### 1NC – DA 1

#### Castro is actively strengthening economic ties with China

WSJ ’12 – Wall Street Journal; “Cuba Seeks Closer Ties With Beijing”; July 5, 2012; <http://online.wsj.com/news/articles/SB10001424052702303684004577508432963724246>

BEIJING—Cuban President Raúl Castro is looking to strengthen the country's economic ties to Beijing as it moves to liberalize its economy somewhat and limit its energy dependence on Venezuela, whose leader is battling cancer and faces a tough election at home.

Mr. Castro landed in Beijing on Wednesday to meet with China's top leaders before heading out to Vietnam on Saturday, touring onetime Communist fellow travelers that have revamped their economies. On Thursday, Cuban representatives signed economic, technology and agricultural agreements with Chinese officials, though few specifics were disclosed.

"Currently relations are maturing with each passing day," Mr. Castro said Thursday in an appearance with China President Hu Jintao. "The relationship has passed the test of time."

Since 2011, Cuba has begun encouraging the formation of private enterprises, permitting property and automobile sales, and reducing the role of the state in agriculture. Still, the Cuban economy grew less than 3% in 2011, nowhere near the pace of Asian nations.

Chinese technocrats and academics are working on a dozen projects to help remake the Cuban economy, including infrastructure, transportation and energy, said Xu Shicheng, a Cuba expert at the Chinese Academy of Social Sciences. While Cuba has made progress, "most importantly, there is a need to update the people's mentality," he said. "Many people in Cuba think that updating the private sector means adopting capitalism. It will take Cuba a long time to accomplish what China did."

Mr. Castro's visit comes as China tries to be a major player in Latin American affairs. Already, China is a major destination for commodities from Brazil and Argentina, and is boosting investment in the region, especially in energy projects.

Beijing also has long been involved in a tug of war with Taiwan over diplomatic recognition by Central American and Caribbean countries, which play off Taipei against Beijing.

Cuba is a nation of just 11 million people but it has long been a foreign-affairs flash point because of the charismatic leadership of former President Fidel Castro and its struggles against the U.S. There are about 1.5 million Cuban-Americans, many of whom live in Florida and other politically important states.

Havana has relied on exports of oil from its closest ally, Venezuela, headed by President Hugo Chávez, who also had pledged in 2007 to help Cuba build or expand its refining capacity. But Venezuela didn't follow through, and after the global financial crisis, China stepped in. State-controlled China National Petroleum Corp. signed a $4.5 billion deal last year to upgrade Cuba's Cienfuegos refinery.

Havana also needs help in exploring for oil offshore, especially in the Gulf of Mexico. The U.S. Energy Information Administration says that drilling in the area thus far has been "quite limited."

"Cuba needs to try to manage what happens if there is a change in government in Caracas tomorrow, either by the death of Chávez or by Chávez losing the election," said Jorge Piñon, a researcher at the University of Texas at Austin. "I personally believe that China would make an important long-term strategic partner for Cuba, particularly after a possible economic and political vacuum left by a change of administration in Caracas and even after a post-embargo scenario."

Cuba and China have had a complicated relationship since China started to open its economy to outside investment in 1978, to veer sharply from communist orthodoxy and to increasingly court the U.S.

Fidel Castro stridently opposed reform that smacked of capitalism, and continued to see the U.S. as an enemy—a view that was largely reciprocated in Washington. After the Soviet Union collapsed in 1991 and cut off subsidized oil shipments to Cuba, Mr. Castro resented China, say Cuba watchers, because China did little to fill the void.

Fidel Castro's brother Raúl, who was then defense minister, was seen as more open to market-oriented changes. In 2003, he invited China's then-premier, Zhu Rongji, who played a leading role in opening up China to foreign trade and investment, to give a series of lectures in Cuba. Fidel Castro was a no-show, said Domingo Amuchastegui, a former Cuban intelligence officer.

But Raúl Castro was hardly a closet capitalist. In 2008, when Chinese President Hu Jintao visited Cuba, according to news reports, Raúl serenaded him with a rendition of the Chinese standard "The East Is Red," a Chinese favorite during the Mao era.

Under Fidel Castro, Cuba grew more reliant on oil-rich Venezuela. But after Mr. Castro became seriously ill in 2006, he temporarily ceded power to his brother, who then formally became president in 2008. When the Cuban government formally approved economic reforms last year, Fidel Castro was in attendance, which was seen as giving his blessing to the changes. Fidel Castro, now 85 years old, writes newspaper columns, but avoids domestic economic issues, said Mr. Xu, the Chinese analyst.

For his part, Mr. Chávez is struggling with cancer and faces a tough presidential election in October.

The 81-year-old Raúl Castro has further cemented ties to China. In June 2011, Chinese Vice President Xi Jinping, who is expected to take China's top positions in the government and Communist Party by next year, visited Havana. The two countries have been working on projects in oil exploration, hotel construction, biotechnology and infrastructure.

"The big picture is that Cuba is still trying to get used to the idea of the 'new China,' which Fidel has long detested and Raúl finds, well, intriguing," says Harvard University professor Jorge Domínguez, a Cuba expert.

This is Raúl Castro's third trip to China since 1997, said Mr. Xu, the Chinese expert. "What's different this time is his status. He is visiting as the No. 1 leader."

#### Engagement is zero-sum

Dowd ‘12

Alan Dowd, Senior Fellow with the American Security Council Foundation, 2012, “Crisis in the America's,” <http://www.ascfusa.org/content_pages/view/crisisinamericas>

Reengagement also means revitalizing security ties. A good model to follow might be what’s happening in China’s backyard. To deter China and prevent an accidental war, the U.S. is reviving its security partnerships all across the Asia-Pacific region. Perhaps it’s time to do the same in Latin America. We should remember that many Latin American countries—from Mexico and Panama to Colombia and Chile—border the Pacific. Given Beijing’s actions, it makes sense to bring these Latin American partners on the Pacific Rim into the alliance of alliances that is already stabilizing the Asia-Pacific region.¶ Finally, all of this needs to be part of a revived Monroe Doctrine.¶ Focusing on Chinese encroachment in the Americas, this “Monroe Doctrine 2.0” would make it clear to Beijing that the United States welcomes China’s efforts to conduct trade in the Americas but discourages any claims of control—implied or explicit—by China over territories, properties or facilities in the Americas. In addition, Washington should make it clear to Beijing that the American people would look unfavorably upon the sale of Chinese arms or the basing of Chinese advisors or military assets in the Western Hemisphere.¶ In short, what it was true in the 19th and 20th centuries must remain true in the 21st: There is room for only one great power in the Western Hemisphere.

#### Chinese influence in Latin America key to the global economy

Ellis 11

R. Evan, Assistant Professor of National Security Studies in the Center for Hemispheric Defense Studies at the National Defense University.Chinese Soft Power in Latin America, 1st quarter 2011, <http://www.ndu.edu/press/lib/images/jfq-60/JFQ60_85-91_Ellis.pdf>

Access to Latin American Markets. Latin American markets are becoming increasingly valuable for Chinese companies because they allow the PRC to expand and diversify its export base at a time when economic growth is slowing in traditional markets such as the United States and Europe. The region has also proven an effective market for Chinese efforts to sell more sophisticated, higher value added products in sectors seen as strategic, such as automobiles, appliances, computers and telecommunication equipment, and aircraft. In expanding access for its products through free trade accords with countries such as Chile, Peru, and Costa Rica, and penetrating markets in Latin American countries with existing manufacturing sectors such as Mexico, Brazil, and Argentina, the PRC has often had to overcome resistance by organized and often politically well-connected established interests in those nations. In doing so, the hopes of access to Chinese markets and investments among key groups of businesspeople and government officials in those nations have played a key role in the political will to overcome the resistance. In Venezuela, it was said that the prior Chinese ambassador to Venezuela, Zheng Tuo, was one of the few people in the country who could call President Chávez on the telephone and get an instant response if an issue arose regarding a Chinese company. Protection of Chinese Investments in and Trade Flows from the Region. At times, China has applied more explicit pressures to induce Latin America to keep its markets open to Chinese goods. It has specifically protested measures by the Argentine and Mexican governments that it has seen as protectionist: and, in the case of Argentina, as informal retaliation, China began enforcing a longstanding phytosanitary regulation, causing almost $2 billion in lost soy exports and other damages for Argentina.14 China has also used its economic weight to help secure major projects on preferential terms. In the course of negotiating a $1.7 billion loan deal for the Coco Coda Sinclair Hydroelectric plant in Ecuador, the ability of the Chinese bidder SinoHidro to self-finance 85 percent of the projects through Chinese banks helped it to work around the traditional Ecuadorian requirement that the project have a local partner. Later, the Ecuadorian government publicly and bitterly broke off negotiations with the Chinese, only to return to the bargaining table 2 months later after failing to find satisfactory alternatives. In Venezuela, the Chávez government agreed, for example, to accept half of the $20 billion loaned to it by the PRC in Chinese currency, and to use part of that currency to buy 229,000 consumer appliances from the Chinese manufacturer Haier for resale to the Venezuelan people. In another deal, the PRC loaned Venezuela $300 million to start a regional airline, but as part of the deal, required Venezuela to purchase the planes from a Chinese company.15 Protection of Chinese Nationals. As with the United States and other Western countries, as China becomes more involved in business and other operations in Latin America, an increasing number of its nationals will be vulnerable to hazards common to the region, such as kidnapping, crime, protests, and related problems. The heightened presence of Chinese petroleum companies in the northern jungle region of Ecuador, for example, has been associated with a series of problems, including the takeover of an oilfield operated by the Andes petroleum consortium in Tarapoa in November 2006, and protests in Orellana related to a labor dispute with the Chinese company Petroriental in 2007 that resulted in the death of more than 35 police officers and forced the declaration of a national state of emergency. In 2004, ethnic Chinese shopkeepers in Valencia and Maracay, Venezuela, became the focus of violent protests associated with the Venezuelan recall referendum. As such incidents increase, the PRC will need to rely increasingly on a combination of goodwill and fear to deter action against its personnel, as well as its influence with governments of the region, to resolve such problems when they occur.The rise of China is intimately tied to the global economy through trade, financial, and information flows, each of which is highly dependent on global institutions and cooperation. Because of this, some within the PRC leadership see the country’s sustained growth and development, and thus the stability of the regime, threatened if an actor such as the United States is able to limit that cooperation or block global institutions from supporting Chinese interests. In Latin America, China’s attainment of observer status in the OAS in 2004 and its acceptance into the IADB in 2009 were efforts to obtain a seat at the table in key regional institutions, and to keep them from being used “against” Chinese interests. In addition, the PRC has leveraged hopes of access to Chinese markets by Chile, Peru, and Costa Rica to secure bilateral free trade agreements, whose practical effect is to move Latin America away from a U.S.-dominated trading block (the Free Trade Area of the Americas) in which the PRC would have been disadvantaged.

#### Nuclear war

Harris and Burrows ‘9

(Mathew, PhD European History at Cambridge, counselor in the National Intelligence Council (NIC) and Jennifer, member of the NIC’s Long Range Analysis Unit “Revisiting the Future: Geopolitical Effects of the Financial Crisis” <http://www.ciaonet.org/journals/twq/v32i2/f_0016178_13952.pdf>, AM)

Of course, the report encompasses more than economics and indeed believes the future is likely to be the result of a number of intersecting and interlocking forces. With so many possible permutations of outcomes, each with ample Revisiting the Future opportunity for unintended consequences, there is a growing sense of insecurity. Even so, history may be more instructive than ever. While we continue to believe that the Great Depression is not likely to be repeated, the lessons to be drawn from that period include the harmful effects on fledgling democracies and multiethnic societies (think Central Europe in 1920s and 1930s) and on the sustainability of multilateral institutions (think League of Nations in the same period). There is no reason to think that this would not be true in the twenty-first as much as in the twentieth century. For that reason, the ways in which the potential for greater conflict could grow would seem to be even more apt in a constantly volatile economic environment as they would be if change would be steadier. In surveying those risks, the report stressed the likelihood that terrorism and nonproliferation will remain priorities even as resource issues move up on the international agenda. Terrorism’s appeal will decline if economic growth continues in the Middle East and youth unemployment is reduced. For those terrorist groups that remain active in 2025, however, the diffusion of technologies and scientific knowledge will place some of the world’s most dangerous capabilities within their reach. Terrorist groups in 2025 will likely be a combination of descendants of long established groups\_inheriting organizational structures, command and control processes, and training procedures necessary to conduct sophisticated attacks\_and newly emergent collections of the angry and disenfranchised that become self-radicalized, particularly in the absence of economic outlets that would become narrower in an economic downturn. The most dangerous casualty of any economically-induced drawdown of U.S. military presence would almost certainly be the Middle East. Although Iran’s acquisition of nuclear weapons is not inevitable, worries about a nuclear-armed Iran could lead states in the region to develop new security arrangements with external powers, acquire additional weapons, and consider pursuing their own nuclear ambitions. It is not clear that the type of stable deterrent relationship that existed between the great powers for most of the Cold War would emerge naturally in the Middle East with a nuclear Iran. Episodes of low intensity conflict and terrorism taking place under a nuclear umbrella could lead to an unintended escalation and broader conflict if clear red lines between those states involved are not well established. The close proximity of potential nuclear rivals combined with underdeveloped surveillance capabilities and mobile dual-capable Iranian missile systems also will produce inherent difficulties in achieving reliable indications and warning of an impending nuclear attack. The lack of strategic depth in neighboring states like Israel, short warning and missile flight times, and uncertainty of Iranian intentions may place more focus on preemption rather than defense, potentially leading to escalating crises. 36 Types of conflict that the world continues to experience, such as over resources, could reemerge, particularly if protectionism grows and there is a resort to neo-mercantilist practices. Perceptions of renewed energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could result in interstate conflicts if government leaders deem assured access to energy resources, for example, to be essential for maintaining domestic stability and the survival of their regime. Even actions short of war, however, will have important geopolitical implications. Maritime security concerns are providing a rationale for naval buildups and modernization efforts, such as China’s and India’s development of blue water naval capabilities. If the fiscal stimulus focus for these countries indeed turns inward, one of the most obvious funding targets may be military. Buildup of regional naval capabilities could lead to increased tensions, rivalries, and counterbalancing moves, but it also will create opportunities for multinational cooperation in protecting critical sea lanes. With water also becoming scarcer in Asia and the Middle East, cooperation to manage changing water resources is likely to be increasingly difficult both within and between states in a more dog-eat-dog world.

### 1NC – CP

#### The United States federal government should initiate the substantial easing of its economic sanctions in all areas with the exception of hydrocarbon development on Cuba.

