors such as terrorists, with information systems used in the control of armouries. It is highly unlikely, though details are (again understandably) not made public, that regular reviews of control arrangements are oblivious to any such risks. Perceptions of them do however reinforce the already-strong case that whatever arrange­ments still remain in place for continuous high readiness to launch nuclear action at short notice should be abandoned. Chapter 13 returns to this.

#### Nuclear war doesn’t cause extinction – prefer models

**Seitz 6 -** former associate of the John M. Olin Institute for Strategic Studies at Harvard University’s Center for International Affairs (Russell, “The' Nuclear Winter ' Meltdown Photoshopping the Apocalypse”, <http://adamant.typepad.com/seitz/2006/12/preherein_honor.html>)//AM

All that remains of Sagan's Big Chill are curves such as this , but history is full of prophets of doom who fail to deliver, not all are without honor in their own land. The 1983 'Nuclear Winter " papers inScience were so politicized that even the eminently liberal President of The Council for a Liveable World called "The worst example ofthe misrepesentation of science to the public in my memory." Among the authors was Stanford President Donald Kennedy. Today he edits Science , the nation's major arbiter of climate science--and policy.¶ Below, a case illustrating the mid-range of the ~.7 to ~1.6 degree C maximum cooling the 2006 studies suggest is superimposed in color on the Blackly Apocalyptic predictions published in Science Vol. 222, 1983 . They're worth comparing, because the range of soot concentrations in the new models overlaps with cases assumed to have dire climatic consequences in the widely publicized 1983 scenarios --"Apocalyptic predictions require, to be taken seriously,higher standards of evidence than do assertions on other matters where the stakes are not as great." wrote Sagan in Foreign Affairs , Winter 1983 -84. But that "evidence" was never forthcoming.'Nuclear Winter' never existed outside of a computer except as [air-brushed animation](http://www.atomicarchive.com/Movies/Movie6.shtml) commissioned by the a PR firm - Porter Novelli Inc. Yet Sagan predicted "the extinction of the ~~human~~ species " as temperatures plummeted 35 degrees C and the world froze in the aftermath of a nuclear holocaust. Last year, Sagan's cohort tried to reanimate the ghost in a machine anti-nuclear activists invoked in the depths of the Cold War, by re-running equally arbitrary scenarios on a modern interactive Global Circulation Model. But the Cold War is history in more ways than one. It is a credit to post-modern computer climate simulations that [they do not reproduce the apocalyptic results](http://www.copernicus.org/EGU/acp/acpd/6/11817/acpd-6-11817_p.pdf) of what Sagan oxymoronically termed "a sophisticated one dimensional model." The subzero 'baseline case' has melted down into a tepid 1.3 degrees of average cooling- [grey skies do not a Ragnarok make](http://whyfiles.org/shorties/222nuclear/images/BCabsoptdaily.gif) . What remains is just not the stuff that End of the World myths are made of.¶ It is hard to exaggerate how seriously " nuclear winter "was once taken by policy analysts who ought to have known better. Many were taken aback by the sheer force of Sagan's rhetoric Remarkably, Science's news coverage of the new results fails to graphically compare them with the old ones Editor Kennedy and other recent executives of the American Association for the Advancement of Science, once proudly co-authored and helped to publicize.¶ You can't say they didn't try to reproduce this Cold War icon. Once again, soot from ¶ imaginary software materializes in midair by the megaton , flying higher than Mount Everest . This is not physics, but a crude exercise in ' garbage in, gospel out' parameter forcing designed to maximize and extend the cooling an aeosol can generate, by sparing it from realistic attrition by rainout in the lower atmosphere. Despite decades of progress in modeling atmospheric chemistry , there is none in this computer simulation, and ignoring photochemistry further extends its impact. Fortunately , the history of science is as hard to erase as it is easy to ignore. Their past mastery of semantic agression cannot spare the authors of "Nuclear Winter Lite " direct comparison of their new results and their old.¶ Dark smoke clouds in the lower atmosphere don't last long enough to spread across the globe. Cloud droplets and rainfall remove them. rapidly washing them out of the sky in a matter of days to weeks- not long enough to sustain a global pall. Real world weather brings down particles much as soot is scrubbed out of power plant smoke by the water sprays in smoke stack scrubbers Robock acknowledges this- not even a single degree of cooling results when soot is released at lower elevations in he models . The workaround is to inject the imaginary aerosol at truly Himalayan elevations - pressure altitudes of 300 millibar and higher , where the computer model's vertical transport function modules pass it off to their even higher neighbors in the stratosphere , where it does not rain and particles linger.. The new studies like the old suffer from the disconnect between a desire to paint the sky black and the vicissitudes of natural history. As with many exercise in worst case models both at invoke rare phenomena as commonplace, claiming it prudent to assume the worst.

### Plan

**Thankfully the plan solves –**

#### Text: The United States federal government should remove its scientific sanctions against Cuba.

**Text: The United States federal government should substantially increase its economic engagement with Cuba through the removal of its Scientific Sanctions.**

### t

#### Econ engagement can be both conditional and unconditional

Kahler and Kastner 06 (Miles Kahler and Scott Kastner, Kahler is from the Graduate School of International Relations and Pacific Studies and Kastner is from the Department of Government and Politics, [www.bsos.umd.edu/gvpt/kastner/KahlerKastner.doc](http://www.bsos.umd.edu/gvpt/kastner/KahlerKastner.doc), “STRATEGIC USES OF ECONOMIC INTERDEPENDENCE: ENGAGEMENT POLICIES IN SOUTH KOREA, SINGAPORE, AND TAIWAN”, Sept. 2006, Accessed: 6/26/13, CW)

Scholars have usefully distinguished between two types of economic engagement: conditional policies that require an explicit quid-pro-quo on the part of the target country, and policies that are unconditional

#### Counter interpretation economic engagement is influencing the political behavior of a state through economic means

**Resnik, 1** – Assistant Professor of Political Science at Yeshiva University (Evan, Journal of International Affairs, “Defining Engagement” v54, n2, political science complete)

A REFINED DEFINITION OF ENGAGEMENT In order to establish a more effective framework for dealing with unsavory regimes, I propose that we define engagement as the attempt to influence the political behavior of a target state through the comprehensive establishment and enhancement of contacts with that state across multiple issue-areas (i.e. diplomatic, military, economic, cultural). The following is a brief list of the specific forms that such contacts might include: DIPLOMATIC CONTACTS Extension of diplomatic recognition; normalization of diplomatic relations Promotion of target-state membership in international institutions and regimes Summit meetings and other visits by the head of state and other senior government officials of sender state to target state and vice-versa MILITARY CONTACTS Visits of senior military officials of the sender state to the target state and vice versa Arms transfers Military aid and cooperation Military exchange and training programs Confidence and security- measures Intelligence sharing ECONOMIC CONTACTS Trade agreements and promotion Foreign economic and humanitarian aid in the form of loans and/or grants CULTURAL CONTACTS Cultural treaties Inauguration of travel and tourism links Sport, artistic and academic exchanges(n25) Engagement is an iterated process in which the sender and target state develop a relationship of increasing interdependence, culminating in the endpoint of "normalized relations" characterized by a high level of interactions across multiple domains. Engagement is a quintessential exchange relationship: the target state wants the prestige and material resources that would accrue to it from increased contacts with the sender state, while the sender state seeks to modify the domestic and/or foreign policy behavior of the target state. This deductive logic could adopt a number of different forms or strategies when deployed in practice.(n26) For instance, individual contacts can be established by the sender state at either a low or a high level of conditionality.(n27) Additionally, the sender state can achieve its objectives using engagement through any one of the following causal processes: by directly modifying the behavior of the target regime; by manipulating or reinforcing the target states' domestic balance of political power between competing factions that advocate divergent policies; or by shifting preferences at the grassroots level in the hope that this will precipitate political change from below within the target state.This definition implies that three necessary conditions must hold for engagement to constitute an effective foreign policy instrument. First, the overall magnitude of contacts between the sender and target states must initially be low. If two states are already bound by dense contacts in multiple domains (i.e., are already in a highly interdependent relationship), engagement loses its impact as an effective policy tool. Hence, one could not reasonably invoke the possibility of the US engaging Canada or Japan in order to effect a change in either country's political behavior. Second, the material or prestige needs of the target state must be significant, as engagement derives its power from the promise that it can fulfill those needs. The greater the needs of the target state, the more amenable to engagement it is likely to be. For example, North Korea's receptivity to engagement by the US dramatically increased in the wake of the demise of its chief patron, the Soviet Union, and the near-total collapse of its national economy.(n28) Third, the target state must perceive the engager and the international order it represents as a potential source of the material or prestige resources it desires. This means that autarkic, revolutionary and unlimited regimes which eschew the norms and institutions of the prevailing order, such as Stalin's Soviet Union or Hitler's Germany, will not be seduced by the potential benefits of engagement. This reformulated conceptualization avoids the pitfalls of prevailing scholarly conceptions of engagement. It considers the policy as a set of means rather than ends, does not delimit the types of states that can either engage or be engaged, explicitly encompasses contacts in multiple issue-areas, allows for the existence of multiple objectives in any given instance of engagement and, as will be shown below, permits the elucidation of multiple types of positive sanctions.

#### Plan is economic means – promotes trade and investment

State Department (“Science and Technology Cooperation”, http://www.state.gov/e/oes/stc/)

Thirty U.S. S&T Agreements worldwide establish bilateral frameworks to facilitate the exchange of scientific results, provide for protection and allocation of intellectual property rights and benefit sharing, facilitate access for researchers, address taxation issues, and respond to the complex set of issues associated with economic development, domestic security and regional stability. S&T cooperation supports the establishment of science-based industries, encourages investment in national science infrastructure, education and the application of scientific standards, promotes international trade and dialogue on issues of direct import to global security, such as protection of the environment and management of natural resources. S&T collaboration assists USG agencies to establish partnerships with counterpart institutions abroad. These relationships enable them to fulfill their individual responsibilities by providing all parties with access to new resources, materials, information, and research. High priority areas include such areas as agricultural and industrial biotechnology research (including research on microorganisms, plant and animal genetic materials, both aquatic and terrestrial), health sciences, marine research, natural products chemistry, environment and energy research.

