## Plan (Day 1 + Round 5)

#### The United States Federal Government should remove its restrictions on the use of reprocessing technology to recycle spent nuclear fuel for commercial nuclear power in the United States.

## Plan (Round 8)

#### The United States Federal Government should remove its restrictions on the use of reprocessing technology to recycle spent nuclear fuel for energy production of commercial nuclear power in the United States.

## Contention 1 Proliferation

#### The U.S. bans commercial reprocessing now – but it hasn’t stopped other countries

Miller ’13 – professor with the University of Missouri’s Nuclear Science and Engineering Institute

(William H., “Used nuclear fuel is a good energy source”, Columbia Daily Tribune, 1-21-2013, http://www.columbiatribune.com/opinion/op-ed/used-nuclear-fuel-is-a-good-energy-source/article\_f9a18f15-3b74-5b6e-9fc2-81b39bba76f0.html#.URSNRB3C2\_c)

Ever since the government banned its use in the recycling of used nuclear fuel nearly 35 years ago, “reprocessing” has been a dirty word. Many nuclear scientists and engineers, however, believe a new commitment to reprocessing is the key to solving the nuclear waste problem and ushering in a new generation of advanced power reactors. Hundreds of nuclear professionals recently sent a joint letter to Energy Secretary Steven Chu and White House science adviser John Holdren urging such action.¶ In spite of the doubts from skeptics, reprocessing is a game-changing technology that could turn a huge amount of used fuel left over from the production of nuclear-generated electricity into a significant energy resource. Housed in cylindrical rods, used fuel is periodically removed from a reactor and stored in engineered water pools or above-ground dry casks at nuclear power plant sites. The United States currently has 65,200 metric tons of used fuel in storage, of which 610 metric tons are at the Callaway Nuclear Plant near Fulton.¶ Often mistaken for nuclear waste, used fuel contains large amounts of valuable plutonium and uranium that can be extracted and then chemically reprocessed into a so-called mixed-oxide, or MOX, fuel that can be used in a nuclear plant to produce more electricity. In 1977, President Jimmy Carter ended reprocessing in the United States, citing proliferation risks and hoping other countries such as France and Great Britain would do likewise. They didn’t. ¶ They have continued to reprocess used fuel — in the case of France, using recycling as part of its nuclear program to obtain 80 percent of its electricity and to sell surplus power to neighboring countries.

#### U.S. influence in fuel cycles is declining – restrictions kill international engagement

**Rasp 11 –** communications director for the Energy Institute at the University of Texas-Austin

(Gary Rasp, “Spent nuclear fuel is anything but waste”, Energy Institute at University of Texas at Austin, 2-20-2011, http://www.eurekalert.org/pub\_releases/2011-02/teia-snf021611.php)

Time has come revive long-dormant reprocessing program Failure to pursue a program for recycling spent nuclear fuel has put the U.S. far behind other countries and represents a **missed opportunity** **to** enhance the nation's energy security and **influence other countries**, the former chairman of the Nuclear Regulatory Commission said Sunday. Dale Klein, Ph.D., Associate Vice Chancellor for Research at the University of Texas System, said largely unfounded concerns and "long-held myths" about the reprocessing of spent fuel have prevented the U.S. from tapping into an extremely valuable resource. Spent nuclear fuel, which includes some plutonium, often is inaccurately referred to as waste, Klein said. "It is not waste," he said. "The waste is in our failure to tap into this valuable and abundant domestic source of clean energy in a systematic way. That's something we can ill-afford to do." Klein, who also serves as an associate director at UT Austin's Energy Institute, made his remarks Sunday morning at the American Association for the Advancement of Science's (AAAS) annual meeting, in Washington, D.C. Compared to other fuels used in the production of electricity, the energy density of uranium is remarkable, Klein said, noting that 95 percent of the energy value in a bundle of spent nuclear fuel rods remains available to be re-used. "The once-through nuclear fuel cycle, which is our practice in the U.S., is an enormous waste of potential energy," he said. Critics cite the potential for nuclear weapons proliferation as the biggest reason to oppose recycling. But such concerns are largely unfounded, Klein said. "While it is true that the plutonium in recycled nuclear fuel is fissionable, no country in the world has ***ever*** made a nuclear weapon out of low-grade plutonium from recycled high burn-up nuclear fuel," he said. "It just doesn't work for a strategic or a tactical nuclear weapon." While the U.S. has sat on the sidelines, other countries, including France, Japan, the United Kingdom, Russia, India, and China have dedicated **significant resources** toward their reprocessing programs, Klein added. "**U.S. leadership in this area has been lost, and the underlying technological capability and intellectual capital needed to compete internationally have diminished to near irrelevance**." Reprocessing not only recovers significant energy value from spent fuel, it substantially reduces the volume and radiotoxicity of high-level nuclear waste. Today, U.S. utilities operating nuclear power plants continue to store spent nuclear fuel rods on site in pools of water, before eventually moving them to dry cask storage. And while there is some debate over whether the casks should be located in one central storage site, the practice is widely accepted as safe and secure. "That's another myth – that we don't know how to safely store nuclear spent fuel," Klein said. Establishing a program to recycle nuclear fuel will require a public-private partnership that operates outside normal Congressional appropriations and has a charter to manage the fuel over a period of decades, he asserted. The government's Blue Ribbon Commission, chartered by the Department of Energy, is charged with making recommendations for the safe, long-term management of spent fuel. The 15-member commission is to issue a draft report this summer, with a final report to be completed in January 2012. "At a time when we are seeking ways to limit carbon emissions from the generation of electricity, the recycling of spent nuclear fuel would appear to be a particularly good fit."