#### DOE will limit LNG exports now because of concerns about domestic supply and demand---the plan resolves those concerns and triggers exports

Ebinger et al 12(Charles, a senior fellow and director of the Energy Security Initiative at the Brookings Institution; Kevin Massy, Assistant Director of the Energy Security Initiative at Brookings; and Govinda Avasarala, Senior Research Assistant in the Energy Security Initiative at Brookings, May 2012, “Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas,” http://www.brookings.edu/~/media/research/files/reports/2012/5/02%20lng%20exports%20ebinger/0502\_lng\_exports\_ebinger.pdf)

**From the perspective of the** U.S. federal **government, the issue** of implications **is viewed in terms of** “**public interest**.” Under existing legislation, exports of natural gas to countries with a free trade agreement (FTA) with the United States are, by law, deemed to be in the public interest and authorization is required to be given without modification or delay. **Projects** looking for authorization **to export** LNG **to countries without an FTA**, **which account for** roughly **96 percent** **of current global LNG demand**, **are required to be approved** by the Secretary of Energy **unless**, after public hearing, **the Department of Energy** **finds** that such **exports are not in the public interest**.80 Although the legal definition of “public interest” is not explicitly given in existing legislation, according to public statements by officials from the Department of Energy, “**public interest” includes**:¶ • **Adequate domestic natural gas supply**; • **Domestic demand for natural gas proposed for export**; • Economic impacts of exports (on GDP, consumers, and industry); • U.S. energy security; • Job creation; • U.S. balance of trade; • International considerations; • Environmental considerations; • Consistency with DoE’s policy of promoting market competition through free negotiation of trade81¶ The first two of these criteria were addressed in Part I. The remainder focus on the various domestic and international implications of U.S. LNG exports. ¶ Domestic Implications¶ The domestic implications of U.S. LNG exports include their impact on natural gas prices, natural gas price volatility, jobs and competitiveness, and on overall energy security.¶ Price of domestic natural Gas¶ **The** **domestic price** impact of natural gas exports **will be a** **significant factor** **in determining whether or not the U**nited **S**tates **should export LNG.** While it is generally acknowledged that a domestic price increase will result from largescale LNG exports, the size of the price increase is the subject of debate, with a number of studies suggesting a range of possible outcomes. The important considerations when analyzing the results and conclusions of the various existing studies are the assumptions and models that are used when making price forecasts. Below are the results and methodologies of five major pricing studies done by the EIA and three consultancies: Deloitte, ICF International, and Navigant Consulting, which published two studies. ¶ 2012 Energy information Administration study In January 2012, the EIA published a study entitled “Effect of Increased Natural Gas Exports on Domestic Energy Markets.”82 The study, conducted at the request of the Office of Fossil Energy of the Department of Energy, analyzed four different export scenarios across four different resource base or economic assumptions to project price responses to LNG exports. In addition to a “baseline” scenario, where no LNG is exported, the EIA model considered four different export scenarios: • A low export/slow growth scenario, where 6 bcf/day of LNG is exported, phased in at a rate of 1 bcf/day per year; • A low export/rapid growth scenario, where 6 bcf/day of LNG is exported, phased in at a rate of 3 bcf/day per year; • A high export/slow growth scenario, where 12 bcf/day of LNG is exported, phased in at a rate of 1 bcf/day per year; • A high export/rapid growth scenario, where 12 bcf/day of LNG is exported, phased in at a rate of 3 bcf/day per year. Given the uncertainty over the actual size of the shale gas resource base and the future growth of the U.S. economy, each of these scenarios (both “baseline” and export) were applied to four alternate background cases: • A reference case, based on the EIA’s 2011 Annual Energy Outlook; • A low-shale estimated ultimate recovery (EUR) case, in which shale gas production from new, undrilled wells is 50 percent below the reference case scenario; • A high-shale EUR case, in which shale gas production from new, undrilled wells is 50 percent higher than the reference case; • A high economic growth case, in which U.S. GDP grows at 3.2 percent as opposed to the 2.7 percent assumed in the reference case. Given the range of assumptions, the range of results was unsurprisingly wide. The results range from a 9.6 percent increase (from $3.56 to $3.90/ mcf) in domestic natural gas prices in 2025 due to exports (in the case of high shale gas recovery, low export volumes and a slow rate of export growth) to a 32.5 percent increase (in the case of low shale gas recovery, high export volumes and a high rate of export growth). The percentage premium for domestic natural gas prices in 2025 for each scenario relative to the baseline scenario price estimate is detailed in table 3. In addition to the price premium for exporting natural gas that exists in each case, the EIA study projected a short-term spike in natural gas prices as a result of LNG exports. As figure 7 below illustrates, in 2015, the first year that LNG exports occur, domestic natural gas prices rise rapidly until total export capacity is reached. In the “lowrapid” scenario prices peak in 2016, after the 6 bcf/day of export capacity is built over 2 years; in the “high-slow” scenario, natural gas prices peak in 2026, after the 12 bcf/day of export capacity is built over 12 years. The immediate jump in price becomes more pronounced in the scenarios where LNG export capacity increases quickly. In the “low-rapid” scenario, the price of natural gas peaks at nearly 18 percent above the baseline case; in the “high-rapid” scenario, natural gas prices peak at 36 percent above the baseline case. This price impact is exacerbated in the Low Shale EUR and High Macroeconomic Growth cases, as LNG exports further tighten domestic natural gas markets. In the most extreme example, the high-rapid scenario for exports in a Low Shale EUR case, the price for natural gas peaks at more than 50 percent than the baseline case.83 There are two factors that should be considered when interpreting the results of this price impact study. The first is the assumption regarding the rate at which LNG could be exported. The results of EIA’s analysis represent an extreme scenario for LNG exports. In the existing LNG market, it is particularly unlikely that either the “low-rapid” or the “high-rapid” scenarios would materialize. The former assumption stipulates that the United States would export 6 bcf/day of LNG by 2016. Given that, at the time of writing, only one facility has been approved to export 2.2 bcf/day to nonFTA countries starting in 2015, it is unlikely that another three plants would be approved and built in such a short time frame.84 The latter scenario, that the United States would be exporting 12 bcf/ day of LNG by 2018, suggests that in the next several years, the United States would grow from exporting negligible volumes of LNG to having roughly one-third of the global LNG export capacity. Not only would this supply growth outpace growth in global LNG demand, but this capacity addition would also have to compete with roughly 11 bcf/day of Australian-origin LNG that is expected to hit the market around the same time.85 The second issue is the model’s assumptions for incremental investment in natural gas production as a result of increased export capacity. The spike in price depicted in figure 7 occurs because investment from gas producers lags additional demand. In the model, producers respond to, rather than anticipate, additional demand. For this reason, prices peak once the export capacity is filled, before steadily decreasing. In reality, the expectation of future demand would likely induce gas producers to invest in additional production before incremental demand occurs. As a result, the increase in prices would likely begin earlier and peak at a lower level than suggested by the model. deloitte study An earlier study released in November 2011 from the Deloitte Center for Energy Solutions highlighted the producer-response in its model. In addition to finding that LNG exports would produce a smaller increase in gas prices than the EIA report suggests, the Deloitte study points out that “producers can develop more reserves in anticipation of demand growth, such as LNG exports. There will be ample notice and time in advance of the exports to make supplies available.”86 Using a dynamic model, in which production increased in anticipation of new demand, the Deloitte study found that 6 bcf/day of exports of LNG would result in, on average, a 1.7 percent increase (from $7.09 to $7.21/MMBtu) in the price of natural gas between 2016 and 2035. Further, the Deloitte study noted that there would be regional variations to the increase in natural gas prices resulting from LNG exports. As most of the proposed liquefaction terminals are expected to be on the Gulf Coast, the price of Henry Hub gas, which is the key benchmark for natural gas from the Gulf Coast, will increase by $0.22/ MMBtu by 2035 as a result of U.S. LNG exports. This is more than double the price increase projected in regions further away from the LNG export terminals. In New York and Illinois, natural gas prices are projected to increase by less than $0.10/MMBtu. This is particularly important in the Northeast, which historically experiences some of the highest natural gas prices in the country, but will benefit from the development and consumption of natural gas from the nearby Marcellus shale play. other studies Three other studies of note have analyzed the price impacts of U.S. LNG exports. In August 2010, Navigant Consulting found that 2 bcf/day of LNG exports would cause a price increase of between 7 and 7.9 percent from 2015 to 2035 relative to a scenario with no gas exports. ICF International found in August 2011 that 6 bcf/day of exports would result in an 11 percent ($0.64/MMBtu) increase in natural gas prices over the same period.87 More recently, Navigant released another study that analyzed the impact of two separate export scenarios. The first scenario modeled the impact of 3.6 bcf/day of LNG exports from three terminals in North America: Sabine Pass in Louisiana, Kitimat in British Columbia, and Coos Bay in Oregon. The second scenario modeled the impact of 6.6 bcf/day of LNG exports from the three aforementioned export projects and 2 bcf/day of added exports from the Gulf Coast and 1 bcf/day from Maryland.88 This Navigant study found that 6.6 bcf/day of LNG exports would result in a 6 percent ($0.35/MMBtu) increase in natural gas prices from 2015 to 2035. As with the EIA and Deloitte studies, the results of both Navigant and ICF’s studies must be analyzed in the context of their respective methodologies and assumptions. Navigant’s first study uses a more static supply model, which, unlike dynamic supply models, does not fully take account of the effect that higher prices have on spurring additional production. As a result, it takes a conservative estimate of supply growth potential. The report acknowledges that the price outcomes modeled in its analysis “establish the upper range of impacts that exports […] might have on natural gas prices.”89 This study also did not factor in the reemergence of the industrial sector as a major consumer of natural gas following the shale gas “revolution.” The study assumes that natural gas consumption by the industrial sector will decline by 0.3% per year to 2035. By contrast, the EIA model assumes that industrial sector demand will increase by roughly 1% per year over the same period.90 The ICF study factors in various levels of production response from an increase in price. Under its 6 bcf/day export scenario, the price impact ranges from a $0.52/ MMBtu increase in a more responsive drilling activity scenario to a $0.75/MMBtu increase in a less responsive drilling activity scenario. which study is right? Given that these studies forecast natural gas prices two decades into the future, it is difficult to determine which study is most accurate. (table 4 shows a comparison of the price impact forecasts of the various models.) However, policymakers would benefit from having a better understanding of the results that are generated from each report. This includes choosing the most relevant results from each report. For instance, following the release of the EIA study, many commentators were quick to highlight that natural gas prices could increase by more than 50 percent as a result of LNG exports. However, this ignored the assumptions behind this number: it was based on the price of natural gas in one year under the most extreme assumptions of exports and domestic resource base. A more comprehensive analysis should include an assessment of the average price impact from 2015 to 2035. When distinguishing between the various studies, policymakers should identify which assumptions most resemble the existing natural gas market and its likely direction, and which models are most reflective of the complex nature of domestic and global natural gas trade. Assuming realistic volumes of natural gas exports as well as a reasonable supply response by natural gas producers are important considerations. It is important to note that the supply curves in the various studies reflect different interpretations of the economics of marginal production. The Power sector and industrial sector Part I indicated that the power-generation and industrial sectors would account for most of the demand for newly available natural gas resources. As shown above, LNG exports are likely to increase domestic prices of natural gas, suggesting negative consequences for these two competing sectors. In their analyses, both Deloitte and EIA found that the majority—63 percent, according to both studies—of the exported natural gas will come from new production as opposed to displaced consumption from other sectors. By contrast, between 17 and 38 percent of supply of natural gas for export would be met by reduced demand, as higher prices pushes some domestic consumers to use less gas. ¶ In the power generation and industrial sectors, the price impacts of LNG exports are likely to have modest impacts. **In the power sector**, natural **gas has historically been used as a back up to coal and nuclear base-load generation**. For such gas used at the margin, the increase in electricity prices as a result of LNG exports would be limited by its competitiveness relative to other fuels: **as soon as it becomes more expensive than the alternative for back up generation**, **power producers** will **substitute away from gas**.91 According to ICF International, a $0.64/MMBtu increase in the price of natural gas would result in an electricity price increase of between $1.66 and $4.97/megawatt-hour (MWh), depending on how often gas is used as the marginal fuel for electricity. Deloitte estimates that the price increase of electricity would not be more than $1.65/MWh. 92 EIA estimates that electricity price impacts will be marginal as well (between $1.40/MWh and $2.90/MWh) except in the “highrapid” export scenario.93 The EIA Annual Energy Outlook 2011 estimates that, without exporting LNG, the average price of electricity (across all fuels) in 2035 will be $92/MWh.94¶ In the longer term, natural gas is itself likely to be used for more base-load generation. The rapid increase in shale gas production, coupled with the **retirements of** as much as 50 gigawatts (GW) of **coal-fired electricity** **due to** plant age or **inability to adhere to possibly forthcoming EPA regulations is likely to** **increase the demand for natural gas in the power sector**. According to some analysts, the **near-term demand caused by the retirements of** the oldest and least efficient **coal-fired power plants could result in an** **additional natural gas demand** of 2 bcf/day.95 Given the lack of environmentally and economically viable alternatives, a moderate increase in gas prices is unlikely to result in a large move away from natural gas, although increased costs will be transferred to customers. Natural gas consumption in the power sector has been considered economic at prices much higher than those resulting from LNG exports in even the highest price-impact projections. Even prior to the shale gas “revolution,” when natural gas prices were high, natural gas demand was increasing in the power sector. The EIA Annual Energy Outlook 2005— published in a year when average well head prices were over $7/MMBTU—projected that natural gas demand in the electricity sector would increase by 70 percent between 2003 and 2015.96¶ Unlike the power sector, which continued to build natural-gas fired generation during a period of increasing gas prices, the industrial sector was negatively affected by growing natural gas import dependence, high gas prices, and gas price volatility. Between 2000 and 2005, the price of natural gas increased by 99 percent and LNG imports more than doubled.97 By 2005, the ratio of the price of oil to the price of natural gas was approximately 6:1, just below the 7:1 oil-to-gas price ratio at which U.S. petrochemical and plastics producers are globally competitive.98 That same year Alan Greenspan, then-Chairman of the Federal Reserve, noted that because of natural gas price increases “the North American gas-using industry [was] in a weakened competitive position.”99 Since then the price of natural gas has collapsed. In 2011, the oil-to-natural gas price ratio was more than 24:1. In 2012 it has been even higher. The decline in natural gas prices has galvanized the industrial sector. A joint study by PwC and the National Association for Manufacturers, an industry trade group, found that the development of shale gas could save manufacturers as much as $11.6 billion per year in feedstock costs through 2025.100 New investments in petrochemical and plastics producing facilities are occurring throughout the East and Southeast, largely predicated on the availability of inexpensive natural gas. Opponents of LNG exports contend that such investments would be deterred in the future as a result of increases in the price of natural gas. However, the evidence suggests that the competitive advantage of U.S. industrial producers relative to its competitors in Western Europe and Asia is not likely to be affected significantly by the projected increase in natural gas prices resulting from LNG exports. As European and many Asian petrochemical producers use oil-based products such as naphtha and fuel oil as feedstock, U.S. companies are more likely to enjoy a significant cost advantage over their overseas competitors. Even a one-third decline in the estimated price of crude oil in 2035 would result in an oil-to-gas ratio of 14:1.101 There is also the potential for increased exports to help industrial consumers. Ethane, a liquid byproduct of natural gas production at several U.S. gas plays, is the primary feedstock of ethylene, a petrochemical product used to create a wide variety of products. According to a study by the American Chemistry Council, an industry trade body, a 25 percent increase in ethane production would yield a $32.8 billion increase in U.S. chemical production. By providing another market for cheap dry gas, LNG exports will encourage additional production of natural gas liquids (NGL) that are produced in association with dry gas. According to the EIA, ethane production increased by nearly 30 percent between 2009 and 2011 as natural gas production from shale started to grow substantially. Ethane production is now at an alltime high, with more than one million barrels per day of ethane being produced.102 Increased gas production for exports results in increased production of such natural gas liquids, in which case exports can be seen as providing a benefit to the petrochemical industry.¶ natural gas price volatility¶ **A major concern among** **domestic end users of natural gas is the** **possibility of an increase in natural gas price volatility** resulting from an increase in U.S. LNG exports. As figure 8 demonstrates, the price volatility experienced during the 2000s was the highest the domestic gas market has experienced in the past three decades. ¶ The **volatility of the natural gas market in the 2000s was** largely **caused by a tight supply-demand balance**. **Natural gas demand increased substantially** as the U.S. economy grew **and natural gas was viewed as environmentally preferable to coal for power generation**. **This increase in demand coincided with a reduction in domestic supply** and an increased reliance on imports. The recent surge in U.S. natural gas production has resulted in less market volatility since 2010. According to EIA, the standard deviation of the price of natural gas (a general statistical indicator of volatility) between 2010 and 2011 was one-third what it was during the 2000s.103 Potential exports of U.S. LNG concerns some domestic consumers for two principal reasons: greater volatility in domestic natural gas prices; and exposure of domestic natural gas prices to higher international prices resulting in a convergence between low U.S. prices and high international prices. ¶ There is an insufficient amount of data and quantitative research on the relationship between domestic natural gas price volatility and LNG exports. However, certain characteristics of the LNG market are likely to limit volatility. LNG is bound by technical constraints: it must be liquefied and then transported on dedicated tankers before arriving at terminals where a regasification facility must be installed. Liquefaction facilities have capacity limits to how much gas they can turn into LNG. If they are operating at or close-to full capacity, such facilities will have a relatively constant demand for natural gas, therefore an international price or supply shock would have little impact on domestic gas prices. Moreover, unlike oil trading, in which an exporter—theoretically—sells each marginal barrel of production to the highest bidder in the global market, the capacity limit on LNG production and export means that LNG exporters have an infrastructure-limited demand for natural gas leaving the rest of the natural gas for domestic consumption. As most LNG infrastructure facilities are built on a project finance basis and underpinned by long-term contracts, this demand can be anticipated by the market years in advance, reducing the likelihood of volatility. The macroeconomy and jobs The macroeconomic and job implications of LNG exports depend on two principal factors: the gains from trade from exploiting pricing differentials and inefficiencies of the global market; and the employment implications of those gains, higher domestic natural gas prices, and greater domestic natural gas production. The Department of Energy has commissioned a study on both the macroeconomic and employment implications of U.S. LNG exports, which will be released later this year. This study will provide a qualitative assessment of the implications of LNG exports to the U.S. economy and employment. LNG exports are likely to be a net benefit to the U.S. economy, although probably not a significant contributor in terms of total U.S. GDP. Exports of U.S. natural gas will take advantage of the benefits of the existing producer’s surplus resulting from the pricing differentials between the natural gas markets in the United States, Europe, and Asia. Contractual terms will determine how this surplus is shared between U.S. sellers and foreign buyers.104 The benefit of this trade will likely outweigh the cost to domestic consumers of the increase in the price of natural gas as most of the natural gas demanded by exports will come from new natural gas production as opposed to displacing existing production from domestic consumers. On the other hand, LNG exports from the United States are likely to put marginal upward pressure on the relative value of the U.S. dollar. In March 2012, Citigroup released a report on North American hydrocarbon production that included a model of the macroeconomic impact of U.S. oil and gas exports. The Citi analysis found that oil and gas exports would cause a nearly two percent decline in the current account deficit by 2020, but that the exchange rate implications would be modest. By 2020, the U.S. dollar would appreciate by between 1.6 and 5.4 percent.105 The implications of LNG exports on job creation are similarly difficult to quantify. Other than temporary construction jobs created by the need to build liquefaction capacity, pipelines, and other ancillary infrastructure, the operation of the liquefaction facility will likely provide little permanent employment benefit. As outlined in the section on price impacts above, as much of the gas for export will come from new production, rather than the displacement of consumption in other sectors, the negative economic, and therefore jobrelated, effects on those sectors is likely to be limited. Beyond the labor required for additional gas