### 2AC FW cards

#### The role of the ballot is to decrease existential risk

Anissimov 4 — Michael Anissimov, science and technology writer focusing specializing in futurism, founding director of the Immortality Institute—a non-profit organization focused on the abolition of nonconsensual death, member of the World Transhumanist Association, associate of the Institute for Accelerating Change, member of the Center for Responsible Nanotechnology's Global Task Force, 2004 (“Immortalist Utilitarianism,” *Accelerating Future*, May, Available Online at http://www.acceleratingfuture.com/michael/works/immethics.htm, Accessed 09-09-2011)

The value of contributing to Aubrey de Grey's anti-aging project assumes that there continues to be a world around for people's lives to be extended. But if we nuke ourselves out of existence in 2010, then what? The probability of human extinction is the gateway function through which all efforts toward life extension must inevitably pass, including cryonics, biogerontology, and nanomedicine. They are all useless if we blow ourselves up. At this point one observes that there are many working toward life extension, but few focused on explicitly preventing apocalyptic global disaster. Such huge risks sound like fairy tales rather than real threats - because we have never seen them happen before, we underestimate the probability of their occurrence. An existential disaster has not yet occurred on this planet. The risks worth worrying about are not pollution, asteroid impact, or alien invasion - the ones you see dramaticized in movies - these events are all either very gradual or improbable. Oxford philosopher Nick Bostrom warns us of existential risks, "...where an adverse outcome would either annihilate Earth-originating intelligent life or permanently and drastically curtail its potential." Bostrom continues, "Existential risks are distinct from global endurable risks. Examples of the latter kind include: threats to the biodiversity of Earth’s ecosphere, moderate global warming, global economic recessions (even major ones), and possibly stifling cultural or religious eras such as the “dark ages”, even if they encompass the whole global community, provided they are transitory." The four main risks we know about so far are summarized by the following, in ascending order of probability and severity over the course of the next 30 years: Biological. More specifically, a genetically engineered supervirus. Bostrom writes, "With the fabulous advances in genetic technology currently taking place, it may become possible for a tyrant, terrorist, or lunatic to create a doomsday virus, an organism that combines long latency with high virulence and mortality." There are several factors necessary for a virus to be a risk. The first is the presence of biologists with the knowledge necessary to genetically engineer a new virus of any sort. The second is access to the expensive machinery required for synthesis. Third is specific knowledge of viral genetic engineering. Fourth is a weaponization strategy and a delivery mechanism. These are nontrivial barriers, but are sure to fall in due time. Nuclear. A traditional nuclear war could still break out, although it would be unlikely to result in our ultimate demise, it could drastically curtail our potential and set us back thousands or even millions of years technologically and ethically. Bostrom mentions that the US and Russia still have huge stockpiles of nuclear weapons. Miniaturization technology, along with improve manufacturing technologies, could make it possible to mass produce nuclear weapons for easy delivery should an escalating arms race lead to that. As rogue nations begin to acquire the technology for nuclear strikes, powerful nations will feel increasingly edgy. Nanotechnological. The Transhumanist FAQ reads, "Molecular nanotechnology is an anticipated manufacturing technology that will make it possible to build complex three-dimensional structures to atomic specification using chemical reactions directed by nonbiological machinery." Because nanomachines could be self-replicating or at least auto-productive, the technology and its products could proliferate very rapidly. Because nanotechnology could theoretically be used to create any chemically stable object, the potential for abuse is massive. Nanotechnology could be used to manufacture large weapons or other oppressive apparatus in mere hours; the only limitations are raw materials, management, software, and heat dissipation. Human-indifferent superintelligence. In the near future, humanity will gain the technological capability to create forms of intelligence radically better than our own. Artificial Intelligences will be implemented on superfast transistors instead of slow biological neurons, and eventually gain the intellectual ability to fabricate new hardware and reprogram their source code. Such an intelligence could engage in recursive self-improvement - improving its own intelligence, then directing that intelligence towards further intelligence improvements. Such a process could lead far beyond our current level of intelligence in a relatively short time. We would be helpless to fight against such an intelligence if it did not value our continuation. So let's say I have another million dollars to spend. My last million dollars went to Aubrey de Grey's Methuselah Mouse Prize, for a grand total of billions of expected utiles. But wait - I forgot to factor in the probability that humanity will be destroyed before the positive effects of life extension are borne out. Even if my estimated probability of existential risk is very low, it is still rational to focus on addressing the risk because my whole enterprise would be ruined if disaster is not averted. If we value the prospect of all the future lives that could be enjoyed if we pass beyond the threshold of risk - possibly quadrillions or more, if we expand into the cosmos, then we will deeply value minimizing the probability of existential risk above all other considerations. If my million dollars can avert the chance of existential disaster by, say, 0.0001%, then the expected utility of this action relative to the expected utility of life extension advocacy is shocking. That's 0.0001% of the utility of quadrillions or more humans, transhumans, and posthumans leading fulfilling lives. I'll spare the reader from working out the math and utility curves - I'm sure you can imagine them. So, why is it that people tend to devote more resources to life extension than risk prevention? The follow includes my guesses, feel free to tell me if you disagree: They estimate the probability of any risk occurring to be extremely low. They estimate their potential influence over the likelihood of risk to be extremely low. They feel that positive PR towards any futurist goals will eventually result in higher awareness of risk. They fear social ostracization if they focus on "Doomsday scenarios" rather than traditional extension. Those are my guesses. Immortalists with objections are free to send in their arguments, and I will post them here if they are especially strong. As far as I can tell however, the predicted utility of lowering the likelihood of existential risk outclasses any life extension effort I can imagine. I cannot emphasize this enough. If a existential disaster occurs, not only will the possibilities of extreme life extension, sophisticated nanotechnology, intelligence enhancement, and space expansion never bear fruit, but everyone will be dead, never to come back. Because the we have so much to lose, existential risk is worth worrying about even if our estimated probability of occurrence is extremely low. It is not the funding of life extension research projects that immortalists should be focusing on. It should be projects that decrease the risk of existential risk. By default, once the probability of existential risk is minimized, life extension technologies can be developed and applied. There are powerful economic and social imperatives in that direction, but few towards risk management. Existential risk creates a "loafer problem" — we always expect someone else to take care of it. I assert that this is a dangerous strategy and should be discarded in favor of making prevention of such risks a central focus.

#### Only pragmatic philosophy can evade the logical harms of the K and still take action against great atrocities

Rorty 2 (Richard, U Minn, http://www.marxists.org/reference/subject/philosophy/works/us/rorty.htm)JFS

The most powerful reason for thinking that no such culture is possible is that seeing all criteria as no more than temporary resting-places, constructed by a community to facilitate its inquiries, seems morally humiliating. **Suppose** that Socrates was wrong, that **we have not** once **seen the Truth**, and so will not, intuitively, recognise it when we see it again. This means that when the secret police come, **when the torturers violate the innocent, there is nothing to be said** to them of the form “**There is something within you which you are betraying.** Though you embody the practices of a totalitarian society which will endure forever, there is something beyond those practices which condemns you.” This thought is hard to live with, as is Sartre’s remark: Tomorrow, after my death, **certain people may decide to establish fascism**, and the others may be cowardly or miserable enough to let them get away with it. **At that moment, fascism will be the truth of man**, and so much the worse for us. In reality, **things will be as much as man has decided they are**. This hard saying brings out what ties Dewey and Foucault, James and Nietzsche, together- the sense that **there is nothing** deep down **inside us except what we have put there ourselves**, no criterion that we have not created in the course of creating a practice, no standard of rationality that is not an appeal to such a criterion, no rigorous argumentation that is not obedience to our own conventions. **A post-philosophical culture**, then, **would be one in which men and women felt** themselves **alone**, merely **finite, with no links to something Beyond.** On **the pragmatist’s** account, **position was** only a halfway stage in the development of such a culture-the **progress toward**, as Sartre puts it, **doing without God**. For positivism preserved a god in its notion of Science (and in its notion of “scientific philosophy”), the notion of a portion of culture where we touched something not ourselves, where we found Truth naked, relative to no description. **The culture of positivism** thus **produced** endless **swings** of the pendulum **between** the view that **“values are** merely ‘**relative’** (or ‘emotive,’ or ‘subjective’)” **and** the view that **bringing the “scientific method”** to bear on questions of political and moral choice **was the solution to all our problems. Pragmatism**, by contrast, **does not erect Science as an idol** to fill the place once held by God. **It views science as one genre** of literature-or, put the other way around, literature and the arts as inquiries, on the same footing as scientific inquiries. Thus **it sees ethics as neither more “relative”** or “subjective” than scientific theory, **nor as needing to be made “scientific.”** Physics is a way of trying to cope with various bits of the universe; ethics is a matter of trying to cope with other bits. Mathematics helps physics do its job; literature and the arts help ethics do its. Some of these inquiries come up with propositions, some with narratives, some with paintings. The question of what propositions to assert, which pictures to look at, what narratives to listen to and comment on and retell, are all questions about what will help us get what we want (or about what we should want). No. The question of whether **the pragmatist view of truth**-that it is t a profitable topic-**is** itself true is thus **a question about whether a post-Philosophical culture is a good thing** to try for. **It is not a question about what** the word **“true” means, nor** about **the requirements of** an adequate philosophy of **language**, nor about whether the world “exists independently of our minds,” **nor about** whether the intuitions of **our culture** are captured in the pragmatists’ slogans. **There is no way in which the issue between the pragmatist and his opponent can be** tightened up and **resolved** according to criteria agreed to by both sides. **This is one of those issues which puts everything up for grabs at once** -where there is no point in trying to find agreement about “the data” or about what would count as deciding the question. But **the messiness of the issue is not a reason for setting it aside.** The issue between religion and secularism was no less messy, but it was important that it got decided as it did.

### 2AC Environmental Security K

#### Environmental security challenges state legitimacy and lead to a paradigm shift away from militarism

BARNETT, RESEARCH COUNCIL FELLOW IN THE SCHOOL OF SOCIAL AND ENVIRONMENTAL ENQUIRY AT THE UNIVERSITY OF MELBOURNE, 2001 [JON, THE MEANING OF ENVIRONMENTAL SECURITY: ECOLOGICAL POLITICS AND POLICY IN THE NEW SECURITY ERA, CHAPTER 9, 137-41]

The question of whether it is valid to understand environmental problems as security problems recurs throughout any thoughtful discussion of environmental security. The dilemma should by now be apparent; securitising environmental issues runs the risk that the strategic/realist approach will coopt and colonise the, environmental agenda rather than respond positively to environmental problems (as discussed in Chapter 6). For this reason critics of environmental security, such as Deudney (1991) and-Brock (1991), Suggest that it is dangerous to understand environmental problems as security issues: This book's position on the matter has been emerging in previous chapters. It contends that the problem turns not on the presentation of environmental problems as security issues, but on-the meaning and practice of security in present times. Environmental security, wittingly or not, contests the legitimacy of the realist conception of security by pointing to the contradictions of security as the defence of territory and resistance to change. It seeks to work from within the prevailing conception of security, but to be successful it must do so with a strong sense of purpose and a solid theoretical base. Understanding environmental problems as security problems is thus a form of conceptual speculation. It is one manifestation of the pressure the Green movement has exerted on states since the late 1960s. **This** pressure has pushed state legitimacy nearer to collaps**e,** for if the state cannot control a problem as elemental as environmental degradation, then what is its purpose? This legitimacy problem suggests that environmental degradation cannot further intensify without fundamental change or the collapse of the state. This in turn implies that state-sanctioned environmentally degrading practices such as those undertaken in the name of national security cannot extend their power further if it means further exacerbation of environmental insecurity. While the system may resist environmental security's challenge for change, it must also resist changes for the worse. In terms of the conceptual venture, therefore, appropriation by the security apparatus of the concept of environmental security is unlikely to result in an increase in environmental insecurity (although the concept itself may continue to be corrupted). On the other hand, succeeding in the conceptual venture may mean a positive modification of the theory and practice of national security. It may also mean that national governments will take environmental problems more seriously, reduce defence budgets, and generally implement policies for a more peaceful and environmentally secure world. This dual goal of demilitarisation and upgrading policy may well be a case of wanting to have one's cake and eat it — but either the having or the eating is sufficient justification for the concept (Brock 1996). The worst outcome would be if the state ceased to use the concept of environmental security, heralding the end of the contest and requiring that the interests of peace and the environment be advocated through alternative discourses**.** This is perhaps the only real failure that is likely to ensue from the project of environmental security.

#### They trivialize the holocaust – reject them

Dr. Manfred **Gerstenfeld**, Holocaust TrivializationApril 9, **2008**

Those abusing Holocaust comparisons for their ideological purposes want to exaggerate the evil nature of a phenomenon they condemn. With the Holocaust symbolizing absolute evil for many, they use it as an instrument for their purposes. Holocaust trivialization manifests itself partly in the growing use of language concerning a large number of disparate events that have no connection to genocide. Other trivializers operate out of commercial or artistic considerations. Unlike in the case of most other distortions of the Holocaust, the trivializers usually do not target Jews. Holocaust distortion has been increasing in recent years. It manifests itself in a great variety of manipulations of history.1 Among the best known are Holocaust denial,2 Holocaust depreciation, and Holocaust inversion3-the portraying of Israel, Israelis, and Jews as Nazis. Most of these distortions aim at harming Jews or Israel. Holocaust trivialization is a tool for some ideologically or politically motivated activists to metaphorically compare phenomena they oppose to the industrial-scale destruction of the Jews in World War II by Germans, Austrians, and their allies. Examples include environmental problems, abortion, the slaughter of animals, the use of tobacco, and human rights abuses. None of these bear any fundamental resemblance to the manmade genocide of the 1940s. Those who abuse Holocaust comparisons for their ideological purposes wish to exaggerate the evil nature of a phenomenon they condemn. With the Holocaust symbolizing absolute evil for many, they use it as an instrument for their purposes and thus abuse the centrality of the Holocaust discourse in contemporary society. The perceived evil to which they compare the Holocaust, however, does not share its major characteristics. These include the systematic defamation, exclusion, torturing, and destruction of specific people in a society. Another element is that all belonging to this category are targeted. Trivialization goes beyond hurting the sensitivities of Jews, by abusing the memory of the murdered victims as well. Holocaust trivialization also manifests itself partly in the growing use of comparisons of disparate events to elements bearing no resemblance to the Holocaust. Many trivializers operate out of commercial or artistic considerations; others are just insensitive. Distortions Overlap Several Holocaust distortions overlap. Comparisons of current wars, specific actions, or individuals to Nazi actions or leaders should be treated as a separate category, namely, postwar Holocaust equivalence. Examples are comparisons of U.S. presidents such as Ronald Reagan, Bill Clinton, and George W. Bush to Hitler, or of the actions of the United States and its allies in Iraq and Afghanistan to those of Nazi Germany. The Holocaust-equivalence category encompasses a broad range of other incidents. In early 2008 Daniel Hannan, a British Conservative Member of the European Parliament, said there that the powers given the Parliament’s president reminded him of the tactics used by the Nazi government of Germany to govern without parliamentary consent.4 As aforementioned, among the better-known ideological or political causes of the trivializers are, for instance, environmentalism, animal rights or pro-life activism, the stopping of smoking, or human rights abuses. What binds the heterogeneous perpetrators of Holocaust trivialization together is their methods. These distortions and others led Nobel Laureate and Holocaust survivor Eli Wiesel to write as early as 1988: I cannot use [the word Holocaust] anymore. First, because there are no words, and also because it has become so trivialized that I cannot use it anymore. Whatever mishap occurs now, they call it “holocaust.” I have seen it myself in television in the country in which I live. A commentator describing the defeat of a sports team, somewhere, called it a “holocaust.” I have read in a very prestigious newspaper published in California, a description of the murder of six people, and the author called it a holocaust. So, I have no words anymore.5 The trivializing comparisons to the Holocaust are rarely elaborated on. This manipulation differs in its mode of distorting from Holocaust denial, in part because the trivializers do not target Jews and also because it rarely develops any detailed arguments about the Holocaust. One hardly sees statements explaining what the defining elements of the Holocaust were and how the phenomenon metaphorically compared to it has all or most of the same components. This characteristic of the manipulation is due to the fact that the desired effect is achieved mainly by the abusive mention of the Holocaust. The manipulation is therefore relatively easy to expose, by pointing out that crucial criminal components of the Holocaust are lacking in what is being compared to it. A consideration of some examples of trivialization, and reactions to them, indicates both the manipulative character of this distortion and how it can be deconstructed. The Environmental Holocaust Environmentalists are one group among which Holocaust trivializers are found. They often regard global warming as the main contemporary threat to humanity. Ellen Goodman, a Boston Globe columnist, wrote that it is no longer possible to deny global warming. She invoked the UN Intergovernmental Panel on Climate Change, which claimed it was 90 percent certain that global warming was the result of human activity. From there she moved on: “I would like to say we’re at a point where global warming is impossible to deny. Let’s just say that global warming deniers are now on a par with Holocaust deniers, though one denies the past and the other denies the present and future.”6 Well-known talk-show host Dennis Prager responded by castigating Goodman’s statement. He first noted that it reflected the fact that most people on the Left see “their ideological adversaries as bad people.” On the other hand, “those on the Right tend to view their adversaries as wrong, perhaps even dangerous, but not usually as bad.” It might be inconceivable to Goodman, Prager observed, that one could disagree with global warming forecasts without evil motives. He further asserted that contemporary liberalism would tend to question the moral authority of Judeo-Christian religions or of any secular conservative authority, but not of “any other authority” such as the United Nations. Prager also pointed out that “If questioning global warming is on ‘a par’ with questioning the Holocaust, how bad can questioning the Holocaust really be?” He added that while liberal and left-wing organizations had agreed with Goodman’s statements, none had condemned her Holocaust comparison. Prager concluded that Goodman’s assertion marked the “beginning of what is becoming one of the largest campaigns of vilification of decent people in history-the global condemnation of…anyone who questions global warming.”7 Many others abuse the Holocaust to promote environmental aims. Bob Burnett, who defines himself as a writer, activist, and Quaker, claimed in an attack on a televangelist who had written about the dirty politics of the “environmental movement” that “It took less than ten years for Nazi anti-Semitism to produce the death of six million European Jews. How long will it take for the effects of global climate change to result in similar loss of life?”8 It is similarly easy to claim that many people in the world die as a result of poor health, malnourishment, and inappropriate diets. Given today’s societal mood we may well read one day about the “diet Holocaust” or the “hamburger Holocaust.” Al Gore Comparing potential ecological disaster to the Holocaust is not a new phenomenon. On 19 March 1989, the then senator from Tennessee, Al Gore, published an op-ed in the New York Times titled “An Ecological Kristallnacht. Listen.” Gore called upon all humankind to heed the warning: “…the evidence is as clear as the sounds of glass shattering in Berlin.”9 In 2007 Gore, by then a Nobel Laureate and former vice-president, continued to use Holocaust imagery for environmental purposes. As part of his advocacy, twice in December 2007, he criticized many world leaders for ignoring the threat of climate change in the same way that former British prime minister Chamberlain and other world leaders had ignored the dangers posed by Hitler. Gore voiced the same sentiments as almost two decades earlier: “Once again world leaders waffle, hoping the danger will dissipate.” Canadian Green Party leader Elizabeth May justified Gore’s remarks, explaining: “It’s not a literal comparison that says somehow climate change is like Hitler. Climate change is not like Hitler. Hitler is an individual who managed to construct a political party and then, through democratic elections, a nation that was prepared to go along with genocide. This is not like that. But the moral failure of those who stand by-that’s the comparison.” A representative of an umbrella organization for Canadian Jewish groups responded that May’s statements supported positions that were “obscene and absolutely unnecessary” for anyone, even Gore.10 Opponents of Environmental Measures Opponents of environmental measures sometimes also refer abusively to the Holocaust. In 2004 Andrei Illarionov, an economic adviser to President Putin, recommended that Russia should not sign the Kyoto Protocol, which he called a death pact that would “strangle economic growth and economic activity in countries that accept the protocol’s requirements.” He likened the protocol to Auschwitz.11 Glenn Beck, a television and radio host and author, compared Gore’s campaign against global warming to elements of the Holocaust, saying: “Al Gore’s not going to be rounding up Jews and exterminating them; it is the same tactic however. The goal is different. The goal is globalization. The goal is global carbon tax. The goal is the United Nations running the world.” The Anti-Defamation League (ADL) denounced Beck’s remarks and said they were part of “a troubling epidemic on the airwaves, where comparisons to Hitler and the Holocaust are becoming all-too facile.” The ADL’s national director Abraham Foxman asserted: “Glenn Beck’s linkage of Hitler’s plan to round up and exterminate Jews with Al Gore’s efforts to raise awareness of global warming is outrageous, insensitive, and deeply offensive.”12 The Abortion Holocaust Abortion opponents have probably mobilized the best-known distorters of the Holocaust. One of these was Pope John Paul II who, in his 2005 book Memory and Identity, compared abortion to the Holocaust. He wrote that both abortion and the murder of six million Jews were the result of humans under the guise of democracy usurping the “law of God.”13 Then-Cardinal Josef Ratzinger, now Pope Benedict XVI, claimed at the launching of the Pope’s book that the Pope was not equating abortion with the Holocaust.14 In another incident involving the Catholic Church, the Archbishop of Cologne in Germany, Cardinal Joachim Meisner, “provoked much unrest when he put women who had had an abortion in a row with mass murderers like Hitler, Stalin and Herod. He compares abortion to the Holocaust and the abortion pill with Zyklon B, the gas used by the Nazis in the extermination camps.” Condemnation came even from groups that some may have expected to be supportive. The ecumenical movement Initiative Kirche told the press, “Meisner has completely lost his authority as a bishop and has publicly done a great wrong to the Catholic Church and to dialogue between Jews and Christians.” Paul Spiegel, the then president of the Central Council of Jews in Germany, said the cardinal had insulted the millions of victims of the Holocaust. He added that “The Catholic Church does not understand or does not want to understand that there is an enormous difference between mass genocide and what women do with their bodies.” Spiegel also linked the Pope’s remarks to the earlier statements by Cardinal Meisner.15 Jim Hughes of the International Right to Life Federation told LifeSiteNews.com, “In today’s relativistic times, it seems the only evil which still touches people whose hearts have grown cold are the atrocities of Hitler. The comparison not only fits like a glove, but is necessary to bring people out of their blissfully ignorant slumber.”16 On many other occasions abortion and other phenomena have been compared to genocide and mass murder, rather than specifically to the Holocaust. The Associated Press reported that “Displays of bloody fetuses next to pictures of the collapsing World Trade Center, a black lynching victim hanging from a tree and corpses at a concentration camp were among the disturbing billboards at the University of New Hampshire put up by a national anti-abortion group, the Center for Bio-Ethical Reform.”17 These billboards liken the genocide of the Holocaust to abortion and victims of 9/11 and racism.