production to satisfy LNG exports, the net impact of LNG exports is likely to be minimal. Further upstream, the job potential may be greater. By increasing domestic natural gas production, employment from additional oil and gas producers will increase, as will the demand for manufacturers of equipment for oil and gas production, gathering, and transportation. domestic energy security¶ Aside from the price impact of potential U.S. LNG exports, **a major concern among opponents is that** such **exports would diminish U.S. “energy security**”; **that** **exports would deny the U**nited **S**tates **of a** **strategically important resource**. **The** **extent to which such concerns are valid depends on** several factors, including **the size of the domestic resource base**, and the liquidity and functionality of global trade. As Part I of this report notes, geological evidence suggests that the volumes of LNG export under consideration would not materially affect the availability of natural gas for the domestic market. Twenty years of LNG exports at the rate of 6 bcf/day, phased in over the course of 6 years, would increase demand by approximately 38 tcf. As presented in Part I, four existing estimates of total technically recoverable shale gas resources range from 687 tcf to 1,842 tcf; therefore, exporting 6 bcf/day of LNG over the course of twenty years would consume between 2 and 5.5 percent of total shale gas resources. While the estimates for shale gas reserves are uncertain, in a scenario where reserves are perceived to be lower than expected, domestic natural gas prices would increase and exports would almost immediately become uneconomic. In the long-term, it is possible that U.S. prices and international prices will converge to the point at which they settle at similar levels. In that case, the United States would have more than adequate import capacity (through bi-directional import/export facilities) to import gas when economic. ¶ A further gas-related consideration with regard to energy security is the effects of increased production of associated natural gas with the increasing volumes of U.S. unconventional oil. As the primary energy-security concern for the United States related to oil, the application of fracking and horizontal drilling in oil production is reducing U.S. oil import dependence, while simultaneously producing substantial volumes of natural gas, which, given the relative economics of oil and gas, is effectively delivered at zero (or, in the case of producers who have to invest in equipment to manage flaring and venting, negative) cost. To the extent that associated gas from unconventional oil production is used for LNG export, it can be seen as a consequence of—rather than a threat to—increased U.S. energy security. international implications The international implications of LNG exports from the United States can be divided into pricing, geopolitics, and environment. international Pricing As discussed in Part I, the global LNG market is informally separated into three markets: North America, the Atlantic Basin (mostly Europe), and the Pacific Basin (including Japan, South Korea, Taiwan, China, and India). These markets are separated because of important technical differences that impact the pricing structure for LNG in each market. The North American natural gas market is competitive and prices are traded in a transparent and open market. The Atlantic Basin is dominated by European LNG consumers such as the United Kingdom, Spain, France, and Italy, and is a hybrid of a competitive U.K. market that was liberalized in the mid-1990s and a Continental European market that is dominated by oil-linked, take-or-pay contracts. In recent years, the U.K. hub, the National Balancing Point (NBP), has traded at a premium to the U.S. hub, the Henry Hub. The Pacific Basin is a more rigid market that depends heavily on oilindexed contracts that are more expensive than those used in the Atlantic Basin. While they have no central trading hub, the Pacific Basin consumers such as Japan and South Korea (which is implementing its recently-signed free-trade agreement with the United States) currently import LNG based on a pricing formula known informally as the Japan Crude Cocktail, the average price of custom-cleared oil imports into Tokyo. Many Pacific Basin contracts have a built-in price floor and price ceiling depending on the price of oil.106 Without exporting any natural gas, the U.S. shale gas “revolution” has already had a positive impact on the liquidity of global LNG markets. Many LNG cargoes that were previously destined for gas-thirsty U.S. markets were diverted and served spot demand in both the Atlantic and Pacific Basins. The increased availability of LNG cargoes has helped create a looser LNG market for other consumers (see figure 9). This in turn has helped apply downward pressure to the terms of oillinked contracts resulting in the renegotiation of some contracts, particularly in Europe. Increased availability of LNG cargoes also accelerated a recent trend of increasing reliance of consumers on spot LNG markets. In 2010 short-term and spot contracts represented 19 percent of the total LNG market, up from only a fraction one decade earlier.107 In this case, increasing demand for spot cargoes indicates that consumers are taking advantage of spot prices that are lower than oilindexed rates. LNG exports will help to sustain market liquidity in what looks to be an increasingly tight LNG market beyond 2015 (see figure 10). Should LNG exports from the United States continue to be permitted, they will add to roughly 10 bcf/day of LNG that is expected to emerge from Australia between 2015 and 2020. Nevertheless, given the projected growth in demand for natural gas in China and India and assuming that some of Japan’s nuclear capacity remains offline, demand for natural gas will outpace the incremental supply. This makes U.S. LNG even more valuable on the international market. Although it will be important to global LNG markets, it is unlikely that the emergence of the United States as an exporter of LNG will change the existing pricing structure overnight. Not only is the market still largely dependent on long-term contracts, the overwhelming majority of new liquefaction capacity emerging in the next decade (largely from Australia) has already been contracted for at oil-indexed rates.108 The incremental LNG volumes supplied by the United States at floating Henry Hub rates will be small in comparison. But while U.S. LNG will not have a transformational impact, by establishing an alternate lower price for LNG derived through a different market mechanism, U.S. exports may be central in catalyzing future changes in LNG contract structure. As previously mentioned, this impact is already being felt in Europe. A number of German utilities have either renegotiated contracts or are seeking arbitration with natural gas suppliers in Norway and Russia. The Atlantic Basin will be a more immediate beneficiary of U.S. LNG exports than the Pacific Basin as many European contracts allow for periodic revisions to the oil-price linkage.109 In the Pacific Basin this contractual arrangement is not as common and most consumers are tied to their respective oil-linkage formulae for the duration of the contract.110 Despite the increasing demand following the Fukushima nuclear accident, however, Japanese LNG consumers are actively pursuing new arrangements for LNG contracts.111 There are other limits to the extent of the impact that U.S. LNG will have on global markets. It is unlikely that many of the LNG export facilities under consideration will reach final investment decision. Instead, it is more probable that U.S. natural gas prices will have rebounded sufficiently to the point that exports are not commercially viable beyond a certain threshold. (figure 11 illustrates the estimated costs of delivering LNG to Japan in 2020.) This threshold, expected by many experts to be roughly 6 bcf/day by 2025, is modest in comparison to the roughly 11 bcf/day of Australian LNG export projects that have reached final investment decision and are expected to be online by 2020. Also, the impact of U.S. LNG exports could be limited by a number of external factors that will have a larger bearing on the future of global LNG prices. For instance, a decision by the Japanese government to phase-out nuclear power would significantly tighten global LNG markets and probably displace any benefit provided by U.S. LNG exports. Conversely, successful and rapid development of China’s shale gas reserves would limit the demand of one of the world’s fastest-growing natural gas consumers. However, to the extent that U.S. LNG exports can help bring about a more globalized pricing structure, they will have economic and geopolitical consequences. Geopolitics A large increase in U.S. LNG exports would have the potential to increase U.S. foreign policy interests in both the Atlantic and Pacific basins. Unlike oil, natural gas has traditionally been an infrastructure-constrained business, giving geographical proximity and political relations between producers and consumers a high level of importance. Issues of “pipeline politics” have been most directly visible in Europe, which relies on Russia for around a third of its gas. Previous disputes between Moscow and Ukraine over pricing have led to major gas shortages in several E.U. countries in the winters (when demand is highest) of both 2006 and 2009. Further disagreements between Moscow and Kiev over the terms of the existing bilateral gas deal have the potential to escalate again, with negative consequences for E.U. consumers. The risk of high reliance on Russian gas has been a principal driver of European energy policy in recent decades. Among central and eastern European states, particularly those formerly aligned with the Soviet Union such as Poland, Hungary, and the Czech Republic, the issue of reliance on imports of Russian gas is a primary energy security concern and has inspired energy policies aimed at diversification of fuel sources for power generation. From the U.S. perspective such Russian influence in the affairs of these democratic nations is an impediment to efforts at political and economic reform. The market power of Gazprom, Russia’s state-owned gas monopoly, is evident in these countries. Although they are closer to Russia than other consumers of Russian gas in Western Europe, many countries in Eastern and Central Europe pay higher contract prices for their imports, as they are more reliant on Russian gas as a proportion of their energy mixes. In the larger economies of Western Europe, which consume most of Russia’s exports, there are efforts to diversify their supply of natural gas. The E.U. has formally acknowledged the need to put in place mechanisms to increase supply diversity. These include market liberalization approaches such as rules mandating third-party access to pipeline infrastructure (from which Gazprom is demanding exemption), and commitments to complete a single market for electricity and gas by 2014, and to ensure that no member country is isolated from electricity and gas grids by 2015.112 Despite these formal efforts, there are several factors retarding the E.U.’s push for a unified effort to reduce dependence on Russian gas. National interest has been given a higher priority than collective, coordinated E.U. energy policy: the gas cutoffs in 2006 and 2009 probably contributed to the acceptance of the Nord Stream project, which carries gas from Russia into Germany. Germany’s decision to phase out its fleet of nuclear reactors by 2022 will result in far higher reliance on natural gas for the E.U.’s biggest economy. The environmental imperative to reduce carbon emissions—codified in the E.U.’s goal of essentially decarbonizing its power sector by the middle of century—mean that natural gas is being viewed by many as the short-to medium fuel of choice in power generation. Finally, the prospects for European countries to replicate the unconventional gas “revolution” that has resulted in a glut of natural gas in the United States look uncertain. Several countries, including France and the U.K., have encountered stiff public opposition to the techniques used in unconventional gas production, while those countries, such as Poland and Hungary, that have moved ahead with unconventional-gas exploration have generally seen disappointing early results. Collectively, these factors suggest that the prospects for reduced European reliance on Russian gas appear dim. The one factor that has been working to the advantage of advocates of greater European gas diversity has been the increased liquidity of the global LNG market, discussed above. Russia’s dominant position in the European gas market is being eroded by the increased availability of LNG. Qatar’s massive expansion in LNG production in 2008, coupled with the rise in unconventional gas production in the United States as well as a drop in global energy demand due to the global recession, produced a global LNG glut that saw many cargoes intended for the U.S. market diverted into Europe. As mentioned previously, with an abundant source of alternative supply, some European consumers, mainly Gazprom’s closest partners, were able to renegotiate their oil-linked, takeor-pay contracts with Gazprom. As figure 10 illustrates, however, in the wake of the Fukushima natural disaster and nuclear accident in Japan and a return to growth in most industrialized economies, the LNG market is projected to tighten considerably in the short-term, potentially returning market power to Russia. However, there is a second, structural change to the global gas market that may have more lasting effects to Russia’s market power in the European gas market. LNG is one of the fastest growing segments of the energy sector. The growth of the LNG market, both through long-term contract and spot-market sales, is likely to put increasing pressure on incumbent pipeline gas suppliers. A significant addition of U.S. LNG exports will accelerate this trend. In addition to adding to the size of the market, U.S. LNG contracts are likely to be determined on a “floating” basis, with sales terms tied to the price of a U.S. benchmark such as Henry Hub, eroding the power of providers of long-term oil linked contract suppliers such as Russia. While U.S. LNG will not be a direct tool of U.S. foreign policy—the destination of U.S. LNG will be determined according to the terms of individual contracts, the spot-price-determined demand, and the LNG traders that purchase such contracts—the addition of a large, market-based producer will indirectly serve to increase gas supply diversity in Europe, thereby providing European consumers with increased flexibility and market power. Increased LNG exports will provide similar assistance to strategic U.S. allies in the Pacific Basin. By adding supply volumes to the global LNG market, the U.S. will help Japan, Korea, India, and other import-dependent countries in South and East Asia to meet their energy needs. The desire on the part of Pacific Basin countries for the U.S. to become a gas supplier to the region has been underlined by the efforts of the Japanese government, which has attempted to secure a free-trade agreement waiver from the United States to allow exports. As with oil price-linked Russian gas contracts in Eu-rope, U.S. LNG exports linked to a floating Henry Hub benchmark, have the potential to weaken the market power of incumbent LNG providers to Asia, increasing the negotiating power of consumers and decreasing the price. As U.S. foreign policy undergoes a “pivot to Asia,” the ability of the U.S. to provide a degree of increased energy security and pricing relief to LNG importers in the region will be an important economic and strategic asset. Beyond the basin-specific considerations of U.S. LNG exports, they would provide a source of predictable natural gas supply that is relatively free from unexpected production or shipping disruption. With Qatar representing roughly one-third of the global LNG market, a blockade or military intervention in the Strait of Hormuz or a direct attack on Qatar’s liquefaction facilities by Iran would inflict chaos on world energy markets. While the United States government will be unable to physically divert LNG cargoes to specific markets or strategic allies that are most affected (gas allocation will be made by the market players), additional volumes of LNG on the world market will benefit all consumers. international Environmental implications Proposed LNG exports from the United States have encountered domestic opposition on environmental grounds. As outlined in Part I, natural gas production causes greenhouse gas emissions in the upstream production process through leakages, venting, and flaring. The greenhouse gas footprint of shale gas production has been the subject of vigorous debate, with some studies suggesting that methane from the production process leads to shale gas having a higher global warming impact than that of other hydrocarbons including coal. While the methodology underlying such studies has been widely criticized, there is no doubt that leakage and venting of natural gas is a serious negative environmental consequence of natural gas production and transportation: EPA has estimated that worldwide leakages and venting volumes were 3,353.5 bcf in 2010.113 By contrast, some advocates of U.S. exports of LNG maintain that they have the potential to bring global environmental benefits if they are used to displace more carbon-intensive fuels. According to the IEA, natural gas in general has the potential to reduce carbon dioxide emissions by 740 million tonnes in 2035, nearly half of which could be achieved by the displacement of coal in China’s power-generation portfolio. Natural gas—in the form of LNG—also has the potential to displace more carbon-intensive fuels in other major energy users, including across the EU and in Japan, which is being forced to burn more coal and oil-based fuels to make up for the nuclear generation capacity lost in the wake of the Fukushima disaster. In addition to its relatively lower carbon-dioxide footprint, natural gas produces lower emissions of pollutants such as sulfur dioxide nitrogen oxide and other particulates than coal and oil. Natural gas—both in the form of LNG and compressed natural gas—is also being viewed as a potential replacement for oil in the vehicle transportation fleet, with large carbon dioxide abatement potential.114 However, as discussed in Part I, even the United States with its low gas prices is unlikely to see any significant move toward natural gas vehicles in the absence of government policies; the prospects for such vehicles entering the European or Asian markets, where gas is several times as expensive, are remote. On the other hand, additional volumes of natural gas in the global power generation fleet may also have longer-term detrimental consequences for carbon emissions. According to the IEA, by backing out nuclear and renewable energy generation, natural gas could add 320Mt of carbon dioxide by 2035.115 Whether U.S. LNG exports contribute to reduced carbon dioxide emissions through the displacement of coal fired power generation or to the crowding out of renewable and nuclear energy in the global energy mix is something of a moot point. According to the IEA, global power generation is projected to exceed 27,000 terawatt hours per year by 2020.116 Even assuming U.S. exports of 6 bcf/day (on the upper end of the range of expectations), zero losses due to transportation, regasification, and transmission, and a high natural gas power plant efficiency level of 60 percent, such volumes would account for just over one percent of total global power generation.117 Therefore, although the domestic environmental impacts associated with shale gas extraction may, pending the outcome of further study, prove to be a cause for concern with respect to greenhouse gas emissions, the potential for U.S. LNG exports to make a meaningful impact on global emissions through changes to the global power generation mix is negligible. Part III: Conclusions and Recommendations¶ This paper has attempted to answer two questions: Are U.S. LNG exports feasible? If so, what are the implications of U.S. LNG exports? **For exports to be feasible**, **several demand and supply-related conditions need to be met**. On the supply side, adequate resources must be available and their production must be sustainable over the long-term. The regulatory and policy environment will need to accommodate natural gas production to ensure that the resources are developed. The capacity and infrastructure required to enable exports must also be in place. This includes the adequacy of the pipeline and storage network, the availability of shipping capacity, and the availability of equipment for production and qualified engineers. ¶ **On the demand side**, **LNG exports will compete with** two main other domestic end uses for natural gas: **the power-generation sector**, and the industrial and petrochemical sector. **According to most projections, the U.S. electricity sector will see an increased demand for natural gas** as it seeks to comply with policies and regulations aimed at reducing carbon-dioxide emissions and pollutants from the power-generation fleet. Cheaper natural gas in the industrial sector has the potential to lower the cost of petrochemical production and to improve the competitiveness of a range of refining and manufacturing operations. Advocates of natural gas usage in the transportation fleet – particularly in heavy-duty vehicles (HDVs) – see it as a way to decrease the country’s dependence on oil, although absent major policy support, this sector is unlikely to represent a significant source of gas demand.¶ For increased U.S. LNG exports to be feasible, they will also need to be competitive with supplies from other sources. The major demand centers that would import U.S. LNG would be Pacific Basin consumers (Japan, South Korea, and Taiwan, and increasingly China and India), and Atlantic Basin consumers, mostly in Europe. The supply and demand balance in the Atlantic and Pacific Basins and, therefore the feasibility for natural gas exports from the United States, depend heavily on the uncertain outlook for international unconventional natural gas production. Recent assessments in countries such as China, India, Ukraine, and Poland indicate that each country has significant domestic shale gas reserves. If these reserves are developed effectively—which is likely to be difficult in the short-term due to a lack of infrastructure, physical capacity, and human capacity—many of these countries would dramatically decrease their import dependence, with negative implications for existing and newcomer LNG exporters. ¶ Detailed analysis of the foregoing factors suggests that the exportation of liquefied natural gas from the United States is logistically feasible. Based on current knowledge, the domestic U.S. natural gas resource base is large enough to accommodate the potential increased demand for natural gas from the electricity sector, the industrial sector, the residential and commercial sectors, the transportation sector, and exporters of LNG. Other obstacles to production, including infrastructure, investment, environmental concerns, and human capacity, are likely to be surmountable. Moreover, the current and projected supply and demand fundamentals of the international LNG market are conducive to competitive U.S.-sourced LNG. ¶ **While LNG exports may be practically feasible,** **they will be** **subject to approval by policy makers** **if they are to happen**. **In making a determination on the advisability of exports,** **the federal government will focus on the likely implications of LNG exports**: **i.e. whether LNG exports are in the “public interest**.” **The extent of the domestic implications is** largely **dependent upon the price impact of exports on domestic natural gas prices**. While it is clear that domestic natural gas prices will increase if natural gas is exported, most existing analyses indicate that the implications of this price increase are likely to be modest. Natural gas producers will likely anticipate future demand from LNG exports and will increase production accordingly, limiting price spikes. The impact on the domestic industrial sector is likely to be marginal: to the extent that LNG exports raise domestic gas prices above the level at which they would have been in the absence of such exports, they will negatively affect the competitiveness of U.S. industry relative to international competitors. However, the competitiveness of natural-gas intensive U.S. companies relative to their counterparts is likely to remain strong, given the large differential between projected U.S. gas prices and oil prices, which are the basis for industrial feedstock by competitor countries. Further, LNG exports are likely to stimulate domestic gas production, potentially resulting in greater production of natural gas liquids such as ethane, a valuable feedstock for industrial consumers. LNG exports are also unlikely to result in an increase in price volatility. The volume of LNG exports is capped by the capacity limitations of liquefaction terminals. If liquefaction terminals are running at close to full capacity, an increase in international demand will do little to affect domestic demand for —and therefore domestic prices of —natural gas. ¶