#### Environmental reps good

Kurasawa 4– Prof Sociology, York (Fuyuki, Cautionary Tales, Constellations 11.4, AG)

And yet dystopianism need not imply despondency, paralysis, or fear. Quite the opposite, in fact, since the pervasiveness of a dystopian imaginary can help notions of historical contingency and fallibilism gain traction against their determinist and absolutist counterparts. Once we recognize that the future is uncertain and that any course of action produces both unintended and unexpected consequences, the responsibility to face up to potential disasters and intervene before they strike becomes compelling. From another angle, dystopianism lies at the core of politics in a global civil society where groups mobilize their own nightmare scenarios (‘Frankenfoods’ and a lifeless planet for environmentalists, totalitarian patriarchy of the sort depicted in Atwood’s Handmaid’s Tale for Western feminism, McWorld and a global neoliberal oligarchy for the alternative globalization movement, etc.). Such scenarios can act as catalysts for public debate and socio-political action, spurring citizens’ involvement in the work of preventive foresight.

#### They’re wrong—its key to effective movements

Dabelko 97 – director, Environmental Change and Security Project (Geoffrey, Environment and Security, SAIS Review 17.1, http://muse.jhu.edu/journals/sais\_review/v017/17.1dabelko.html)

Undoubtedly, environment and security research, rhetoric, and activities--and the sobering statistics and trenchant analyses of environment and population dynamics that accompany them--have significantly raised the profile of many environmental concerns. They have also generated many useful discussions and new ways of thinking among a diverse set of experts, including those who previously considered the environment peripheral or unimportant to their interests. At the same time, there are serious limitations to the environment and security conceptual and linguistic framework. As convincing as certain security-related arguments may be, they are not the only reasons why the American public, decisionmakers, and other nations should care about the environment. Value-oriented considerations about the aesthetics of nature, human responsibility for global stewardship, and humanitarian concerns are also important. These considerations [End Page 141] can greatly enhance the process of **formulating effective solutions and winning sustained public attention** **and support for** international **environmental action**. Policymakers might therefore be best served by framing international environmental priorities in terms of a broad set of interests, including, but not limited to, security concerns. They should resist the temptation, common in security analyses, to examine environmental problems solely in terms of crises and "threats." Though helpful in setting priorities, threat-based analyses can have the unintentional effect of encouraging decisionmakers to pay attention to issues only when crises are imminent, by which time it is often too late for effective interventions and corrective measures. Examining how environmental preservation will enhance security and other interests over time might lead decisionmakers to adopt more appropriate long-term strategies to address the underlying causes of problems. International environmental issues will be most effectively addressed in the decades to come through a combination of conceptual clarity, a pragmatic and multidisciplinary approach to problem solving, an emphasis on long-term strategies, and an improved willingness and ability among leaders to explain the complexity of environmental change. As the debates on environment and security continue, environmentalists' arguments will be strengthened if they resist the temptation to place all their priorities under the attention-grabbing security rubric. Meanwhile, skeptical foreign policy experts will benefit from recognizing the real and potential effects of environmental change and their relevance to many critical interests. As the United States considers security expenditures and priorities for the twenty-first century, the vibrant debates concerning environment and security matters will continue to be instructive.

### Discourse

#### They will say discourse first but the assumption that language shapes reality is empirically flawed – they must support their claim by proving that we MEANT to be securitizing

Roskoski & Peabody, Florida State, 91

(Matthew and Joe, 1991, A Linguistic and Philosophical Critique of Language "Arguments,” <http://debate.uvm.edu/Library/DebateTheoryLibrary/Roskoski&Peabody-LangCritiques>, Date Accessed: 7/8, JS)

Initially, it is important to note that the Sapir-Whorf hypothesis does not intrinsically deserve presumption, although many authors assume its validity without empirical support.The reason it does not deserve presumption is that "on a priori grounds one can contest it by asking how, if we are unable to organize our thinking beyond the limits set by our native language, we could ever become aware of those limits"(Robins 101). Au explains that"because it has received so little convincing support, the Sapir-Whorf hypothesis has stimulated little research**"** (Au 1984 156). However**,** many critical scholars take the hypothesis for granted because it is a necessary but uninteresting precondition for the claims they really want to defend.Khosroshahi explains: However**,** the empirical tests of the hypothesis of linguistic relativity have yielded more equivocal results.But independently of its empirical status, Whorf's view is quite widely held. In fact, many social movements have attempted reforms of language and have thus taken Whorf's thesis for granted. (Khosroshahi 505). One reason for the hypothesis being taken for granted is that on first glance it seems intuitively valid to some. However, after research is conducted it becomes clear that this intuition is no longer true. Rosch notes that the hypothesis "not only does not appear to be empirically true in any major respect, but it no longer even seems profoundly and ineffably true" (Rosch 276). The implication for language "arguments" is clear: a debater must do more than simply read cards from feminist or critical scholars that say language creates reality. Instead, the debater must support this claim with empirical studies or other forms of scientifically valid research. Mere intuition is not enough, and it is our belief that valid empirical studies do not support the hypothesis. After assessing the studies up to and including 1989, Takano claimed that the hypothesis "has no empirical support" (Takano 142). Further, Miller & McNeill claim that "nearly all" of the studies performed on the Whorfian hypothesis "are best regarded as efforts to substantiate the weak version of the hypothesis" (Miller & McNeill 734). We additionally will offer four reasons the hypothesis is not valid. The first reason is that it is impossible to generate empirical validation for the hypothesis. Because the hypothesis is so metaphysical and because it relies so heavily on intuition it is difficult if not impossible to operationalize. Rosch asserts that "profound and ineffable truths are not, in that form, subject to scientific investigation" (Rosch 259). We concur for two reasons. The first is that the hypothesis is phrased as a philosophical first principle and hence would not have an objective referent. The second is there would be intrinsic problems in any such test. The independent variable would be the language used by the subject. The dependent variable would be the subject's subjective reality. The problem is that the dependent variable can only be measured through selfreporting, which - naturally - entails the use of language. Hence, it is impossible to separate the dependent and independent variables. In other words, we have no way of knowing if the effects on "reality" are actual or merely artifacts of the language being used as a measuring tool.

#### Discussing existential risks is key to prevent neglectful attitudes toward them

Bostrom 2 (Nick Professor of Philosophy and Global Studies at Yale.. www.transhumanist.com/volume9/risks.html.)JFS

Existential risks have a cluster of features that make it useful to identify them as a special category: the extreme magnitude of the harm that would come from an existential disaster; the futility of the trial-and-error approach; the lack of evolved biological and cultural coping methods; the fact that existential risk dilution is a global public good; the shared stakeholdership of all future generations; the international nature of many of the required countermeasures; the necessarily highly speculative and multidisciplinary nature of the topic; the subtle and diverse methodological problems involved in assessing the probability of existential risks; and the comparative neglect of the whole area. From our survey of the most important existential risks and their key attributes, we can extract tentative recommendations for ethics and policy: We need more research into existential risks – detailed studies of particular aspects of specific risks as well as more general investigations of associated ethical, methodological, security and policy issues. Public awareness should also be built up so that constructive political debate about possible countermeasures becomes possible. Now, it’s a commonplace that researchers always conclude that more research needs to be done in their field. But in this instance it is *really* true. There is more scholarly work on the life-habits of the dung fly than on existential risks. Since existential risk reduction is a global public good, there should ideally be an institutional framework such that the cost and responsibility for providing such goods could be shared fairly by all people. Even if the costs can’t be shared fairly, some system that leads to the provision of existential risk reduction in something approaching optimal amounts should be attempted. The necessity for international action goes beyond the desirability of cost-sharing, however. Many existential risks simply cannot be substantially reduced by actions that are internal to one or even most countries. For example, even if a majority of countries pass and enforce national laws against the creation of some specific destructive version of nanotechnology, will we really have gained safety if some less scrupulous countries decide to forge ahead regardless? And strategic bargaining could make it infeasible to bribe all the irresponsible parties into subscribing to a treaty, even if everybody would be better off if everybody subscribed [14,42].

#### ALT FAILS: makes real change impossible—lures us into thinking we have solved anything, damning the emancipatory potential of their arguments

Roskoski & Peabody, Florida State, 91

(Matthew and Joe, 1991, A Linguistic and Philosophical Critique of Language "Arguments,” <http://debate.uvm.edu/Library/DebateTheoryLibrary/Roskoski&Peabody-LangCritiques>, Date Accessed: 7/8, JS)

There are several levels upon which language "arguments" are actually counterproductive. We will discuss the quiescence effect, deacademization, and publicization. The quiescence effect is explained by Strossen when she writes "the censorship approach is diversionary. It makes it easier for communities to avoid coming to grips with less convenient and more expensive, but ultimately more meaningful approaches" (Strossen 561). Essentially, the argument is that allowing the restriction of language we find offensive substitutes for taking actions to check the real problems that generated the language. Previously, we have argued that the language advocates have erroneously reversed the causal relationship between language and reality. We have defended the thesis that reality shapes language, rather than the obverse. Now we will also contend that to attempt to solve a problem by editing the language which is symptomatic of that problem will generally trade off with solving the reality which is the source of the problem. There are several reasons why this is true. The first, and most obvious, is that we may often be fooled into thinking that language "arguments" have generated real change. As Graddol and Swan observe, "when compared with larger social and ideological struggles, linguistic reform may seem quite a trivial concern," further noting "there is also the danger that effective change at this level is mistaken for real social change" (Graddol & Swan 195). The second reason is that the language we find objectionable can serve as a signal or an indicator of the corresponding objectionable reality. The third reason is that restricting language only limits the overt expressions of any objectionable reality, while leaving subtle and hence more dangerous expressions unregulated. Once we drive the objectionable idea underground it will be more difficult to identify, more difficult to root out, more difficult to counteract, and more likely to have its undesirable effect. The fourth reason is that objectionable speech can create a "backlash" effect that raises the consciousness of people exposed to the speech. Strossen observes that "ugly and abominable as these expressions are, they undoubtably have had the beneficial result of raising social consciousness about the underlying societal problem..." (560).