#### Increases the risk of accidents – outweighs nuclear war

Lovin and Lovin, ‘1 – Amory B. Lovin, Chief Scientist of the Rocky Mountain Institute, and L. Hunter Lovin, President – National Capitalism and Co-Founder – Rocky Mountain Institute, “Brittle Power: Energy Strategy for National Security”, 2001, www.rmi.org%2Fcms%2FDownload.aspx%3Fid%3D5084%26file%3DBrittlePower3PtCombo.pdf%26title%3DBrit

About nine percent of such a tankerload of LNG will probably, if spilled onto water, boil to gas in about five minutes. It does not matter how cold the water is; it will be at least two hundred twenty-eight Fahrenheit degrees hotter than the LNG, which it will therefore cause to boil violently.) The resulting gas, however, will be so cold that it will still be denser than air. It will therefore flow in a cloud or plume along the surface until it reaches an ignition source. Such a plume might extend at least three miles downwind from a large tanker spill within ten to twenty minutes.4 It might ultimately reach much farther—perhaps six to twelve miles.5 If not ignited, the gas is asphyxiating. If ignited, it will burn to completion with a turbulent diffusion flame reminiscent of the 1937 Hindenberg disaster but about a hundred times as big. Such a fireball would burn everything within it, and by its radiant heat would cause third-degree burns and start fires a mile or two away.6 An LNG fireball can blow through a city, creating “a very large number of ignitions and explosions across a wide area. No present or foreseeable equipment can put out a very large [LNG]... fire.”7 The energy content of a single standard LNG tanker (one hundred twenty-+five thousand cubic meters) is equivalent to seven-tenths of a megaton of TNT, or about fifty-five Hiroshima bombs.

### 1NC – DA 2

#### Hardline stance against Cuba now – Venezuelan ties

Marc Caputo 2/25/14 “Analysis: Venezuela’s violence, Cuba’s ‘farce,’ and Marco Rubio’s milestone speech” http://www.miamiherald.com/2014/02/25/3958565/analysis-venezuelas-violence-cubas.html//DOBP

The U.S. senator from Florida had listened patiently to Sen. Tom Harkin of Iowa speak favorably about his recent trip to Cuba, all the while omitting any real references to the oppression of the totalitarian government there.

To Rubio, like many Cuban exiles and their descendants, it was too much to bear. “Let me tell you what the Cubans are really good at,” Rubio said Monday when he took to the Senate floor. “What they are really good at is repression ... They have exported repression in real time, in our hemisphere, right now.” This wasn’t some Cold War-era fulmination about Castro’s regime. Rubio’s speech was about current events: the protests in Venezuela, the Maduro government and the ties it has with the Castros, who repress their own people and helped inspire the suppression in Caracas. Venezuela is becoming the new Cuba. For 14 minutes and 16 seconds, Rubio gave the best oration of his political career, speaking largely off the top of his head and with only the barest of notes. Rubio sometimes dripped with sarcasm or simmered with indignation as he made the case to Congress that the United States needs to continue Cuba sanctions and punish Venezuela.

Over the next few days, Rubio said, he’d propose sanctions “we should be pursuing against the individuals responsible for these atrocities.” Rubio said it’s “shameful” that the United States and Congress haven’t done more to denounce or punish the government-sponsored violence in Venezuela. As an aide flipped through over-sized photos of Venezuelan protests, Rubio ticked off the struggles of living in the country, the horrors of its citizens dying and being jailed at the hands of its government. “This gentleman here is the former mayor of a municipality in Caracas. His name is Leopoldo Lopez,” Rubio said. “And this is the National Guard of Venezuela pulling him into an armored truck last week. You know why? Because he’s protesting against the government.” Then came the next photograph, a picture of a young woman being driven off on a motorcycle. “This is Genesis Carmona,” Rubio said. “They shot her in the head. She died last week.” Rubio continued: “Let me show you the next slide. Here’s a demonstrator detained by police. Look how they drag him through the streets. This is in Caracas, Venezuela.” Rubio also took issue with a recent survey, cited by Harkin, that indicated a thaw in American and Floridian perceptions of relations with Cuba. “He cited a poll, ‘More Americans want normal relations with Cuba.’ So do I — a democratic and free Cuba,” Rubio said. “But you want us to reach out and develop friendly relationships with a serial violator of human rights, who supports what’s going on in Venezuela and every other atrocity on the planet? On issue after issue, they are always on the side of the tyrants. Look it up,” Rubio said. “And this is who we should be opening up to? Why don’t they change? Why doesn’t the Cuban government change? Why doesn’t the Venezuelan government change?” Rubio said that, just as the United States has sanctions against North Korea and Syria — allies of Cuba — it should keep pressuring the governments in Havana and Caracas. And he disagreed with the notion that the embargo hurts the Cuban people. Instead, he said, it’s the totalitarian-socialist government that’s to blame for problems in Cuba — As well as in “oil-rich” Venezuela.

“We don’t have an embargo against Venezuela,” he said. “They have a shortage of toilet paper and tooth paste. Why? Because they are incompetent. Because communism doesn’t work. They look more and more like Cuba economically and politically every single day.” Rubio repeated that last line elsewhere in his speech: “They look more and more like Cuba economically and politically every single day. What’s the first thing the Venezuelan government did when these broke out? They shut off access to Twitter and Facebook and the Internet. They ran CNN out of there. They closed down the only Colombian station. Years before, they had closed down all the independent media outlets that criticized the government.“Where did they learn that from? From Cuba. And yet we have to listen to what a paradise Cuba is.” Rubio also said members of Congress who visit Cuba should ask the regime tough questions about dissidents and protestors. “I would suggest to my colleagues, the next time they go to Cuba, ask to meet with the Ladies in White. Ask to meet with the Yoani Sanchez. Ask to meet with the dissidents and the human rights activists that are jailed and repressed and exiled,” Rubio said. “Ask to meet with them. I bet you’re going to hear something very different than what you got from your hosts on your last trip to the wonderful Cuba, this extraordinary socialist paradise. Because it’s a joke. It’s a farce.”

#### The plan is surrender – it emboldens global regimes and collapses US credibility

Brooks ‘9

Senior fellow for National Security Affairs in the Davis Institute at The Heritage Foundation. (Peter – Heritage foundation “Keep the Embargo, O“ April 16, 2009 http://www.heritage.org/research/commentary/2009/04/keep-the-embargo-o)//EB

IN another outreach to roguish regimes, the Obama administration on Monday announced the easing of some restrictions on Cuba.

Team Bam hopes that a new face in the White House will heal old wounds. Fat chance.

Sure, it’s fine to allow separated families to see each other more than once every three years — even though Cubanos aren’t allowed to visit America. And permitting gifts to Cuban relatives could ease unnecessary poverty — even though the regime will siphon off an estimated 20 percent of the money sent there. In the end, though, it’s still Fidel Castro and his brother Raul who’ll decide whether there’ll be a thaw in ties with the United States — or not. And in usual Castro-style, Fidel himself stood defiant in response to the White House proclamation, barely recognizing the US policy shift. Instead, and predictably, Fidel demanded an end to el bloqueo (the blockade) — without any promises of change for the people who labor under the regime’s hard-line policies. So much for the theory that if we’re nice to them, they’ll be nice to us.

Many are concerned that the lack of love from Havana will lead Washington to make even more unilateral concessions to create an opening with Fidel and the gang. Of course, the big empanada is the US economic embargo against Cuba, in place since 1962, which undoubtedly is the thing Havana most wants done away with — without any concessions on Cuba’s part, of course. Lifting the embargo won’t normalize relations, but instead legitimize — and wave the white flag to — Fidel’s 50-year fight against the Yanquis, further lionizing the dictator and encouraging the Latin American Left.

Because the economy is nationalized, trade will pour plenty of cash into the Cuban national coffers — allowing Havana to suppress dissent at home and bolster its communist agenda abroad.

The last thing we should do is to fill the pockets of a regime that’ll use those profits to keep a jackboot on the neck of the Cuban people. The political and human-rights situation in Cuba is grim enough already. The police state controls the lives of 11 million Cubans in what has become an island prison. The people enjoy none of the basic civil liberties — no freedom of speech, press, assembly or association.Security types monitor foreign journalists, restrict Internet access and foreign news and censor the domestic media. The regime holds more than 200 political dissidents in jails that rats won’t live in.We also don’t need a pumped-up Cuba that could become a serious menace to US interests in Latin America, the Caribbean — or beyond. (The likes of China, Russia and Iran might also look to partner with a revitalized Cuba.)With an influx of resources, the Cuban regime would surely team up with the rulers of nations like Venezuela, Nicaragua and Bolivia to advance socialism and anti-Americanism in the Western Hemisphere.The embargo has stifled Havana’s ambitions ever since the Castros lost their Soviet sponsorship in the early 1990s. Anyone noticed the lack of trouble Cuba has caused internationally since then? Contrast that with the 1980s some time.Regrettably, 110 years after independence from Spain (courtesy of Uncle Sam), Cuba still isn’t free. Instead of utopia, it has become a dystopia at the hands of the Castro brothers.The US embargo remains a matter of principle — and an appropriate response to Cuba’s brutal repression of its people. Giving in to evil only begets more of it. Haven’t we learned that yet?Until we see progress in loosing the Cuban people from the yoke of the communist regime, we should hold firm onto the leverage the embargo provides.