The second major reason why language "arguments" are counterproductive is that they contribute to deacademization. In the context of critiquing the Hazelwood decision, Hopkins explains the phenomenon: To escape censorship, therefore, student journalists may eschew school sponsorship in favor of producing their own product. In such a case, the result would almost certainly be lower quality of high school journalism... The purpose of high school journalism, however, is more than learning newsgathering, writing, and editing skills. It is also to learn the role of the press in society; it is to teach responsibility as well as freedom. (Hopkins 536).

Hyde & Fishman further explain that to protect students from offensive views, is to deprive them of the experiences through which they "attain intellectual and moral maturity and become self-reliant" (Hyde & Fishman 1485). The application of these notions to the debate round is clear and relevant. If language "arguments" become a dominant trend, debaters will not change their attitudes. Rather they will manifest their attitudes in non-debate contexts. Under these conditions, the debaters will not have the moderating effects of the critic or the other debaters. Simply put, sexism at home or at lunch is worse than sexism in a debate round because in the round there is a critic to provide negative though not punitive feedback.

The publicization effects of censorship are well known. "Psychological studies reveal that whenever the government attempts to censor speech, the censored speech - for that very reason - becomes more appealing to many people" (Strossen 559). These studies would suggest that language which is critiqued by language "arguments" becomes more attractive simply because of the critique. Hence language "arguments" are counterproductive.

### 2AC narcissism

#### The K cannot be divorced from the narcissism of man – causes us to repeat the tragedy of narcissus

Becker 73 (Earnest, The Denial of Death, pg 14, Ph.D ins Cultural Anthropology, was a professor the University of California at Berkely, San Franciso State College, and Simon Fraser University, and founder of The Ernest Becker Foundation; Kristof)

One such vital truth that has long been known is the idea of heroism; but in “normal” scholarly times we never thought of making much out of it, of parading it, or of using it as a central concept. Yet the popular mind always knew how important it was: as William James—who covered just about everything— remarked at the turn of the century: “mankind’s common instinct for reality … has always held the world to be essentially a theatre for heroism.”1 Not only the popular mind knew, but philosophers of all ages, and in our culture especially Emerson and Nietzsche—which is why we still thrill to them: we like to be reminded that our central calling, our main task on this planet, is the heroic.\* One way of looking at the whole development of social science since Marx and of psychology since Freud is that it represents a massive detailing and clarification of the problem of human heroism. This perspective sets the tone for the seriousness of our discussion: we now have the scientific underpinning for a true understanding of the nature of heroism and its place in human life. If “mankind’s common instinct for reality” is right, we have achieved the remarkable feat of exposing that reality in a scientific way. One of the key concepts for understanding man’s urge to heroism is the idea of “narcissism.” As Erich Fromm has so well reminded us, this idea is one of Freud’s great and lasting contributions. Freud discovered that each of us repeats the tragedy of the mythical Greek Narcissus: we are hopelessly absorbed with ourselves. If we care about anyone it is usually ourselves first of all. As Aristotle somewhere put it: luck is when the guy next to you gets hit with the arrow. Twenty-five hundred years of history have not changed man’s basic narcissism; most of the time, for most of us, this is still a workable definition of luck. It is one of the meaner aspects of narcissism that we feel that practically everyone is expendable except ourselves. We should feel prepared, as Emerson once put it, to recreate the whole world out of ourselves even if no one else existed. The thought frightens us; we don’t know how we could do it without others—yet at bottom the basic resource is there: we could suffice alone if need be, if we could trust ourselves as Emerson wanted. And if we don’t feel this trust emotionally, still most of us would struggle to survive with all our powers, no matter how many around us died. Our organism is ready to fill the world all alone, even if our mind shrinks at the thought. This narcissism is what keeps men marching into point-blank fire in wars: at heart one doesn’t feel that he will die, he only feels sorry for the man next to him. Freud’s explanation for this was that the unconscious does not know death or time: in man’s physiochemical, inner organic recesses he feels immortal. None of these observations implies human guile. Man does not seem able to “help” his selfishness; it seems to come from his animal nature. Through countless ages of evolution the organism has had to protect its own integrity; it had its own physiochemical identity and was dedicated to preserving it. This is one of the main problems in organ transplants: the organism protects itself against foreign matter, even if it is a new heart that would keep it alive. The protoplasm itself harbors its own, nurtures itself against the world, against invasions of its integrity. It seems to enjoy its own pulsations, expanding into the world and ingesting pieces of it. If you took a blind and dumb organism and gave it self-consciousness and a name, if you made it stand out of nature and know consciously that it was unique, then you would have narcissism. In man, physiochemical identity and the sense of power and activity have become conscious. In man a working level of narcissism is inseparable from self-esteem, from a basic sense of self-worth. We have learned, mostly from Alfred Adler, that what man needs most is to feel secure in his self-esteem. But man is not just a blind glob of idling protoplasm, but a creature with a name who lives in a world of symbols and dreams and not merely matter. His sense of self-worth is constituted symbolically, his cherished narcissism feeds on symbols, on an abstract idea of his own worth, an idea composed of sounds, words, and images, in the air, in the mind, on paper. And this means that man’s natural yearning for organismic activity, the pleasures of incorporation and expansion, can be fed limitlessly in the domain of symbols and so into immortality. The single organism can expand into dimensions of worlds and times without moving a physical limb; it can take eternity into itself even as it gaspingly dies.

#### This narcissism leads to oppressive systems such as Nazi Germany, Stalinist Russia and contemporary capitalism

Becker 73 (Earnest, The Denial of Death, pg 15, Ph.D ins Cultural Anthropology, was a professor the University of California at Berkely, San Franciso State College, and Simon Fraser University, and founder of The Ernest Becker Foundation; Kristof)

If we were to peel away this massive disguise, the blocks of repression over human techniques for earning glory, we would arrive at the potentially most liberating question of all, the main problem of human life: How empirically true is the cultural hero system that sustains and drives men? We mentioned the meaner side of man’s urge to cosmic heroism, but there is obviously the noble side as well. Man will lay down his life for his country, his society, his family. He will choose to throw himself on a grenade to save his comrades; he is capable of the highest generosity and self-sacrifice. But he has to feel and believe that what he is doing is truly heroic, timeless, and supremely meaningful. The crisis of modern society is precisely that the youth no longer feel heroic in the plan for action that their culture has set up. They don’t believe it is empirically true to the problems of their lives and times. We are living a crisis of heroism that reaches into every aspect of our social life: the dropouts of university heroism, of business and career heroism, of political-action heroism; the rise of anti-heroes, those who would be heroic each in his own way or like Charles Manson with his special “family”, those whose tormented heroics lash out at the system that itself has ceased to represent agreed heroism. The great perplexity of our time, the churning of our age, is that the youth have sensed—for better or for worse—a great social-historical truth: that just as there are useless self-sacrifices in unjust wars, so too is there an ignoble heroics of whole societies: it can be the viciously destructive heroics of Hitler’s Germany or the plain debasing and silly heroics of the acquisition and display of consumer goods, the piling up of money and privileges that now characterizes whole ways of life, capitalist and Soviet.

### 2ac Russia

#### Cuba says no

Blank, 11 – (Stephen J., Research Professor of National Security Affairs, Strategic Studies Institute, U.S. Army War College; “Civil-Military Relations in Medvedev’s Russia,” University of Miami Center for Hemispheric Policy, January 2011, http://www.strategicstudiesinstitute.army.mil/pdffiles/pub1038.pdf)//HO

This Latin American example illustrates that the ¶ rivalry opens up areas for well-connected political entrepreneurs like Igor Sechin, acting on behalf of Putin, ¶ to launch defense and foreign policy initiatives that ¶ expose Russia to some risk and dangerous adventures and suggests that the military services are being ¶ drawn into this game on one or another contender’s ¶ side, a further example of politicization of the armed ¶ forces and the increasingly risk-accepting behavior of ¶ the Russian government. Displaying that strategic motivation to counter U.S. policy, President Putin, even ¶ before the Georgian war of 2008, also seemed to be ¶ trying to conduct his own security and foreign policy ¶ in competition with his heir, President Medvedev, by ¶ planting hints among military men that Russia should ¶ restore its relations with Cuba and establish an air ¶ base there. He even sent Deputy Prime Minister Igor ¶ Sechin and Security Council Secretary Nikolai Patrushev to Cuba in 2008 to discuss enhanced cooperation ¶ between the two states. Given Patrushev’s position as ¶ Head of the Security Council, this could only mean ¶ defense cooperation. Such moves clearly aimed to ¶ irritate the United States gratuitously. Cuba refused ¶ to bite because these plans were publicly announced ¶ without consulting it in advance, further evidence that ¶ they served interests other than that of Cuba.135 Cuba’s ¶ Foreign Minister even denied any knowledge of the ¶ Russian plan for deploying military sites there, and ¶ Fidel Castro publicly praised Raul Castro’s restraint ¶ in refusing to be provoked by Moscow or by U.S. Air ¶ Force Chief of Staff General Norton Schwartz, who ¶ said that such a base would be crossing the red line.136

#### CP destroys soft power

Cohen 9 ([Ariel Cohen](http://blog.heritage.org/author/acohen/), Senior Fellow at Heritage, “Unrequited Concessions In Chess Is Bad Policy” September 14, 2009 at 1:36 pm <http://blog.heritage.org/2009/09/14/unrequited-concessions-in-chess-is-bad-policy/> BG)

MOSCOW – In meetings with Prime Minister Vladimir Putin, Foreign Minister Sergey Lavrov and the leading Russian foreign policy experts one thing becomes blatantly clear: the Obama Administration did not receive any quid-pro-quo for significant concessions it provided to Russia as a part of its “reset button” policy.¶ Since January of this year, the Obama Administration has resumed the START strategic arms talks, and is trying to complete them before the current nuclear weapons agreement expires on December 9th.¶ It looks like it will abandon ballistic missile deployment against Iran in Poland the Czech Republic, and adopt an inferior system instead. The Administration also signaled that it will listen to Russian ideas about reshaping European security architecture and at least for now it will not seriously push for Georgia and Ukraine to join NATO.¶ Moscow will not take a “yes” for an answer. All these concessions the Russians pocketed, smiled, and moved on to new demands: European security reconfiguration; additional global reserve currency which would weaken the dollar; and a strong push-back on sanctions against the Iranian nuclear program.¶ In meetings I attended, both Putin and Lavrov warned against any military strikes on Iranian nukes while refusing to support a gasoline sales embargo against the mullahs. “Russia has good relations with Iran; has very significant economic interests there. Iran never supported any Islamist terrorism [in North Caucasus], and Russia will be the last state Iran would target even if it gets nuclear weapons”, says a senior foreign policy expert who regularly advises Russian leadership.¶ When I asked, why President Obama needed to provide all these goodies while getting nothing in return, Lavrov and Putin said that they did not view US “reset” measures as concessions. “They corrected mistakes that the Bush Administration made”, said Lavrov.¶ Putin had harsh words about “Condoleeza” and repeatedly criticized the previous administration. Not so the current one: he expressed “cautious optimism”, said that the atmosphere has improved, and that the US President was in the “listening mode”. “I am a simple man” said Putin half-smiling, but I learned one thing in eight years [in office] – do not criticize the current Administration.”¶ While the Russians clearly like the better atmospherics, and somewhat toned down the shrill anti-American rhetoric, the Iranians and the Venezuelans, who also received Obama’s “stretched hand” and, in case of Hugo Chavez, a pat on the back, are refusing to play ball. They, like their friends in Moscow, are also pocketing concessions while continuing the mischief.¶ The irony of this is that the Obama Administration sees nothing wrong with such behavior. Time and again, in foreign policy conferences, including with the Russians, the Obama Administration champions blame US behavior first, before criticizing the outrages committed by the hosts.¶ Unilateral concessions by the Obama Administration are interpreted as a sign of weakness, from Moscow to Teheran to Caracas. Blaming the Bush Administration and making unrequited concessions is bad policy, especially when dealing with chess champions (the Russians), or those who invented chess – the Iranians.

#### US credibility is key to build coalitions which solve every existential risk

Reiffel, ‘5 (Lex, Visiting Fellow at the Global Economy and Development Center of the Brookings Institution, The Brookings Institution, Reaching Out: Americans Serving Overseas, 12-27-2005, www.brookings.edu/views/papers/20051207rieffel.pdf)

I. Introduction: Overseas Service as a Soft Instrument of Power The United States is struggling to define a new role for itself in the post-Cold War world that protects its vital self interests without making the rest of the world uncomfortable. In retrospect, the decade of the 1990s was a cakewalk. Together with its Cold War allies Americans focused on helping the transition countries in Eastern and Central Europe and the former Soviet Union build functioning democratic political systems and growing market economies. The USA met this immense challenge successfully, by and large, and it gained friends in the process. By contrast, the first five years of the new millennium have been mostly downhill for the USA. The terrorist attacks on 9/11/01 changed the national mood in a matter of hours from gloating to a level of fear unknown since the Depression of the 1930s. They also pushed sympathy for the USA among people in the rest of the world to new heights. However, the feeling of global solidarity quickly dissipated after the military intervention in Iraq by a narrow US-led coalition. A major poll measuring the attitudes of foreigners toward the USA found a sharp shift in opinion in the negative direction between 2002 and 2003, which has only partially recovered since then.1 The devastation of New Orleans by Hurricane Katrina at the end of August 2005 was another blow to American self-confidence as well as to its image in the rest of the world. It cracked the veneer of the society reflected in the American movies and TV programs that flood the world. It exposed weaknesses in government institutions that had been promoted for decades as models for other countries. Internal pressure to turn America’s back on the rest of the world is likely to intensify as the country focuses attention on domestic problems such as the growing number of Americans without health insurance, educational performance that is declining relative to other countries, deteriorating infrastructure, and increased dependence on foreign supplies of oil and gas. A more isolationist sentiment would reduce the ability of the USA to use its overwhelming military power to promote peaceful change in the developing countries that hold two-thirds of the world’s population and pose the gravest threats to global stability. Isolationism might heighten the sense of security in the short run, but it would put the USA at the mercy of external forces in the long run. Accordingly, one of the great challenges for the USA today is to build a broad coalition of like-minded nations and a set of international institutions capable of maintaining order and addressing global problems such as nuclear proliferation, epidemics like HIV/AIDS and avian flu, **failed states** like Somalia and Myanmar, and environmental degradation. The costs of acting alone or in small coalitions are now more clearly seen to be unsustainable. The limitations of “hard” instruments of foreign policy have been amply demonstrated in Iraq. Military power can dislodge a tyrant with great efficiency but cannot build stable and prosperous nations. Appropriately, the appointment of Karen Hughes as Under Secretary of State for Public Diplomacy and Public Affairs suggests that the Bush Administration is gearing up to rely more on “soft” instruments.2

#### Military leadership is inevitable – but credibility is key to solve transnational problems – terrorism, cybersecurity, disease, climate, war

**Nye 11** [Joseph S. Nye Jr., University Distinguished Service Professor at Harvard University, God of Soft Power “The Future of Power”, 2011, CMR]

Today, power in the world is distributed in a pattern that resembles a complex three-dimensional chess game. On the top chessboard, military power is largely unipolar and the United States is likely to remain supreme for some time. But on the middle chessboard, economic power has been multipolar for more than a decade, with the United States, Europe, Japan, and China as the major players, and with others gaining in importance. Europe's economy is larger than America's. The bottom chessboard is the realm of transnational relations that cross borders outside of government control, and it includes nonstate actors as diverse as bankers electronically transferring sums larger than most national budgets at one extreme and terrorists transferring weapons or hackers threatening cybersecurity at the other. This chessboard also includes new transnational challenges such as pandemics and climate change. On this bottom board, power is widely diffused, and it makes no sense to speak here of unipolarity, multipolarity, hegemony, or any other such clichés that political leaders and pundits put in their speeches. Two great power shifts are occurring in this century: a power transition among states and a power diffusion away from all states to nonstate actors. Even in the aftermath of the financial crisis, the giddy pace of technological change continues to drive globalization, but the political effects will be quite different for the world of nation-states and the world of nonstate actors. In interstate politics, the most important factor will be the continuing "return of Asia." In 1750, Asia had more than half of the world population and product. By 1900, after the Industrial Revolution in Europe and America, Asia's share shrank to one-fifth of the world product. By 2050, Asia will be well on its way back to its historical share. The "rise" in the power of China and India may create instability, but it is a problem with precedents, and we can learn from history about how our policies can affect the outcome. A century ago, Britain managed the rise of American power without conflict, but the world's failure to manage the rise of German power led to two devastating world wars. In transnational politics-the bottom chessboard-the Information Revolution is dramatically reducing the costs of computing and communication. Forty years ago, instantaneous global communication was possible but costly, and it was restricted to governments and corporations. Today, this communication is virtually free to anyone with the means to enter an Internet cafe. The barriers to entry into world politics have been lowered, and nonstate actors now crowd the stage. Hackers and cybercriminals cause billions of dollars of damage to governments and businesses. A pandemic spread by birds or travelers on jet aircraft could kill more people than perished in World War l or ll, and climate change could impose enormous costs. This is a new world politics with which we have less experience. The problem for all states in the twenty-first century is that there are more and more things outside the control of even the most powerful states, because of the diffusion of power from states to nonstate actors. Although the United States does well on military measures, there is increasingly more going on in the world that those measures fail to capture. Under the influence of the Information Revolution and globalization, world politics is changing in a way that means Americans cannot achieve all their international goals acting alone. For example, international financial stability is vital to the prosperity of Americans, but the United States **needs the cooperation of others** to ensure it. Global climate change too will affect the quality of life, but the United States cannot manage the problem alone. And in a world where borders are becoming more porous than ever to everything from drugs to infectious diseases to terrorism, nations must mobilize **international coalitions** and build institutions to address shared threats and \_ ln this sense, power becomes a positive-sum game. It is not enough to think in terms of power over others. We must also think in terms of power to accomplish goals that involves power with others." On many transnational issues, empowering others can help us to accomplish our own goals. In this world, networks and connectedness become an important source of relevant power. Contextual intelligence, the ability to understand an evolving environment and capitalize on trends, will become a crucial skill in enabling leaders to convert power resources into successful strategies." We will need contextual intelligence if we are to understand that the problem of American power in the twenty-first century is not one of decline, but of a failure to realize that even the largest country cannot achieve its aims **without the help of others**. That will requirea deeper understanding of power, how it is changing, and how to construct smart power strategies. That will require a more sophisticated narrative than the classical stories of the rise and fall of great powers. America is likely to remain the strongest country of the twenty-hrst century; but that will not mean domination. The ability to get the outcomes we want **will rest** up**on** a new narrative of **smart power**.Americans will need to stop asking questions about who is number one, and entertaining narratives about dominance, and start asking questions about how the various tools of power can be combined into smart strategies for power with rather than merely over other nations. Thinking more clearly about power and stimulating that broader narrative are the purposes of this book. [xvi-xvii]

### 2ac cir – fullerton

#### The plan’s popular

**DeWeerd, 1** – writer in seatte, cites Nick Smith, a republican rep from MI, (Sarah, “Embargoing Science: US Policy toward Cuba and Scientific Collaboration” 2001)ahayes

These relatively streamlined procedures have been in place since 1999, when the Clinton administration announced a new policy to expand people-to-people contacts-such as scientific exchanges-between the United States and Cuba. Scientific collaboration between the two countries continues to enjoy broad bipartisan support in Washington. Rep. Nick Smith (R-MI), who visited Cuba in April as part of a delegation organized by the American Association for the Advancement of Science, says that scientific collaboration is "one area that's reasonable" for contact with Cuba. "There are some things we can learn from them, and certainly many things they can learn from the scientific effort in this country."