#### That kills heg

APSA, 09 - American Political Science Association (Sept., “U.S. Standing in the World: Causes, Consequences, and the Future”, Task Force Report)

As at the regional level, U.S. standing on the global stage appears susceptible to both vicious and virtuous cycles resulting in valleys and peaks, declines and advances. As credibility and esteem decline, the United States may be less able to lead and accomplish its policy goals. Others will be less willing to follow a U.S. lead or defer to U.S. opinions because they no longer believe the United States will get the job done, honor promises, or offer a desirable model to emulate. This, in turn, may further diminish U.S. standing. We see some evidence of this in the most recent period of diminished U.S. standing in global institutions. Logically, however, the converse ought to be true as well. As the United States is perceived to honor promises and show interest in multilateral leadership, its standing may be expected to increase, which may make expanded leadership, increased authority and cooperation possible. We suspect, however, that is harder to recover standing than to lose it.

#### The alternative is regional blocs and great power war

**Zhang et al., Carnegie Endowment researcher, 2011**

(Yuhan, “America’s decline: A harbinger of conflict and rivalry”, 1-22, <http://www.eastasiaforum.org/2011/01/22/americas-decline-a-harbinger-of-conflict-and-rivalry/>)

Over the past two decades, no other state has had the ability to seriously challenge the US military. Under these circumstances, motivated by both opportunity and fear, many actors have bandwagoned with US hegemony and accepted a subordinate role. Canada, most of Western Europe, India, Japan, South Korea, Australia, Singapore and the Philippines have all joined the US, creating a status quo that has tended to mute great power conflicts. However, as the hegemony that drew these powers together withers, so will the pulling power behind the US alliance. The result will be an international order where power is more diffuse, American interests and influence can be more readily challenged, and conflicts or wars may be harder to avoid. As history attests, power decline and redistribution result in military confrontation. For example, in the late 19th century America’s emergence as a regional power saw it launch its first overseas war of conquest towards Spain. By the turn of the 20th century, accompanying the increase in US power and waning of British power, the American Navy had begun to challenge the notion that Britain ‘rules the waves.’ Such a notion would eventually see the US attain the status of sole guardians of the Western Hemisphere’s security to become the order-creating Leviathan shaping the international system with democracy and rule of law. Defining this US-centred system are three key characteristics: enforcement of property rights, constraints on the actions of powerful individuals and groups and some degree of equal opportunities for broad segments of society. As a result of such political stability, free markets, liberal trade and flexible financial mechanisms have appeared. And, with this, many countries have sought opportunities to enter this system, proliferating stable and cooperative relations. However, what will happen to these advances as America’s influence declines? Given that America’s authority, although sullied at times, has benefited people across much of Latin America, Central and Eastern Europe, the Balkans, as well as parts of Africa and, quite extensively, Asia, the answer to this question could affect global society in a profoundly detrimental way. Public imagination and academia have anticipated that a post-hegemonic world would return to the problems of the 1930s: regional blocs, trade conflicts and strategic rivalry. Furthermore, multilateral institutions such as the IMF, the World Bank or the WTO might give way to regional organisations. For example, Europe and East Asia would each step forward to fill the vacuum left by Washington’s withering leadership to pursue their own visions of regional political and economic orders. Free markets would become more politicised — and, well, less free — and major powers would compete for supremacy. Additionally, such power plays have historically possessed a zero-sum element. In the late 1960s and 1970s, US economic power declined relative to the rise of the Japanese and Western European economies, with the US dollar also becoming less attractive. And, as American power eroded, so did international regimes (such as the Bretton Woods System in 1973). A world without American hegemony is one where great power wars re-emerge, the liberal international system is supplanted by an authoritarian one, and trade protectionism devolves into restrictive, anti-globalisation barriers. This, at least, is one possibility we can forecast in a future that will inevitably be devoid of unrivalled US primacy.

### 1NC – T

#### A. Interpretation – Removing sanctions is a form of appeasement

Stern 6 (Martin, University of Maryland Graduate, Debunking detente, 11/27/06, http://www.diamondbackonline.com/article\_56223e79-7009-56a3-8afe-5d08bfff6e08.html)

Appeasement is defined as "granting concessions to potential enemies to maintain peace." Giving Iran international legitimacy and removing sanctions would have maintained peace with a potential enemy without changing the undemocratic practices of the enemy. If this isn't appeasement, I don't know how better to define the word.

#### Engagement and appeasement are distinct

Resnick 1 (Evan, Assistant Professor and coordinator of the United States Programme at RSIS, “Defining Engagement,” Journal of International Affairs, 0022197X, Spring2001, Vol. 54, Issue 2, <http://web.ebscohost.com.turing.library.northwestern.edu/ehost/detail?sid=1b56e6b4-ade2-4052-9114-7d107fdbd019%40sessionmgr12&vid=2&hid=24&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=mth&AN=4437301>)

Thus, a rigid conceptual distinction can be drawn between engagement and appeasement. Whereas both policies are positive sanctions--insofar as they add to the power and prestige of the target state--engagement does so in a less direct and less militarized fashion than appeasement. In addition, engagement differs from appeasement by establishing an increasingly interdependent relationship between the sender and the target state. At any juncture, the sender state can, in theory, abrogate such a relationship at some (ideally prohibitive) cost to the target state.(n34) Appeasement, on the other hand,does not involve the establishment of contacts or interdependence between the appeaser and the appeased. Territory and/or a sphere of influencearemerelytransferred by one party to the other either unconditionally or in exchange for certain concessions on the part of the target state.

#### B. Violation – they remove restrictions – that’s appeasement

#### C. Voting issue

#### 1. Limits – infinite amount of restrictions the aff can remove – explodes neg research burden

#### 2. Ground – Lose spending links based off of positive engagement

### Framing

#### Nuclear war causes extinction – here’s the most qualified, recent evidence

Starr ’10 – director of the University of Missouri's Clinical Laboratory Science Program

[Steven, “The climatic consequences of nuclear war”, March 12, http://www.thebulletin.org/web-edition/op-eds/the-climatic-consequences-of-nuclear-war]

This isn't a question to be avoided. Recent scientific studies PDF have found that a war fought with the deployed U.S. and Russian nuclear arsenals would leave Earth virtually uninhabitable. In fact, NASA computer models have shown that even a "successful" first strike by Washington or Moscow would inflict catastrophic environmental damage that would make agriculture impossible and cause mass starvation. Similarly, in the January Scientific American, Alan Robock and Brian Toon, the foremost experts on the climatic impact of nuclear war, warn that the environmental consequences of a "regional" nuclear war would cause a global famine that could kill one billion people. Their article, "Local Nuclear War: Global Suffering," PDF predicts that the detonation of 100 15-kiloton nuclear weapons **in Indian and Pakistani megacities** would create urban firestorms that would loft 5 million tons of thick, black smoke above cloud level. (This smoke would engulf the entire planet within 10 days.) Because the smoke couldn't be rained out, it would remain in the stratosphere for at least a decade and have profoundly disruptive effects. Specifically, the smoke layer would block sunlight, heat the upper atmosphere, and cause massive destruction of protective stratospheric ozone. A 2008 study PDF calculated ozone losses (after the described conflict) of 25-45 percent above mid-latitudes and 50-70 percent above northern high latitudes persisting for five years, with substantial losses continuing for another five years. Such severe ozone depletion would allow intense levels of harmful ultraviolet light to reach Earth's surface--even with the stratospheric smoke layer in place. Beneath the smoke, the loss of warming sunlight would produce average surface temperatures colder than any experienced in the last 1,000 years. There would be a corresponding shortening of growing seasons by up to 30 days and significant reductions in average rainfall in many areas, with a 40-percent decrease of precipitation in the Asian monsoon region. Basically, the Earth's surface would become cold, dark, and dry. Humans have had some experience with this sort of deadly global climate change. In 1815, the largest volcanic eruption in recorded history took place in Indonesia. Mount Tambora exploded and created a stratospheric layer of sulfuric acid droplets that blocked sunlight from reaching Earth. During the following year, which was known as "The Year without Summer," the northeastern United States experienced snowstorms in June and debilitating frosts every month of the year. In an earlier study PDF, Robock, Toon, and their colleagues predicted that the decreases in average surface temperatures following the nuclear conflict described above would be 2-3 times colder than those experienced in 1816 and that the black soot produced by subsequent nuclear firestorms would remain in the stratosphere five times longer than the acid clouds from volcanic eruptions. In other words, 10 years after a regional nuclear war, Earth's average surface temperatures would still be as cold, or colder, than they were in 1816. Most likely, the long-lived smoke layer would produce a "decade without a summer." Here it's important to point out that the 100 Hiroshima-size weapons detonated in Robock and Toon's regional war scenario contain less than 1 percent of the combined explosive power in the 7,000 or so operational and deployed nuclear weapons the United States and Russia possess. If even one-half of these weapons were detonated in urban areas, Robock and Toon have predicted that the resulting nuclear darkness would cause daily minimum temperatures to fall below freezing in the largest agricultural areas of the Northern Hemisphere for a period of between one to three years. Meanwhile, average global surface temperatures would become colder than those experienced 18,000 years ago at the height of the last Ice Age. Amazingly, however, no follow-up studies have been initiated to further evaluate the decreases in temperature, precipitation, or ozone depletion predicted to arise from either regional or strategic nuclear war. Large studies were conducted in the 1980s on "nuclear winter" by the U.S. National Academy of Sciences, the World Meteorological Organization, and the International Council for Science's Scientific Committee on Problems of the Environment. But given that Robock and Toon's new research has found that these early studies significantly underestimated the climatic and environmental consequences of nuclear war, wouldn't it make sense for such groups to now revisit the subject? At the very least, Washington and Moscow, with 95 percent of the world's nuclear weapons, should be required to investigate the environmental and climatic consequences from a nuclear war created by their nuclear arsenals. Moreover, in the United States, there appears to be a legal basis to force the Defense Department to evaluate the likely consequences of its nuclear arsenal. According to the EPA's website, "The National Environmental Policy Act [NEPA] requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. To meet NEPA requirements, federal agencies [must] prepare a detailed statement known as an Environmental Impact Statement." If that's the case, why not require Defense to create an Environmental Impact Statement for the more than 1,000 U.S. strategic nuclear weapons now on high-alert? To date, the discussion of a nuclear-weapons-free world has included no mention of the environmental consequences of nuclear war. I fear that without such a dialogue, the debate lacks the sense of urgency required to change the nuclear status quo. That's why I believe that a wake-up call from the scientific community is seriously needed. Regardless of how "safe from use" U.S. and Russian nuclear weapons are considered to be, they still could wipe out humanity. Thus, the recognition by Washington that its nuclear arsenal, if used in conflict, will make the whole world--including all of its territory--uninhabitable, is long overdue.

#### Deterrence doesn’t check

Krieger 2009 **–** professor of politics (David, September 4th, “Still loving the Bomb After All these Years” Nuclear Age Peace Foundation <https://www.wagingpeace.org/articles/2009/09/04_krieger_newsweek_response.php?krieger>)Tepperman builds upon Waltz’s logic, and concludes “that all states are rational,” even though their leaders may have a lot of bad qualities, including being “stupid, petty, venal, even evil….”  He asks us to trust that rationality will always prevail when there is a risk of nuclear retaliation, because these weapons make “the costs of war obvious, inevitable, and unacceptable.”  Actually, he is asking us to do more than trust in the rationality of leaders; he is asking us to gamble the future on this proposition.  “The iron logic of deterrence and mutually assured destruction is so compelling,” Tepperman argues, “it’s led to what’s known as the nuclear peace….”  But if this is a peace worthy of the name, which it isn’t, it certainly is not one on which to risk the future of civilization.  One irrational leader with control over a nuclear arsenal could start a nuclear conflagration, resulting in a global Hiroshima. Tepperman celebrates “the iron logic of deterrence,” but deterrence is a theory that is far from rooted in “iron logic.”  It is a theory based upon threats that must be effectively communicated and believed.  Leaders of Country A with nuclear weapons must communicate to other countries (B, C, etc.) the conditions under which A will retaliate with nuclear weapons.  The leaders of the other countries must understand and believe the threat from Country A will, in fact, be carried out.  The longer that nuclear weapons are not used, the more other countries may come to believe that they can challenge Country A with impunity from nuclear retaliation.  The more that Country A bullies other countries, the greater the incentive for these countries to develop their own nuclear arsenals.  Deterrence is unstable and therefore precarious. Most of the countries in the world reject the argument, made most prominently by Kenneth Waltz, that the spread of nuclear weapons makes the world safer.  These countries joined together in the Nuclear Non-Proliferation Treaty (NPT) to prevent the spread of nuclear weapons, but they never agreed to maintain indefinitely a system of nuclear apartheid in which some states possess nuclear weapons and others are prohibited from doing so.  The principal bargain of the NPT requires the five NPT nuclear weapons states (US, Russia, UK, France and China) to engage in good faith negotiations for nuclear disarmament, and the International Court of Justice interpreted this to mean complete nuclear disarmament in all its aspects.  Tepperman finds that when viewed from his “nuclear optimist” perspective, “nuclear weapons start to seem a lot less frightening.”  “Nuclear peace,” he tells us, “rests on a scary bargain: you accept a small chance that something extremely bad will happen in exchange for a much bigger chance that something very bad – conventional war – won’t happen.”  But the “extremely bad” thing he asks us to accept is the end of the human species.  Yes, that would be serious.  He also doesn’t make the case that in a world without nuclear weapons, the prospects of conventional war would increase dramatically.  After all, it is only an unproven supposition that nuclear weapons have prevented wars, or would do so in the future.  We have certainly come far too close to the precipice of catastrophic nuclear war. As an ultimate celebration of the faulty logic of deterrence, Tepperman calls for providing any nuclear weapons state with a “survivable second strike option.”  Thus, he not only favors nuclear weapons, but finds the security of these weapons to trump human security.   Presumably he would have President Obama providing new and secure nuclear weapons to North Korea, Pakistan and any other nuclear weapons states that come along so that they will feel secure enough not to use their weapons in a first-strike attack.  Do we really want to bet the human future that Kim Jong-Il and his successors are more rational than Mr. Tepperman?

#### Interdependece and MAD fail – nanotechnology

Treder 5 (Mike Treder is the executive director of the Center for Responsible Nanotechnology. “War, Interdependence, and Nanotechnology.” FutureBrief 2005. Web.) <http://www.futurebrief.com/miketrederwar002.asp> EW

Today, more people live in freedom than at any time in history. Although poverty is still a serious worldwide problem, more people are healthier and better fed than ever before. And despite regional wars and terrorist attacks (which have beset civilization for centuries), we have managed to avoid destroying ourselves with full-scale thermonuclear war. But looming just over the horizon is a grave threat. It is nanotechnology. From the dawn of the nuclear age until the present day, we have relied on two mechanisms to protect us from World War III: the doctrine of Mutually Assured Destruction (MAD), and the growing interdependence of nations. However, in the very near future we may not be able to count on these controls. The tenuous balance of MAD and the worldwide network of commercial trade are both threatened by the rise of advanced nanotechnology.

#### The taboo solves nothing

**Gray, Reading international politics professor, 1999**

(Colin, “To Confuse Ourselves: Nuclear Fallacies”, <http://fds.oup.com/www.oup.co.uk/pdf/0-19-829624-X.pdf>, ldg)

There is much to be said in praise of the taboo hypothesis. Unfortunately, the proposition that an international political taboo against the'use' (i.e. the threat or the employment) of nuclear weapons has coalesced, is coalescing, or might coalesce, has about as much validity as the proposition that major war is, is becoming, or soon will be, obsolete.59 In the decent opinion of truly civilized folk the use of nuclear weapons (let alone chemical or, heaven forbid, biological weapons) may well be far beyond the pale of acceptable options for statecraft; that, however, can never be the relevant issue. Most probably there is today extant a political taboo against nuclear weapons, per se, and certainly against the use of nuclear weapons, which is authoritative for most people and most polities. If ruling notions for all of world politics were determined by a crude head, or political unit, count, then indeed it would be true to point to the power and influence of a, or the, nuclear taboo. The reality of world politics in this second nuclear age is, alas, far removed from that just fantasized. Self-helping security communities cannot be influenced very usefully by a nuclear taboo, especially when the principal articulators of this taboo are citizens of contentedly and prospectively permanently nuclear-armed states. To put this concept in some context, there are social (and legal) taboos against incest (everywhere) and spitting in public (in some societies), but in neither of these cases are taboos able to cope with the truly hard cases ('necessity knows no proscriptive norms' to misquote Theobald von Bethmann Hollweg60). The idea that embattled polities with the most serious of security problems could be influenced conclusively by a Westernled nuclear taboo is close to absurd. Less absurd is the proposition that the somatization of nuclear arms that is largely implicit in the global nonproliferation regime which is capped by the NPT, might help inhibit the pace of further nuclear proliferation. A general delegitimization and 'deglorification' of nuclear arms should facilitate the efforts of those who seek to impede the path of would-be nuclear proliferants. That granted, the superordinate difficulty remains that supply-side anti-proliferation measures cannot succeed, unless success is claimed merely for delay. The central problem with the hypothesis of a nuclear taboo is that it endeavours to deny needs both of the logic of policy and the grammar of strategy, to resort to Clausewitzian phrasing.61 American adherents to the hypothesis of the importance of a nuclear taboo should explain why this taboo can carry authority, given that it is flatly and robustly contradicted in key senses by the strategic beliefs and policies of eight nuclear-weapon states. There is a nuclear taboo which stigmatizes nuclear threat or employment. But policymakers in the eight nuclear weapon states do not equate such stigmatization— or singularization, for a less pejorative rendering—with unusability. Nuclear weapons may be weapons of last resort—for us, at least—but last resort should not be confused with 'no resort1. More to the point, perhaps, is the question of how a nuclear taboo possibly can contribute usefully ciegrat to world peace with security, when this second nuclear age provides a buyer's market for fissile material, skills in nuclear-weapon design and industrial fabrication, and certainly for ballistic and air-breathing means of nuclear-weapon delivery? To show the absurdity of the hypothesis of a nuclear taboo is akin to demonstrating the folly in the United Nations. Neither critique really is fair, because neither subject can command the merit in its destiny. Practical demolition of the value in the hypothesis of a nuclear taboo and thoroughgoing criticism of the United Nations ultimately are futile exercises, because both are shooting at straw targets. The United Nations cannot reform until its members reform their approaches to world politics. Similarly, a nuclear taboo cannot assume solidly reliable significance until political-military conditions are permissive, in which case it will not be needed. It is just naive to believe that nuclear arms, or other WMD, can be rendered morally unfashionable to a point of policy insignificance.

#### Yes miscalc

Ferguson 2008 - sr. fellow @ the Hoover Institute and professor of History @ Harvard (Niall, Hoover Digest no1 47-53 Wint 2008)

The risk of a major geopolitical crisis in 2007 is certainly lower than it was in 1914. Yet it is not so low as to lie altogether beyond the realm of probability. The escalation of violence in the Middle East as Iraq disintegrates and Iran presses on with its nuclear program is close to being a certainty, as are the growing insecurity of Israel and the impossibility of any meaningful U.S. exit from the region. All may be harmonious between the United States and China today, yet the potential for tension over trade and exchange rates has unquestionably increased since the Democrats gained control of Congress. Nor should we forget about security flashpoints such as the independence of Taiwan, the threat of North Korea, and the nonnuclear status of Japan. To consign political risk to the realm of uncertainty seems almost as rash today as it was in the years leading up the First World War. Anglo-German economic commercial ties reached a peak in 1914, but geopolitics trumped economics. It often does.

### Transition

#### Status quo selective engagement spurs gradual reforms – speeding up engagement risks Cuban collapse and US intervention

Feinberg, 11/22 – Richard E. Feinberg is a professor at the UC San Diego and served as the Latin American expert on President Bill Clinton’s National Security Council. His most recent publication is “Soft Landing in Cuba? Emerging Entrepreneurs and Middle Classes”, (“Deciphering diplo-speak on Cuba” Miami Herald, <http://www.miamiherald.com/2013/11/21/3770099_p2/deciphering-diplo-speak-on-cuba.html>)

With good reason, the administration believes it can take some credit for some of the positive changes underway in Cuba — especially the significant growth of the private sector and the allied middle classes. As a result of earlier administration decisions to selectively loosen U.S. economic sanctions against Cuba, U.S. visitor dollars and remittances by Cuban-Americans are fueling the emerging entrepreneurs on the island. Kerry then went on to criticize the non-democratic nature of the Castro regime — hardly news, yet the thrust of much of the media coverage of the speech. Phrases no doubt intended to please the anti-Castro Cuban-Americans in South Florida and their allies on Capitol Hill. What the media missed was an appreciation for Kerry’s careful choice of words. Kerry labeled the Cuban government “authoritarian,” a much softer term than the traditional “totalitarian” or “communist.” “Authoritarian” puts Cuba in the same camp as, say, the Russia of Vladimir Putin or the Venezuela of Nicolás Maduro and Hugo Chávez — regimes we definitely don’t like but with which we do business every day. Kerry then called on the Cuban government to “embrace a broader political reform agenda: and if more does not change soon, it is clear that the 21st century will continue, unfortunately, to leave the Cuban people behind.” But unlike the U.S. embargo legislation, the secretary of State did not call for the immediate resignation of President Raúl Castro. Rather, “more should change.” Kerry seemed to be suggesting that the U.S. would accept — perhaps even prefer — a more gradual transition rather than sudden upheaval. For the United States, gradual change in Cuba entails fewer risks. Sudden regime transformation might carry a superficial appeal, but it could entail political instability and unpredictable violence, social disarray opening space for international criminal syndicates, and even irresistible pressure for international intervention to quell civil strife and halt a mass exodus of refugees. Unguided regime collapse in Havana could become a monumental headache for Washington. Many in the administration understand that the best strategy for promoting gradual political liberalization in Cuba is to help build an independent private sector and modern middle classes that aspire to greater individual autonomy, economic opportunity, and material prosperity — and who will seek a Cuba that is more “normal,” more like other societies in the Caribbean basin where individuals have access to middle-class consumption patterns and can pursue their talents and careers independent of state control. Neither Obama nor Kerry have told us just what new initiatives they may be contemplating, as they seek to build on their initial successes in nudging Cuba toward more pragmatic diplomacy and more forward-looking economic reforms. But we should read in their diplo-speak that they are signaling new approaches: rhetoric and policies that recognize that Cuba is changing before our eyes, that favor selective engagement over blanket sanctions, and that appreciate that gradual economic change in Cuba today is the more realistic path toward political evolution tomorrow.

#### Rapid, unstable transition causes US intervention and incapacitates crisis management – causes global conflict escalation

Gorrell, 5

(Tim, Lieutenant Colonel, “CUBA: THE NEXT UNANTICIPATED ANTICIPATED STRATEGIC CRISIS?” 3/18, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA433074)

Regardless of the succession, under the current U.S. policy, Cuba’s problems of a post Castro transformation only worsen. In addition to Cubans on the island, there will be those in exile who will return claiming authority. And there are remnants of the dissident community within Cuba who will attempt to exercise similar authority. A power vacuum or absence of order will create the conditions for instability and civil war. Whether Raul or another successor from within the current government can hold power is debatable. However, that individual will nonetheless extend the current policies for an indefinite period, which will only compound the Cuban situation. When Cuba finally collapses anarchy is a strong possibility if the U.S. maintains the “wait and see” approach. The U.S. then must deal with an unstable country 90 miles off its coast. In the midst of this chaos, thousands will flee the island. During the Mariel boatlift in 1980 125,000 fled the island.26 Many were criminals; this time the number could be several hundred thousand fleeing to the U.S., creating a refugee crisis.¶ Equally important, by adhering to a negative containment policy, the U.S. may be creating its next series of transnational criminal problems. Cuba is along the axis of the drug-trafficking flow into the U.S. from Columbia. The Castro government as a matter of policy does not support the drug trade. In fact, Cuba’s actions have shown that its stance on drugs is more than hollow rhetoric as indicated by its increasing seizure of drugs – 7.5 tons in 1995, 8.8 tons in 1999, and 13 tons in 2000.27 While there may be individuals within the government and outside who engage in drug trafficking and a percentage of drugs entering the U.S. may pass through Cuba, the Cuban government is not the path of least resistance for the flow of drugs. If there were no Cuban restraints, the flow of drugs to the U.S. could be greatly facilitated by a Cuba base of operation and accelerate considerably.¶ In the midst of an unstable Cuba, the opportunity for radical fundamentalist groups to operate in the region increases. If these groups can export terrorist activity from Cuba to the U.S. or throughout the hemisphere then the war against this extremism gets more complicated. Such activity could increase direct attacks and disrupt the economies, threatening the stability of the fragile democracies that are budding throughout the region. In light of a failed state in the region, the U.S. may be forced to deploy military forces to Cuba, creating the conditions for another insurgency. The ramifications of this action could very well fuel greater anti-American sentiment throughout the Americas. A proactive policy now can mitigate these potential future problems.¶ U.S. domestic political support is also turning against the current negative policy. The Cuban American population in the U.S. totals 1,241,685 or 3.5% of the population.28 Most of these exiles reside in Florida; their influence has been a factor in determining the margin of victory in the past two presidential elections. But this election strategy may be flawed, because recent polls of Cuban Americans reflect a decline for President Bush based on his policy crackdown. There is a clear softening in the Cuban-American community with regard to sanctions. Younger Cuban Americans do not necessarily subscribe to the hard-line approach. These changes signal an opportunity for a new approach to U.S.-Cuban relations. (Table 1)¶ The time has come to look realistically at the Cuban issue. Castro will rule until he dies. The only issue is what happens then? The U.S. can little afford to be distracted by a failed state 90 miles off its coast. The administration, given the present state of world affairs, does not have the luxury or the resources to pursue the traditional American model of crisis management. The President and other government and military leaders have warned that the GWOT will be long and protracted. These warnings were sounded when the administration did not anticipate operations in Iraq consuming so many military, diplomatic and economic resources. There is justifiable concern that Africa and the Caucasus region are potential hot spots for terrorist activity, so these areas should be secure. North Korea will continue to be an unpredictable crisis in waiting. We also cannot ignore China. What if China resorts to aggression to resolve the Taiwan situation? Will the U.S. go to war over Taiwan? Additionally, Iran could conceivably be the next target for U.S. pre-emptive action. These are known and potential situations that could easily require all or many of the elements of national power to resolve. In view of such global issues, can the U.S. afford to sustain the status quo and simply let the Cuban situation play out? The U.S. is at a crossroads: should the policies of the past 40 years remain in effect with vigor? Or should the U.S. pursue a new approach to Cuba in an effort to facilitate a manageable transition to post-Castro Cuba?

#### Cuba won’t cooperate after the plan

**Starr, USC IR professor, 2013**

(Pamela, “As Cuba Changes, U.S. Policy Does Not”, May, <https://www.pacificcouncil.org/document.doc?id=539>)

Obstacles to improved bilateral relations, however, are not limited to the U.S. side of the Florida Straits. Our meetings suggested at least three reasons why, despite all their public protestations, the Cuban government may not place an end to the “blockade” at the top of their to-do list: the impact of history; the profound asymmetry of power between the two nations; and the utility of U.S. hostility in unifying the nation against threats to the survival of the Revolution. The history of U.S.-Cuban relations has taught Cuba to be very wary of the United States. Over a half century of hostility has taught each side to mistrust the other, but Cuban suspicion of the United States runs deeper. In part, this is because U.S. policy toward Cuba since 1961 has been geared toward removing the Cuban government from power, and in part it is because of U.S.-Cuban relations even before the Cuban Revolution. From the Cuban perspective, Cuba did not win its independence in 1898, as Americans learn in their history books, but in 1959 as a result of the Revolution. The U.S. goal in the first Cuban War of Independence (what we in the United States call the Spanish-American War) was the separation of Cuba from Spanish colonial domination, followed by its transformation into a de facto colony of the United States. Our Cuban hosts reminded us that the U.S.-imposed Platt Amendment to the Cuban constitution gave the United States the authority to intervene in Cuban politics virtually at will. Furthermore, bilateral economic accords allowed U.S. capital to dominate the production and refining of Cuba’s primary export product, sugar. In the words of Miguel Figueras, “Cuba remained a sugar colony, just of the United States instead of Spain.” Despite the abrogation of the Platt Amendment in 1933, the United States continued to dominate Cuban politics and economy for another quarter century. As a result, the deep poverty, inequality, corruption and repression that characterized Cuba for most of the early 20th century, and which seemed to reach their apogee in the 1950s, has come to be associated with U.S. domination of Cuba. For the delegation, it was not relevant whether or not this was a true reflection of historic fact. What was relevant is that this is how the history of our bilateral relationship is seen from the Cuban perspective and that this understanding of the past informs Cuban engagement with the United States today. Despite evident Cuban fondness for many aspects of American culture (baseball in particular stands out) and their openness to Americans who visit the island, Cubans have no desire to return to their pre-revolutionary past. And given the realities of geography and power, there seems to be a festering undercurrent of concern among Cubans that an uncontrolled opening to the United States could do just this. Indeed, several of our hosts reminded us of the historic U.S. interest, expressed by U.S. politicians from the early 19th century onward, to dominate Cuba and the parallel belief that geography made this both natural and inevitable. This understanding of the history of U.S.-Cuban relations, reinforced by the power asymmetry between our two countries, was clearly reflected in Ambassador Alzugaray’s insistence that Cuba has to be very careful in its dealings with the United States. He argued that this was because “a mistake could prove fatal for Cuba.” He further observed that the United States and Cuba have “never had normal relations” as sovereign equals, so how could we go about constructing them now? The consequence of these apprehensions appears to be an unstated policy of keeping the United States at arm’s length for now. When asked directly what the United States could do to convince Cuba of the sincerity of its desire to improve bilateral relations, the recently retired chief economist for the Ministry of Economy and Planning suggested a series of small confidence-building measures. Ambassador Alzugaray, however, insisted that small steps were not enough. Since the United States is the bigger country, it “needs to make a bigger effort.” The Cuban motivation to prevent a rapid warming in U.S.-Cuban relations also seems to reflect the regime’s historic use of U.S. hostility to unite the country against threats to the Revolution. All of the Cuban academics and former government officials with whom we spoke agreed that the economic and political “updating” of the Cuban system was as essential to the survival of Cuban socialism and its governing structure as it would be difficult to implement. They were convinced that to be successful, the early, critical phase of the reform process had to be undertaken with a Castro in power. This was because, as noted above, only a Castro has the legitimacy to convince Cubans to accept the third massive reorganization of the economy since 1959. Implicit in this opinion is the recognition that such profound economic change will produce opposition which, if not kept in check, could threaten the success of the reforms and thus the survival of the revolutionary project. In this context, U.S. hostility is apt to remain a useful if not essential tool for mitigating opposition to reform during the first and most difficult years of the process. This reading of the Cuban attitude toward the United States was reinforced by a recitation of the history of Cuban responses to U.S. attempts to reduce bilateral hostility provided by the Chief of the U.S. Mission in Cuba, John Caulfield. We were reminded that President Ford’s efforts to reduce tensions were greeted by Cuba’s decision to send troops to Angola. Carter’s efforts to normalize relations were greeted by the Mariel boatlift. Clinton’s were met by the shooting down of a Brothers to the Rescue plane. Finally, most recently, Obama efforts were greeted by the arrest and imprisonment of a USAID contractor on charges of espionage. Although Caulfield did not explicitly connect the dots, his meaning was clear: Alan Gross was likely arrested either to prevent any reduction in tensions between the two countries or because improving ties with the United States is simply not that important to Cuba. Whatever the reason for Alan Gross’ arrest, it is clear that Cuba is not preoccupied with encouraging the United States to end the embargo. Time and again we were told that economic reform is Cuba’s number one priority—the United States is not. The two countries do cooperate—on hurricane tracking, drug trafficking, migration, and preparing for potential gulf oil spills—but extending and improving bilateral cooperation is not high on the Cuban foreign policy agenda. Instead, Cuban foreign policy continues to emphasize efforts to maintain Cuban sovereignty and identity, which Ambassador Alzugaray noted have historically been most directly threatened by the United States. It is now charged with supporting the economic reform process by promoting foreign direct investment and the diversification of Cuban economic ties. In this context, the only potential role for the United States in the coming years that was mentioned by our Cuban hosts is the growing role of Cuban-American investment in Cuba.