#### Status quo disaster response destroys the governments reputation and decimates polcap – the plan solves

Gaines-Ross 12 (Dr. Leslie Gaines-Ross is a chief reputation strategist and leads public relations firm Weber Shandwick’s global reputation consulting services and proprietary thought leadership development. Dr. Gaines-Ross is also the author of two books, CEO Capital: A Guide to Building CEO Reputation and Company Success (2003) and Corporate Reputation: 12 Steps to Safeguarding and Recovering Reputation (2008). 2012. “Reputation Matters” <http://www.europeanbusinessreview.com/?p=356>)//KDUB

A Tipping Point On August 29, 2005, America suffered its biggest disaster since September 11, 2001. Hurricane Katrina hit the north-central Gulf Coast of the United States at 6:10 a.m. with a particularly catastrophic blow to New Orleans. Levees were soon breached, and the South would never be the same. Thousands of homes were destroyed, leaving tens of thousands of people instantly homeless. As the waters overwhelmed coastal communities, television stations broadcasted dramatic, heart-wrenching images-citizens stranded on roofs waving in desperation to search helicopters, living rooms filled with shattered remains of what were once their homes, and families standing on highways searching for missing loved ones. Distressing media coverage continued day in and day out, for weeks, and then for months. Even after the waters had long since receded, personal, emotional stories continued to make news. Media accounts of unredeemable flood insurance, undelivered trailers for the homeless, and mounting tales of emotional and physical distress seemed to be never ending. The government response at city, state, and federal levels was considered grossly inadequate from the start. Evacuation before and after the hurricane hit was poorly planned and sluggish. Little thought was given to the special needs of the infirm and helpless. Some policemen failed to show up for work. Corpses floated unclaimed amidst the debris in the Lower Ninth Ward. As evacuees squeezed into the Superdome and reports of looting increased at an alarming rate, then U.S. President George W. Bush miscalculated the urgency of the crisis and remained vacationing at his Texas ranch. Several days later, the president visited the suffering port city in a flyover on Air Force One. At an impromptu press conference at the New Orleans airport runway after the flyover, the president praised the head of the Federal Emergency Management Agency (FEMA), Michael Brown. However, Brown would ultimately be the target of more criticism in the coming months than perhaps anyone else involved in Katrina’s aftermath. Only as it became increasingly clear that FEMA was unable to provide adequate transportation, food, and shelter did President Bush fire Brown and replace him with an experienced emergency disaster relief admiral. Three years later, the hard-hit Gulf Coast is still getting back on its feet. Although after-effects of Katrina continue to linger, signs of progress are now visible. Permits and licenses for New Orleans vendors for the 2007 Mardi Gras were up 310 percent from 2006. A Kaiser Family Foundation study based on New Orleans residents found that some progress was being made in restoring basic services, reopening schools, launching new businesses, and growing its population. Hurricane Katrina will forever stand as an example of how the American government failed to address one of the country’s most serious modern-day catastrophes. Most every American agreed that assistance for Hurricane Katrina victims was received too little, too late. The majority of Americans (58 percent) in a CBS News poll disapproved of the government’s handling of relief efforts one week after the hurricane hit. Response to Katrina by the federal government, FEMA, and state and local government was regarded by most Americans as poor (77, 70, and 70 percent, respectively). Equally disturbing, Americans believed that the disaster’s response had worsened the already battered overseas image of the United States. Worse still, the American public was left with the impression that the administration’s response to the deadly hurricane reflected a lack of compassion and management ability. Hurricane Katrina had a powerfully negative impact on perceptions of President Bush and his cabinet. The government’s missteps served as a negative tipping point for the Bush administration’s reputation. Its poor handling of the disaster took on epic proportions and was viewed as intrinsic to the core of the administration’s character. Each mistake generated a whole new set of problems. It was not just the administration’s failure to anticipate and react in time to the deadly hurricane, but also the magnitude of this failure that led to a material loss in the president’s and his administration’s reputation. The traditional rally of support for a president during the aftermath of a national emergency such as the September 11 terrorist attacks was nowhere to be found. Coupled with growing dissatisfaction with the war in Iraq, popular support for the administration reached a point of no return. Unfortunately for President Bush, the administration’s past and future actions would thereafter be viewed through the lens of another devastating event. With no appropriate and effective reputation recovery program for the handling of Hurricane Katrina and the continuing violence in Iraq, the November 2006 midterm Senate, House, and gubernatorial elections were all but preordained. Both houses of Congress gained Democratic majorities, thereby demonstrating just how irreparably damaged the administration’s reputation, and that of the political party it represented, had become. This is not to say that local political issues did not play a role in Hurricane Katrina’s devastation. New Orleans Mayor Ray Nagin and Louisiana Governor Kathleen Blanco were both heavily criticized for not ordering New Orleans residents to evacuate early enough. Emergency evacuation plans were implemented less than one day before the hurricane hit, and many people were unable to find safe routes out of the city. Reputation Advantage As the Hurricane Katrina episode shows, reputation matters. Reputation means how positively, or negatively, a company or similar institution is perceived by its key stakeholders-the people or entities that the company or institution relies on for its success. For many for-profit companies, typical stakeholders might include customers, employees, suppliers, or financial analysts. For governments or political entities such as the Bush and now President Obama administrations, stakeholders are, above all, the electorate. Reputation loss can strike any company or group. Unfortunately for many companies that have built great reputations, the much-touted adage ”the bigger they are, the harder they fall” holds true. Stakeholders can lose confidence in even the most highly admired companies that fail them. Although it may take a catastrophe before stakeholders ultimately lose faith in the great branded companies, it does happen, and then the fall from grace can be fast and furious. Hubris has no place in business. All are susceptible to reputation damage. If its reputation is strong, a company in crisis is granted the benefit of the doubt by its stakeholders. They expect companies to do the right thing. Even when inevitable mistakes are committed, stakeholders will afford highly regarded companies an additional opportunity to make amends-an opportunity they are not likely to grant the less regarded. When stakeholders view companies in a positive light, they give companies license to continue to operate and grow. Reputation also contributes directly to a company’s health by providing competitive advantage and differentiation. When stakeholders hold a company in high regard, they generate sales by recommending or buying its products/services. They support its ability to invest and grow by recommending or buying its stock. Stakeholders who hold a company in high esteem are more likely to recommend the company as a good place to work, allowing it to attract, develop, and keep the best employees. Those who admire companies spread positive word-of-mouth across a wide social network. Companies burdened by a tainted reputation have less opportunity to continue business as usual, which further hampers their reputation comeback efforts. Steps that would otherwise be viewed with optimism, or at least equanimity, are viewed with suspicion and doubt. Good reputations do more than raise capital and attract the best talent. Admired companies generate additional sales from loyal customers, attract the right strategic and business partners, assure the public that the company will behave ethically, provide a buffer when problems arise, and sometimes permit companies to charge premium prices. Not to be ignored in this age of regulatory watchdogs is how a positive reputation reduces friction with government officials and legislators. For these reasons and more, there are very real, tangible, ”hard” payoffs to maintaining a good reputation. Weber Shandwick’s Safeguarding ReputationTM research found that a hefty 63 percent of a company’s market value is attributable to reputation, according to global business influencers. Executives in all regions of the world agreed with this high valuation. The average compound shareholder returns of top 10 Fortune Most Admired Companies substantially exceed that of Standard & Poor’s (S&P) 500 companies over five- and one-year periods. A Pennsylvania State University survey also found that reputable companies provided considerably better returns on investment compared to the S&P 500-22 percent versus 16 percent, respectively. Reputation is clearly a quantifiable asset and a proven wealth generator. Good reputation yields ‘’soft” payoffs as well. Companies report that after being named as a ”best company to work for,” resumes pour in. A leading economist estimated that companies included on the Working Mother ”100 Best Companies for Working Mothers” list are worth 3 to 6 percent more than their peers that did not make the list. As Workforce magazine wrote: ”The effort doesn’t always pay off in a high ranking, but a high ranking always pays off in invigorating a company’s reputation among recruits, employees, shareholders, investors, and customers.” Making Fortune’s Best Places to Work list opens wide the recruiting door, as financial services giant Edward Jones found out-job applications went from 7,000 to 400,000 one year after landing on the list. In sharp contrast to the multiple payoffs of good reputation are the real costs of a poor reputation. Least-admired Fortune Most Admired Companies perform considerably worse than the average S & P 500 company. These numbers are not surprising since the reason for a poor reputation may be due to a company’s poor financial performance. But it is also true that a poor reputation may be part of a vicious cycle. Poorly regarded companies have a hard time attracting talent, new business, new partnerships, referrals, customers, and higher pricing compared to highly regarded companies. Companies that suffer from reputation failure have to work harder and longer than companies held in high esteem. As Hurricane Katrina tragically demonstrated, losing reputation is a defining moment for a company, country, institution, or individual. Benjamin Franklin once advised that ”glass, china, and reputation are easily cracked, and never well mended.” Franklin was only partially correct. Yes, reputations are inherently fragile and can tumble without warning overnight. However, the repair process has greatly improved since the eighteenth century. Today, companies can expect to do more than merely patch a tattered reputation back together. Rebuilding a strong reputation is well within the realm of possibility. If the right steps are taken, reputation restoration is likely.

#### Won’t pass

#### -budget battle, independently polcap not key

**New York Times 10-17**, 13, <http://nymag.com/daily/intelligencer/2013/10/frank-rich-shutdown-wont-kill-radical-right.html>

¶ About a month and a half ago, President Obama was widely viewed as waffling on the issue of a Syria invasion. Now, he's stared down the GOP's "suicide caucus" and won. Obama has already said he's going to make a [fresh push on immigration reform](http://www.reuters.com/article/2013/10/16/us-usa-obama-immigration-idUSBRE99F01Q20131016). Is this win going to help the president enact any of his agenda? Obama’s firm stand in this showdown was admirable. He ignored all the “wise” Beltway voices saying that he could have managed the crisis more effectively by inviting the opposing parties ***in*** for a drink or to Camp David — governance by schmooze. He at long last recognized that he has been dealing with a band of revolutionaries who don’t want to compromise and are happy to bring the government down to achieve their goals. However, let’s be clear**: What he achieved by standing firm in this battle was not a furtherance of his agenda** but the removal of an extralegal impediment to the enactment of a key piece of his agenda that was already the law of the land. It’s admirable that he now will turn to another agenda priority, much-needed immigration reform, **but the same GOP base that tried to bring down Obamacare will easily block any law that would seriously address immigration.** **The radical Republicans have lost this week’s battle, but they have not surrendered their power to stall Obama’s agenda — even when that agenda would seem to be in the national interests of a GOP that desperately needs Hispanic votes if it is to win the White House.**

#### -partisanship

**Lohud.com, 10-17,** 13, http://www.lohud.com/usatoday/article/3000575

Democrats are hoping that Republicans, mindful of the party's poor performance in recent national elections among Hispanics, will support a comprehensive bill that tackles many issues such as citizenship, expanded visas and border security. But the **House Republicans hav**e thus far **been working on separate bills for each issue**.¶ House Speaker John **Boehner**, R-Ohio, has **said he is committed to advancing immigration legislation in this Congress but there is virtually no interest among GOP lawmakers to vote for the kind of sweeping bill that Democrats are seeking.**¶ Rep. Raul **Labrador,** R-Idaho, a conservative **who was once a member of a bipartisan House group that tried to draft a broad immigration bill, said the prospects for even smaller bills are slim in the House.**¶ **"It's not going to happen this year**," Labrador said. "**After the way the president acted over the last two or three weeks where he would refuse to talk to the speaker of the House ... they're not going to get immigration reform. That's done**."