#### Lifting the embargo destroys Cuban health care

**Garrett, CFR global health senior fellow, 2012**

(Laurie, “Castrocare in Crisis Will Lifting the Embargo Make Things Worse?”, August, ebsco)

According to Steven Ullmann of the University of Miami's Cuba Transition Project, if Washington lifts its embargo, Cuba can expect a mass exodus of health-care workers and then the creation of a domestic health system with two tiers, one private and one public. The system's lower, public tier would be at risk of complete collapse. Ullmann therefore suggests "fostering this [public] system through partnerships and enhanced compensation of personnel." He also argues that officials in both governments should "limit out-migration of scientific brainpower from the country." Properly handled, the transition could leave Cuba with a mixed health-care economy -- part public, part locally owned and private, and part outsourced and private -- that could compensate Cuban physicians, nurses, and other health-care workers enough to keep them in the country and working at least part time in the public sector. The only U.S. policy currently in place, however, encourages Cuban physicians to immigrate to the United States. In 2006, the U.S. Department of Homeland Security created a special parole program under which health-care workers who defect from Cuba are granted legal residence in the United States while they prepare for U.S. medical licensing examinations. An estimated 2,000 physicians have taken advantage of the program. Although few have managed to gain accreditation as U.S. doctors, largely due to their poor English-language skills and the stark differences between Cuban and U.S. medical training, many now work as nurses in Florida hospitals. The Castro government, meanwhile, is in a seemingly untenable position. The two greatest achievements of the Cuban Revolution -- 100 percent literacy and quality universal health care -- depend on huge streams of government spending. If Washington does eventually start to normalize relations, plugging just a few holes in the embargo wall would require vast additional spending by the Cuban government. The government would have to pay higher salaries to teachers, doctors, nurses, and technicians; strengthen the country's deteriorating infrastructure; and improve working conditions for common workers. To bolster its health-care infrastructure and create incentives for Cuban doctors to stay in the system, Cuba will have to find external support from donors, such as the United Nations and the U.S. Agency for International Development. But few sources will support Havana with funding as long as the regime restricts the travel of its citizens.In the long run, Cuba will need to develop a taxable economic base to generate government revenues -- which would mean inviting foreign investment and generating serious employment opportunities. The onus is on the Castro government to demonstrate how the regime could adapt to the easing or lifting of the U.S. embargo. Certainly, Cuban leaders already know that their health triumphs would be at risk. The United States, too, has tough responsibilities. How the U.S. government handles its side of the post-embargo transition will have profound ramifications for the people of Cuba. The United States could allow the marketplace to dictate events, resulting in thousands of talented professionals leaving Cuba and dozens of U.S. companies building a vast offshore for-profit empire of medical centers along Cuba's beaches. But it could and should temper the market's forces by enacting regulations and creating incentives that would bring a rational balance to the situation.

#### No scenario for superbugs- virulence trades off with transmissibility

**Orent, anthropologist specializing in evolutionary epidemiology, 2005**

(Wendy, “Bird bug has flown the coop”, 10-23, lexis, ldg)

Transmissibility is the ability of the virus to get out of one host and into another. In order to do so, the virus has to do something to the host to get itself shed. People act like transmissibility is just some little quirk of the genome, but what it really is, is the ability of the virus to colonize tissues, say, in the upper airways so that you sneeze or cough, and the virus is shed in large quantities. . . . You might go to work one day not feeling terribly well. You try not to sneeze all over everywhere. But flu is extraordinarily transmissible. It's these tiny, tiny particles that just fly off in a big cloud [when an infected person sneezes] and spread very easily. . . . So flu depends on keeping you out there --- going to work, you know, going to school, sitting on a bus --- if it's going to spread. It has to keep the host relatively healthy. A host can't keel over and die. Think about how ebola doesn't spread because it's so lethal that it just kills you right off. And certain forms of plague can do that, too. **They kill you very quickly so there's no chance for the bug to spread**. . . . So if transmissibility increases, the virulence should decrease, because the virus needs to keep you mobile to get you to transmit it. If you think about it, it's just Darwinian logic. **If you're too sick to transmit the disease, it dies with you**.

#### Their authors have a financial and institutional bias for alarmism

**Canberra Times, 2010**

(“Swine Flu Who Should We Trust?”, 2-6, lexis, ldg)

It's also timely in the light of a series of recent developments that might have undermined public trust in official responses to pandemic influenza. While we were marking Australia Day, Keiji Fukuda, the special adviser on pandemic influenza to the director-general of the World Health Organisation, was responding to allegations that WHO had ''faked'' a pandemic on the basis of overly close ties with companies that make influenza vaccines and treatments. The chairman of the council's health committee, Wolfgang Wodarg, a German epidemiologist turned MP, told the hearing that about $US18billion ($A20 billion) had been spent on the pandemic worldwide and that millions were vaccinated ''for no good reason''. Wodarg said, ''The definition of a pandemic was changed by the WHO last May. It was only this change of definition which made it possible to transform a run-of-the-mill flu into a worldwide pandemic and made it possible for the pharmaceutical industry to transform this opportunity into cash, under contracts which were mainly secret.'' Equally critical was Ulrich Keil, the director of the WHO Collaborating Centre for Epidemiology at the University of Munster in Germany. ''We are witnessing a gigantic misallocation of resources in terms of public health,'' he told the hearing. A day later, in Canada's Globe and Mail newspaper, two senior doctors wrote that the ''ballyhoo'' over the swine flu was due to the WHO's ''rigid adherence to pre-existing pandemic plans'' rather than to any conspiracy theory involving pharmaceutical companies, though the consequences were no less serious. Richard Schabas, a former chief medical officer of health in Ontario, and Neil Rau, an infectious diseases specialist at the University of Toronto, argued that WHO had made a subtle but important change in its definition of pandemic. They wrote, ''It dropped the key requirements that a pandemic virus had to be completely novel an antigenic shift and cause widespread and severe disease. Almost immediately, as luck had it, a virus appeared that [fitted] the new pandemic definition but not the old one.'' The Canadian doctors said the H1N1 outbreak peaked in their neck of the woods in October, and disease rates dropped off rapidly in North America. ''Any benefit from immunising healthy people had virtually vanished by mid-November, the very time when the vaccine became readily available to all,'' they wrote. ''Speculation about a serious 'third wave' is fading fast, as high population levels of immunity make it implausible.'' But instead of spreading this good news, they say, ''the current risk is exaggerated to justify ongoing futile vaccination efforts directed at the worried well''. The JAMA article on trust was written by two public health experts with a long experience in the complexities of public health communication: Heidi J. Larson, a social anthropologist from the Institute for Global Health at Imperial College in London, who has advised the WHO and many agencies, and David L. Heymann, a physician who heads the Centre on Global Health Security at the London School of Hygiene and Tropical Medicine and chairs Britain's Health Protection Agency. According to Larson and Heymann, trust in public health messages is built long before it is put to the test in situations such as the swine flu pandemic. It may be influenced by personal experiences and a variety of historical factors, including previous vaccine safety scares and the way governments have managed other public health problems. The legacy of the British minister who chomped on a hamburger while insisting there was no threat of mad cow disease in good old British beef, undoubtedly lives on. But the article omitted some critical issues that other experts use to help explain the varying degrees of trust built up by governments and official health policy organisations. These include the fact that public trust in the integrity of medicine generally not only vaccines has taken a hammering in recent years following one scandal after another surrounding poor professional conduct and ties to the pharmaceutical industry. Some of these scandals the overly enthusiastic promotions of hormone replacement therapy and the arthritis drug Vioxx are prime examples caused significant harm.Vaccines are one of the holy cows of public health. In some quarters, the suggestion that conflicts of interest might be an issue for researchers or doctors in this field is tantamount to heresy. Some people in the field believe that such issues should not even be aired in public, in case they feed the campaigns and conspiracy theories of a small but active minority who are often dismissed as ''anti-vaccinationists''. And yet it is an issue that merits serious investigation, according to a United States report which found that the major player in the fields in the US, the Centers for Disease Control and Prevention, has been doing a poor job of screening medical experts for conflicts of interest when they are providing advice on vaccines. Most of the experts who served on advisory panels to evaluate vaccines for flu and cervical cancer in 2007 had potential conflicts that were not properly managed. Much of the discussion around conflicts of interest focuses on commercial ties, but they can be more subtle. If your career is built on the back of influenza research, for example, then there is also a professional imperative to highlight the importance of your work (and the need to fund it). Another, related factor which undoubtedly has some bearing on the community's response to pandemic policy is growing awareness of ''disease mongering'' efforts by the medical industry, whether drug and device manufacturers or service providers, to **exaggerate or overstate** the impact of a whole range of health conditions and diseases, to drum up business.

### Ag

#### Lifting sanctions means agribusiness has a free hand to destroy Cuba’s sustainable ag model

Gonzalez, Seattle law professor, 2004

(Carmen, “Whither Goes Cuba? Prospects For Economic & Social Development Part Ii Of Ii: Trade Liberalization, Food Security, and the Environment: The Neoliberal Threat to Sustainable Rural Development”, Transnat'l L. & Contemp. Probs. 419, lexis)

The greatest challenge to Cuba's unique agricultural experiment is the eventual renewal of trade relations The greatest challenge to Cuba's unique agricultural experiment is the eventual renewal of trade relations with the United States and the re-integration of Cuba into the global trading system. At the behest of the United States, Cuba was excluded from major trade and financial institutions, including the IMF, the World Bank, and regional trade organizations. n357 Paradoxically, while Cuba's economic isolation produced enormous hardship, it also gave Cuba free rein to respond to the crisis of the Special Period in ways that diverged radically from the prevailing neoliberal model. One of the most significant decisions that Cuba will face after the lifting of the U.S. economic embargo is whether to join the World Bank, the [\*483] IMF, and the Inter-American Development Bank. n358 With an external debt of approximately $ 12 billion as well as an additional $ 15 billion to $ 20 billion debt to Russia, n359 Cuba might be tempted to avail itself of concessional loans and debt restructuring assistance from the IMF and the World Bank in order to normalize relations with external creditors and to obtain badly needed infusions of capital. Debt relief, however, will come at a very high price. Cuba, like other developing countries, will be compelled to implement neoliberal reforms pursuant to structural adjustment programs overseen by the World Bank and the IMF. These programs will require Cuba to maximize the revenues available for debt service by slashing social spending and vigorously promoting exports. In light of Cuba's "comparative advantage" in agricultural production, it is likely that structural adjustment will result in renewed emphasis on sugar production or on the cultivation of non-traditional agricultural exports (such as flowers, fruits, and vegetables). Cuba will be required to prioritize agricultural exports over domestic food production, to drastically reduce subsidies and social safety nets (including agricultural subsidies and food aid), to privatize state lands and government-owned enterprises, and to open its markets to foreign competition. These reforms would be enacted in conjunction with pre-existing commitments under the WTO Agreement on Agriculture to eliminate non-tariff barriers and reduce tariffs, to phase out domestic subsidies, and to eliminate export subsidies. Cuba would also be obligated under the SPS Agreement to permit the cultivation of genetically modified crops unless Cuba could present strict scientific proof that such cultivation will harm human health or the environment. Since such proof is unlikely given scientific uncertainty regarding the effects of genetically modified organisms, it is likely that Cuba, like Argentina, would become a major cultivator of genetically modified crops. Based on the track record of the neoliberal model in the developing world, it appears that Cuba's adoption of the standard package of neoliberal reforms would jeopardize food security at the national level. First, the neoliberal reforms would undercut domestic food production by diverting prime agricultural land to export production and by requiring Cuba to open its markets to cheap, subsidized food from the United States. This would reduce Cuba's food self-sufficiency and would reinstate Cuba's dangerous dependence on food imports to satisfy basic nutritional needs. Second, renewed emphasis on agricultural exports to generate foreign exchange would make Cuba's trade-based entitlements highly vulnerable to fluctuations in world market agricultural prices and to the declining terms of [\*484] trade for agricultural products. In the terminology of entitlements, Cuba's production-based entitlements would be eroded in favor of highly precarious trade-based entitlements. n360 In addition, a significant percentage of Cuba's export earnings would be earmarked for debt service and thus unavailable for investment or for the importation of food and other vital items. Finally, the cultivation of genetically modified crops would reinstate Cuba's trade dependence on the United States (and subordinate Cuba's food security to U.S. political and economic interests) by shutting Cuba out of lucrative EU markets. The neoliberal model would also jeopardize food security at the household level by fueling rural poverty and inequality. The promotion of export production is likely to provoke a land grab by elite Cubans and transnational corporations at the expense of Cuban smallholders. Export production tends to favor wealthy farmers with ready access to capital who can benefit from economies of scale in both production and marketing and can withstand the dramatic price fluctuations that plague many export commodities. n361 Furthermore, the opening of Cuba's markets to cheap food imports from the United States, in conjunction with the slashing of agricultural subsidies and social safety nets, will threaten the livelihoods of the majority of Cuban farmers and produce economic polarization in rural areas. Finally, the cultivation of genetically modified crops is likely to accelerate the dispossession of small farmers by disrupting the traditional practice of saving, sharing, and breeding seeds. As farmers become increasingly dependent on seeds and other inputs produced by transnational corporations, they may suffer severe economic dislocation if input prices increase or if farm revenues drop. Dispossessed farmers are likely to migrate en masse to towns and cities, thereby straining limited urban amenities. In the terminology of [\*485] entitlements, Cuban smallholders are likely to be deprived of production-based entitlements (land with which to grow food), trade-based entitlements (the ability to buy food on the market with the income generated by agricultural production), labor-based entitlements (due to the loss of jobs to mechanization on the large farms), and transfer-based entitlements (state subsidies and food aid). Neoliberal economic reforms may also jeopardize Cuba's experiment in sustainable agriculture. Export production tends to reinforce ecologically unsustainable monocultures that require extensive application of agrochemicals. These monocultures displace traditional food crops that contribute to soil fertility, pest control, and fodder production. The cultivation of genetically modified crops may exacerbate the problems associated with industrial agriculture by reinforcing monocultural production, eroding biodiversity, and increasing the use of herbicides and insecticides (by accelerating resistance to these products). Even if Cuba is able to capture an export niche in the lucrative market for certified organic products, the introduction of genetically modified organisms may undermine Cuba's efforts by producing genetic contamination. Moreover, the cultivation of Bt crops may injure organic farmers by accelerating resistance to one of the most widely used natural pesticides. Finally, if the cultivation of genetically modified crops results in increased use of herbicides and insecticides, this may harm organic agriculture by killing non-target organisms (including the natural enemies of the target pest and other beneficial insects) and by producing ecosystem-wide disturbances. In short, Cuba's adoption of neoliberal economic reforms threatens to recreate colonial and post-colonial patterns of land tenure and production, whereby the ruling elite and transnational corporations grow export crops on large industrial farms while small-scale producers are relegated to marginal subsistence plots or forced to abandon agriculture altogether. Furthermore, the cultivation of genetically modified crops may re-introduce trade dependency on the United States by foreclosing access to the lucrative European market. The prospects for food security and ecological sustainability under neoliberalism are grim. D. Summary and Conclusion: The Symbolic Significance of Cuba The saga of Cuban agriculture illustrates the ways in which developing countries are structurally disadvantaged in the global trading system by the colonial and post-colonial division of labor that relegates them to the production of primary agricultural commodities. Cuba's integration into the world economy as an exporter of sugar and an importer of manufactured goods and food products so deeply constrained its development options that not even a socialist revolution could alter these pre-existing trade and production patterns. It was not until the collapse of the socialist trading bloc and the tightening of the U.S. economic embargo that Cuba was forced by external circumstances to diversify its exports, diversify its trading partners, [\*486] decentralize agricultural production, prioritize domestic food production, and promote organic and semi-organic farming techniques. Cuba is **symbolically important** because it demonstrates that there is an alternative to the dominant export-oriented industrial agricultural model and that this alternative can boost agricultural productivity, enhance food security, and protect the environment. n362 However, the transformation of Cuban agriculture was a response to the crisis of the Special Period and was made possible by Cuba's relative economic isolation. Once the U.S. embargo is lifted and Cuba is reintegrated into the global trading system, Cuba, like every other developing country, will face intense pressure to restructure its economy along neoliberal lines. The results could be devastating. It is therefore important to recognize the neoliberal threat, to consider whether neoliberalism can ever be made compatible with food security and ecological sustainability, and to explore alternative strategies for sustainable rural development.