#### No bipartisanship kills agenda

**Wall Street Journal, 10-17**, 13, http://online.wsj.com/news/articles/SB10001424052702303680404579141472200495820

Yet it is far from certain Mr. **Obama** can exploit these tactical gains in coming months. In his remarks Thursday from the State Dining Room, he **said he wanted to pass an immigration overhaul, a farm bill and reach a budget agreement that cuts the deficit and spurs economic growth.** Not on the list were the more ambitious plans he laid out in his State of the Union speech in February: raising the minimum wage, expanding access to pre-school education and launching a sweeping program to upgrade the nation's roads and bridges.¶ **Those efforts require bipartisan consensus** that may be even more elusive amid the ill will carried over from the budget fight. **Even Republicans who voted with the president believe Mr. Obama struck a hard-line posture that makes future collaboration difficult.**¶ **"A lot of us are resentful that he didn't negotiate as hard as we think he could have or should have**," said Sen. [John McCain](http://topics.wsj.com/person/M/John-McCain/6226) (R., Ariz.) in an interview. "**Let me put it this way: He didn't do himself any good."**

#### Forcing controversial fights key to Obama’s agenda- try or die for the link turn

Dickerson 13 (John, Slate, Go for the Throat!, 1/18 www.slate.com/articles/news\_and\_politics/politics/2013/01/barack\_obama\_s\_second\_inaugural\_address\_the\_president\_should\_declare\_war.single.html)

On Monday, President Obama will preside over the grand reopening of his administration. It would be altogether fitting if he stepped to the microphone, looked down the mall, and let out a sigh: so many people expecting so much from a government that appears capable of so little. A second inaugural suggests new beginnings, but this one is being bookended by dead-end debates. Gridlock over the fiscal cliff preceded it and gridlock over the debt limit, sequester, and budget will follow. After the election, the same people are in power in all the branches of government and they don't get along. There's no indication that the president's clashes with House Republicans will end soon. Inaugural speeches are supposed to be huge and stirring. Presidents haul our heroes onstage, from George Washington to Martin Luther King Jr. George W. Bush brought the Liberty Bell. They use history to make greatness and achievements seem like something you can just take down from the shelf. Americans are not stuck in the rut of the day. But this might be too much for Obama’s second inaugural address: After the last four years, how do you call the nation and its elected representatives to common action while standing on the steps of a building where collective action goes to die? That bipartisan bag of tricks has been tried and it didn’t work. People don’t believe it. Congress' approval rating is 14 percent, the lowest in history. In a December Gallup poll, 77 percent of those asked said the way Washington works is doing “serious harm” to the country. The challenge for President Obama’s speech is the challenge of his second term: how to be great when the environment stinks. Enhancing the president’s legacy requires something more than simply the clever application of predictable stratagems. Washington’s partisan rancor, the size of the problems facing government, and the limited amount of time before Obama is a lame duck all point to a single conclusion: The president who came into office speaking in lofty terms about bipartisanship and cooperation can only cement his legacy if he destroys the GOP. If he wants to transform American politics, he must go for the throat. President Obama could, of course, resign himself to tending to the achievements of his first term. He'd make sure health care reform is implemented, nurse the economy back to health, and put the military on a new footing after two wars. But he's more ambitious than that. He ran for president as a one-term senator with no executive experience. In his first term, he pushed for the biggest overhaul of health care possible because, as he told his aides, he wanted to make history. He may already have made it. There's no question that he is already a president of consequence. But there's no sign he's content to ride out the second half of the game in the Barcalounger. He is approaching gun control, climate change, and immigration with wide and excited eyes. He's not going for caretaker. How should the president proceed then, if he wants to be bold? The Barack Obama of the first administration might have approached the task by finding some Republicans to deal with and then start agreeing to some of their demands in hope that he would win some of their votes. It's the traditional approach. Perhaps he could add a good deal more schmoozing with lawmakers, too. That's the old way. He has abandoned that. He doesn't think it will work and he doesn't have the time. As Obama explained in his last press conference, he thinks the Republicans are dead set on opposing him. They cannot be unchained by schmoozing. Even if Obama were wrong about Republican intransigence, other constraints will limit the chance for cooperation. Republican lawmakers worried about primary challenges in 2014 are not going to be willing partners. He probably has at most 18 months before people start dropping the lame-duck label in close proximity to his name. Obama’s only remaining option is to pulverize. Whether he succeeds in passing legislation or not, given his ambitions, his goal should be to delegitimize his opponents. Through a series of clarifying fights over controversial issues, he can force Republicans to either side with their coalition's most extreme elements or cause a rift in the party that will leave it, at least temporarily, in disarray.

#### Budget win won’t translate into political success

**Bloomberg, 10-17,** 13, http://www.bloomberg.com/news/2013-10-17/obama-s-fiscal-fight-win-won-t-secure-success-for-agenda.html

President [**Barack Obama**](http://topics.bloomberg.com/barack-obama/)**’s victory in the fiscal standoff with Republicans won’t guarantee success in future talks over his second-term spending priorities and immigration proposals.** At the end of a weeks-long stalemate, Obama managed to stave off a direct assault on his health-care law by [House Republicans](http://topics.bloomberg.com/house-republicans/) and force them to allow an increase in the U.S. debt ceiling without conditions.¶ “It’s clearly a win for the president,” said Patrick Griffin, a congressional lobbyist in the administration of President [Bill Clinton](http://topics.bloomberg.com/bill-clinton/), who faced two government shutdowns and a combative [Republican Congress](http://topics.bloomberg.com/republican-congress/). “Whether it’s a battle win or a war win for the president, we don’t know.”¶ Speaking from the White House this morning as federal workers returned to their jobs, Obama said, “how business is done in this town has to change.” He asked congressional lawmakers to return to negotiations with him to pass immigration and farm bills and craft a budget plan by year’s end.¶ “I understand we will not suddenly agree on everything now that the cloud of crisis has passed,” he said. Republicans who dislike him should “go out there and win an election” rather than undermine democratic governance. “Don’t break it,” he said.¶ Central Conflict¶ **The last-minute agreement didn’t eliminate the core conflict in Congress over fiscal policy, and the temporary funding extension for the government expires on Jan. 15. The debt ceiling increase expires Feb. 7.**¶ **Republicans say that in the next round of budget talks they will still refuse to raise taxes, while Democrats say they won’t cut entitlements such as** [**Social Security**](http://topics.bloomberg.com/social-security/) **and Medicare without more** [**tax revenue**](http://topics.bloomberg.com/tax-revenue/)**.**¶House **Republicans vowed to keep chipping away at the Patient Protection and Affordable Care Act, the president’s signature achievement of his first term.**¶ **“We haven’t really resolved any of the big issues**,” said Dan Meyer, who was chief of staff to[Newt Gingrich](http://topics.bloomberg.com/newt-gingrich/) when the former House speaker was confronting Clinton over the budget. “He didn’t get more revenue. He didn’t get the sequester caps lifted. All those decisions were punted.”¶ Former Vice President [Al Gore](http://topics.bloomberg.com/al-gore/), who served during Clinton’s administration, said Obama was correct in refusing to negotiate with Republicans over raising the debt ceiling.¶ “The outcome certainly validates the president’s decision,” Gore said in an interview on Bloomberg Television¶ Economic Impact¶ The partial government shutdown that resulted from the deadlock has taken at least $24 billion out of the [U.S. economy](http://topics.bloomberg.com/u.s.-economy/) so far, reducing fourth-quarter growth by at least 0.6 percentage points, according [Standard & Poor’s](http://topics.bloomberg.com/standard-%26-poor%27s/).¶ Investors were unfazed, though. Daily swings in the [Standard & Poor’s 500 Index (SPX)](http://www.bloomberg.com/quote/SPX:IND)averaged less than 1 percent since the shutdown began on Oct. 1. After a deal was announced by Senate leaders, the benchmark climbed 1.4 percent to 1,721.54 yesterday in [New York](http://topics.bloomberg.com/new-york/), rising to within 0.3 percent of its last closing record. Stocks rose today, briefly sending the [S&P 500](http://topics.bloomberg.com/s%26p-500/) past its record close. The S&P 500 gained 0.2 percent to 1,724.87 at 11:40 a.m. in New York.¶ The political costs are less clear.¶ A Pew Research Center [poll](http://www.pewresearch.org/fact-tank/2013/10/11/john-boehners-dilemma-in-a-chart/) showed that the longer the shutdown went on, the more Americans blamed Republicans. Seventy-two percent of Americans surveyed Oct. 9-13 disapproved of the job Republican leaders in Congress were doing, while 51 percent disapproved of Obama’s performance.¶ Midterm Elections¶ Lawmakers have more than a year before they face voters again in midterm elections.¶ “I lived through it last time,” Meyer said of the shutdowns in 1995 and 1996, after which Republicans maintained their congressional majorities. “There’s little historical evidence that standing a year before an election has much of an impact.”¶ **Obama still is without a Republican negotiating partner who can reliably make a deal and deliver opposition party support.**¶House Speaker [John Boehner](http://topics.bloomberg.com/john-boehner/) of [Ohio](http://topics.bloomberg.com/ohio/) has been reluctant to hold votes on measures opposed by Republicans in the Tea Party caucus. While Senator Republican Leader [Mitch McConnell](http://topics.bloomberg.com/mitch-mcconnell/) of[Kentucky](http://topics.bloomberg.com/kentucky/) stepped in to steer the bipartisan resolution to avoid a debt default, he may be less inclined to take such a political risk on other policy issues that could hurt his prospects in a primary election next year.¶ ‘No Winners’¶ While Obama pressed this morning for Congress to take up his agenda and criticized Republicans who he blamed for creating “manufactured crises,” he refused to claim victory.¶ “Let’s be clear, there are no winners here,” he said.¶ [David Plouffe](http://topics.bloomberg.com/david-plouffe/), a former senior adviser to Obama, said the president is likely to emerge with a stronger hand in any case. The Tea Party faction in the House overplayed its hand, he said, and that probably enhances the position of the Senate, where Democrats have a majority, and of House Republicans who are willing to compromise with the administration.¶ The outcome of this standoff makes future confrontations over the [debt limit](http://www.bloomberg.com/quote/DEBTOUTD:IND) less likely, Plouffe said.¶ “Hopefully, we have broken forever using the debt ceiling as a political weapon,” Plouffe said. “I’m not naïve but I think it’s unlikely the Republicans in Congress want to go through this anytime again soon.”¶ Next Round¶ The biggest victory for the president was in cutting off the Republican attempt to scuttle the health-care law, Plouffe said. By the time the next round of fiscal negotiations occurs in January, coverage will have begun for Americans who signed up through the health-insurance exchanges. That means **Republicans who attack the law in the next budget fight would have to try to take away existing coverage from constituents.**