#### Embargo restricts access to offshore oil technology

Almeida ’12 Rob Almeida is Partner/CMO at gCaptain. He graduated from the US Naval Academy in 1999 with a B.S in Naval Architecture and spent 6.5 years on active duty as a Surface Warfare Officer. He worked for a year as a Roughneck/Rig Manager trainee on board the drillship Discoverer Americas. May 18th – http://gcaptain.com/drilling-cuba-embargo-badly/

In short however, Cuba’s access to containment systems, offshore technology, and spill response equipment is severely restricted by the US embargo, yet if a disaster occurs offshore, not only will Cuban ecosystems be severely impacted, but those of the Florida Keys, and US East Coast.¶ If disaster strikes offshore Cuba, US citizens will have nobody else to blame except the US Government because outdated policies are impacting the ability to prepare sufficiently for real-life environmental threats. Considering Cuba waters are home to the highest concentration of biodiversity in the region and is a spawning ground for fish populations that migrate north into US waters, a Cuban oil spill could inflict unprecedented environmental devastation if not planned for in advance.

#### New oil development causes Dutch Disease, collapses multiple sectors of the Cuban economy and turns case

Orro, graduate of University of Havana, 9

[Roberto, also holds a master degree in economics from el Colegio de México, 2009, “PETROLISM IN CUBA AND IMPLICATIONS OF U.S. INVESTMENT IN THE CUBAN OIL SECTOR,” ASCE, p. 340-341, http://www.ascecuba.org/publications/proceedings/volume19/pdfs/orro.pdf]

After a plethora of empirical works addressing the effects of oil on democracy and development, and the record of Cuba over the last fifty years, it is not difficult to image the picture of an oil-rich Cuba. Let us begin with the economic implications:

• Agriculture will surely receive the biggest negative blow. Imports of foods will rise and the chances to overhaul Cuba’s troubled agriculture will go away. Further concessions to private farmers would look as an improbable scenario.

• A huge inflow of petrodollars to Cuba will also hurt tourism. As it has happened since 2004, Cuban authorities will lose interest in exploiting the full potential of tourism. They will just focus on resorts and some tourist niches like Varadero, where foreign visitors are isolated from the population. Tourism to big cities, which promotes interaction between foreigners and Cubans and di- rects some money into the pockets of ordinary citizens, will continue to lose ground.

• Manufacturing will not go unscathed either. An offshore oil boom could finally kill the sugar industry. It is noteworthy that Cuban officials court U.S. oil companies, but never mention the island’s potential as an ethanol producer. The Cuban leadership does not like cooperation in this sector, as they do not want thousands of Cuban workers and farmers interacting with U.S. firms. The revival of the sugar sector, both agricultural and industrial, demands liberalizing steps that the Cuban government refuses to take. Oil and sugar do not really mix.

• Biotechnology and pharmaceuticals, in which Cuba has made some notable strides, could fall in the doldrums as well. Over the last 50 years, Cuba has shown a long record of replacing rather than adding economic activity. Once the government gives priority to one sector — the one that pro- vides revenues without political risk — they let others stagnate.

• The tertiary sector, which has a great potential in Cuba, will never blossom in an economy driven by oil. Cuba has thousands of talented artists, sports- men, physicians, musicians, and many other pro- fessionals, living in the island or abroad. Nonethe- less, the island will not reap the benefits of these assets until a radical reform opens the doors of the market to Cuban professionals. Under a massive inflow of petrodollars, the Cuban government will have little incentives to do that.

As researchers have shown, oil starts its harmful work from the moment significant oil wealth is discovered. The mere expectations that U.S. firms will enter the Cuban market will abort timid attempts to liberalize the economy. The arrival of U.S. firms to explore and drill offshore in Cuban waters will embolden political hardliners, those who adamantly refuse any kind of small moves towards democracy and market economy.

The advocates of market reforms — who now can barely make a comment in favor of liberalization— will be left in a much weaker position.

#### No solvency— multiple barriers prevent Cuban ag expansion

Kost 04

William Kost is an Agricultural Economist with ERS, u.s.. Department of Agriculture

UBAN AGRICULTURE: TO BE OR NOT TO BE ORGANIC?

<http://www.ascecuba.org/publications/proceedings/volume14/pdfs/kost.pdf>

In spite of successes, Cuba’s urban agriculture program faces several problems that limit further expansion. Seed shortages continue. Land remains in short¶ supply. Soil quality of available land is low. Many¶ years of spilled pollutants¶ have contaminated much¶ of the available urban land. Significant portions of¶ land are covered with litter. The major problem, and¶ the hardest to address, continues to be a fresh water¶ shortage. This shortage is further compounded by¶ Cuba’s dilapidated infrastructure, which constrains¶ movement of available water, and the lack of energy¶ needed to power pumps.

#### The impact is exaggerated – Cuban ag isn’t sustainable

Thompson and Stephens, 12 – \* Ph.D. Curriculum and Education Director @ Duke University AND \*\* Marian Cheek Jackson Center (Charles D. and Alexander, “Visions for Sustainable Agriculture in Cuba and the United States: Changing Minds and Models through Exchange”, Southern States, March 22 2013, <http://www.southernspaces.org/2012/visions-sustainable-agriculture-cuba-and-united-states-changing-minds-and-models-through-exchan>) //SP

Following the Cuban Revolution (1953–59), the Soviet Union’s (USSR) agricultural imperatives drove the island toward state-run farms, marginalizing many family run operations. The breakup of the USSR in 1990 spelled the end of Soviet agricultural influence but intensified Cuban food shortages. Cuba began to look within for solutions, finding indigenous knowledge and encouraging local innovation. Exaggerated praise for developments in the country’s sustainable agriculture belies the reality that Cuba is no utopia. Popular descriptions often oversimplify the narrative of Cuba’s sustainable agriculture. For example, the website of the Durham, North Carolina, non-profit NEEM (Natural Environment Ecological Management) features a narrative sketch that labels the rise of organic garden collectives in Cuban cities "the urban agriculture miracle."5 Others have suggested that we can expect "an ecological agriculture" in Cuba’s future.6 In much sustainable agriculture praise of Cuba, we do not hear that the country (like the U.S.) has confinement hog and chicken houses, that major U.S. food conglomerates are already selling vast quantities of grain and other products there, or that the embargo on trade with Cuba does not apply to U.S. agribusiness. We are not told that thousands work in small farming because they have no other option. Agricultural work is popular in Cuba, in part, because state-supported income is drying up for hundreds of thousands of wage earners and there is often nowhere else to turn but to small-scale farms and gardens. Yet much of Cuba’s former sugarcane land, once a volatile but powerful economic life-force, is idle and in poor condition. Even with its admirable innovations in sustainable and organic farming, Cuba’s domestic agricultural producers cannot meet the food needs of the island’s population; there is a real sense of food insecurity. Looking for food (in dollar stores, on the black market, legally), is a major pre-occupation for much of the population. Cuba imports at least 80 percent of its food, with much of it coming from its largest trading partners—China and Venezuela. This is hardly a sustainable scenario, and while there does not appear to be starvation in Cuba, food shortages remain a problem, even as the government’s meager food rationing is fading.7 However, household food insecurity is also on the rise in the U.S. today. According to the U.S. Department of Agriculture at least 14.5% of U.S. households were food insecure at some time during the year in 2010, up from 11% in 2005.

#### Status quo solves: other countries are beginning to adopt the Cuban model now

Friedman**,** New York Times,2012

(Noah, “Urban Agriculture in Cuba (Photo Essay)”, 10-18, https://nacla.org/news/2012/10/18/urban-agriculture-cuba-photo-essay)

Cubans see their urban agriculture movement as a possible solution as the world begins to grapple with increasing prices and demand for food and fuel. Many other countries have begun to use the Cuban experience as a model as locally grown, organic produce becomes more popular worldwide. In 2007, Fidel Castro warned in the first published essay after his illness: "More than three billion people in the world are being condemned to a premature death from hunger and thirst" by diverting food crops to biofuels. In the past four years, food prices have indeed skyrocketed and a 2011 report by Oxfam identifies biofuel production as a principal cause of food insecurity. Some Cubans see their urban agriculture movement as a possible solution as the world begins to grapple with increasing prices and demand for food and fuel: "There is an ecological trend, a green philosophy. This is an urgent call, an immediate future; the large urban centers, with the problems of oil production and the transport of goods, this could be a worldwide solution as it has been in Cuba. We have the advantage of having gone through what other countries may experience in 50 years,” says Miguel Salcines Lopez, President of Havana’s largest urban agriculture cooperative, Vivero Alamar. Beginning with the collapse of the Soviet Union in 1989, Cuba entered a period of extreme shortages that came to be known as "The Special Period." With imports such as food, fuel, pesticides, and fertilizers disappearing almost overnight, Cubans began to grow their own produce wherever they could—balconies, empty lots, and roof-tops. Initially these were grassroots initiatives born of necessity, but over the next decade they would become a central tenet of state planning and a pillar for the island's economy. A homage to the history of Cuban urban agriculture in the home of Oscar Aleman Perez in Havana. In the 1970s and '80s, Raul Castro, as Defense Minister, encouraged the development of urban agriculture and oversaw experimental organic farming in military facilities. In those days, the organoponicos, as they came to be known, were introduced in preparation for a possible worldwide embargo of Cuba; today they are a training ground and growth area for Raul Castro's economic reforms that allow for more small business. In 1994, the Ministry of Agriculture institutionalized urban agriculture initiatives under one umbrella. Projects from informal family gardens (huertos), to large cooperatives (organoponicos), to state-owned gardens would all receive assistance from the ministry, which sought to provide free land to residents for gardens, through support in the start-up phase, providing seed banks, and overseeing hundreds of horticultural clubs for information exchange. Many Cubans assumed that as the shortages of the 1990s faded, so too would urban agriculture, but instead it has expanded in the last decade. Indeed, many other countries have begun to use the Cuban experience as a model as locally grown, organic produce becomes more popular worldwide. Of the recently released linamientos, or guidelines, for economic and social reforms in Cuba, 12 refer to urban agriculture. Number 174 states the necessity of increasing agricultural initiatives that can substitute for food imports, “with emphasis in the execution of the urban agriculture program, which should be extended to the entire country.”

#### Dangerous climate change inevitable-most comprehensive accounts.

**Anderson et al., Tyndall Centre for Climate Change research professor, 2011**

(Kevin, “Beyond ‘dangerous’ climate change: emission scenarios for a new world”, Phil. Trans. R. Soc. A January 13, 2011 369 20-44, ldg)

In relation to the ﬁrst two issues, the Copenhagen Accord and many other high level policy statements are unequivocal in both their recognition of 2 ◦ C as the appropriate delineator between acceptable and dangerous climate change and the need to remain at or below 2 ◦ C. Despite such clarity, those providing policy advice frequently take a much less categorical position, although the implications of their more nuanced analyses are rarely communicated adequately to policy makers. Moreover, given that it is a ‘political’ interpretation of the severity of impacts that informs where the threshold between acceptable and dangerous climate change resides, the recent reassessment of these impacts upwards suggests current analyses of mitigation signiﬁcantly underestimate what is necessary to avoid dangerous climate change [20,21]. Nevertheless, and despite the evident logic for revising the 2 ◦ C threshold, 31 there is little political appetite and limited academic support for such a revision. In stark contrast, many academics and wider policy advisers undertake their analyses of mitigation with relatively high probabilities of exceeding 2 ◦ C and consequently risk entering a prolonged period of what can now reasonably be described as extremely dangerous climate change. 32 Put bluntly, while the rhetoric of policy is to reduce emissions in line with avoiding dangerous climate change, most policy advice is to accept a high probability of extremely dangerous climate change rather than propose radical and immediate emission reductions. 33 This already demanding conclusion becomes even more challenging when assumptions about the rates of viable emission reductions are considered alongside an upgrading of the severity of impacts for 2 ◦ C. Within global emission scenarios, such as those developed by Stern [6], the CCC [8] and ADAM [47], annual rates of emission reduction beyond the peak years are constrained to levels thought to be compatible with economic growth—normally 3 per cent to 4 per cent per year. However, on closer examination these analyses suggest such reduction rates are no longer sufﬁcient to avoid dangerous climate change. For example, in discussing arguments for and against carbon markets the CCC state ‘rich developed economies need to start demonstrating that a low-carbon economy is possible and compatible with economic prosperity’ [8, p. 160]. However, given the CCC acknowledge ‘it is not now possible to ensure with high likelihood that a temperature rise of more than 2 ◦ C is avoided’ and given the view that reductions in emissions in excess of 3–4% per year are not compatible with economic growth, the CCC are, in effect, conceding that avoiding dangerous (and even extremely dangerous) climate change is no longer compatible with economic prosperity. In prioritizing such economic prosperity over avoiding extremely dangerous climate change, the CCC, Stern, ADAM and similar analyses suggest they are guided by what is feasible. 34 However, while in terms of emission reduction rates their analyses favour the ‘challenging though still feasible’ end of orthodox assessments, the approach they adopt in relation to peaking dates is very different. All premise their principal analyses and economic assessments on the ‘infeasible’ assumption of global emissions peaking between 2010 and 2016; a profound departure from the more ‘feasible’ assumptions framing the majority of such reports. The scale of this departure is further emphasized when disaggregating global emissions into Annex 1 and non-Annex 1 nations, as the scenario pathways developed within this paper demonstrate. Only if Annex 1 nations reduce emissions immediately 35 at rates far beyond those typically countenanced and only then if non-Annex 1 emissions peak between 2020 and 2025 before reducing at unprecedented rates, do global emissions peak by 2020. Consequently, the 2010 global peak central to many integrated assessment model scenarios as well as the 2015–2016 date enshrined in the CCC, Stern and ADAM analyses, do not reﬂect any orthodox ‘feasibility’. By contrast, the logic of such studies suggests (extremely) dangerous climate change can only be avoided if economic growth is exchanged, at least temporarily, for a period of planned austerity within Annex 1 nations 36 and a rapid transition away from fossil-fuelled development within non-Annex 1 nations. The analysis within this paper offers a stark and unremitting assessment of the climate change challenge facing the global community. There is now little to no chance of maintaining the rise in global mean surface temperature at below 2 ◦ C, despite repeated high-level statements to the contrary. Moreover, the impacts associated with 2 ◦ C have been revised upwards (e.g. [20,21]), sufﬁciently so that 2 ◦ C now more appropriately represents the threshold between dangerous and extremely dangerous climate change. Consequently, and with tentative signs of global emissions returning to their earlier levels of growth, 2010 represents a political tipping point. The science of climate change allied with emission pathways for Annex 1 and non-Annex 1 nations suggests a profound departure in the scale and scope of the mitigation and adaption challenge from that detailed in many other analyses, particularly those directly informing policy.

#### Zero chance the US adopts the Cuban model

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<http://www.fromthewilderness.com/free/ww3/120103_korea_2.html>.

Resistance to Cuban-style agricultural reform would be particularly stiff in the United States.Agribusiness will not allow all of its holdings and power to be expropriated. Nor is the U.S. government interested in small farms and organic agriculture. The direction of U.S. agriculture is currently towards more advanced technology, greater fossil fuel dependency, and less sustainability. The ability of small farmers and urban gardens to turn a profit is effectively drowned outby the overproduction of agribusiness.