#### Plan increases leverage – allows us set fuel cycle standards

NNSA ‘8

(“Nonproliferation Impact Assessment for the Global Nuclear Energy Partnership Programmatic Alternatives”, December 2008, http://nnsa.energy.gov/sites/default/files/nnsa/inlinefiles/GNEP\_NPIA.pdf)

Policy Impact: By taking an active role in spent fuel recycling, the United States would strengthen its ability to influence how other countries engage in recycling. In choosing to abstain from civil spent fuel reprocessing for the past 30 years, the United States aimed to influence other countries to make the same choice. However, some countries had already chosen to pursue civil reprocessing. The U.S. choice not to pursue that path reduces the U.S. ability to influence the policies and practices of those who do. Conversely, by choosing to pursue civil spent fuel recycling, the United States could increase its influence among those countries and over time establish a leadership role. Such leadership and influence could take several forms. First, the United States could define and build consensus on goals for spent fuel recycling. The GNEP Statement of Principles provides an example of successful U.S. leadership in this area (see text box below). Second, the United States could cooperate with international partners on Research And Development for technologies to achieve those goals, subject to constraints on the transfer of sensitive technologies (see Chapter 2). Third, by participating directly in developing the options for providing back-end fuel services, the United States could set standards that influence the choices of other countries, either as users or as providers of back-end services. By working to establish partnerships with other countries to offer a comprehensive package of nuclear energy and fuel cycle services, the United States could help define how those partnerships functioned to meet shared nonproliferation objectives through full actinide recycle.

#### Plan solves signal – ensures prolif resistant tech is adopted, bolsters U.S. nonprolif leadership, and no risk of tech diversion

**ANS ‘11**

(American Nuclear Society “American Nuclear Society Issue Paper on the Nuclear Fuel Cycle and U.S. Nuclear Nonproliferation Policy”, 2011, http://www2.ans.org/pi/ip/pdfs/nonproliferation.pdf)

U.S. nonproliferation policy is set forth in Presidential Decision Directive-13 (PDD-13), dated September 27, 1993, which states that “the United States does not encourage the civil use of plutonium and, accordingly, does not engage in plutonium reprocessing for either nuclear power or nuclear explosive purposes.” For more than 40 years, the U.S. engaged in both plutonium reprocessing for defense purposes and in programs to develop nuclear reactors that would “breed” plutonium for use in nuclear energy systems. “Breeder” reactors are reactors that can actually produce more fuel than they consume. Breeder reactor programs were pursued by the U.S., along with France, Japan, Russia, and other countries, as a way to help ensure energy independence by extending nuclear fuel supplies from a 50-100 year reserve to a reserve of more than 1000 years. Today, France, Japan, Russia, and the United Kingdom also reprocess civilian nuclear fuel to maximize the use of nuclear fuel resources in conventional reactors. In implementing PDD-13, the U.S. Department of Energy (DOE) ceased both defense plutonium reprocessing and the development of breeder reactors. The U.S. breeder reactor programs were terminated in 1994, under the premise that by pursuing breeder reactor development, the U.S. was sending a signal to other countries that we weren’t serious about our objection to the civil use of plutonium. **Despite the U.S. action**, France, Japan, Russia, and other countries continued the development of breeder reactors and the use of reprocessing. **Commercial reprocessing is a major international industry**. Since 1994, great strides have been made world-wide in the development of nuclear fuel recycling technologies that do not result in the separation of plutonium suitable for use in nuclear weapons. These technologies have been developed with the express purpose of greatly reducing or eliminating altogether the potential for proliferation from nuclear fuel recycling operations. These technologies could lead to the development of nuclear energy systems that produce an essentially inexhaustible supply of nuclear fuel. The need for the U.S. to reassert its leadership in nuclear fuel cycle research was spelled out in a January 2000 report of the Center for Strategic and International Studies Project on Global Nuclear Materials Management. This Project, Chaired by former Senator Sam Nunn, concluded that “The United States has virtually **disengaged** from international discussions and cooperation on the future of the nuclear fuel cycle.” The report recommends that “the United States should re-engage in international discussions and R&D on safe and proliferation-resistant approaches to the fuel cycle.” This re-engagement should conducted be with an eye toward “finding ways to better utilize limited nuclear resources and ensure adequate fuel supplies for the long-term...” This is not to infer that commercial nuclear fuel reprocessing should be resumed in the U.S. at this time. There are no driving economic or resource issues that would prompt the U.S. today to consider commercial recycle. However, as advocated by Senator Pete Domenici, it is in the national interest to ensure that proliferation-resistant recycle technologies are available when they are needed, and to restore U.S. influence over nuclear fuel cycle decisions abroad. To achieve these important national security goals, the U.S. should resume research as part of a larger effort to develop sustainable nuclear energy systems. Recommendation The American Nuclear Society believes it is time for the U.S. to allow the consideration of proliferation-resistant nuclear fuel recycling technologies and nuclear power systems. This action will help ensure that proliferation-resistant recycle technologies are available when they are needed, and will give the U.S. a greater degree of influence over nuclear fuel cycle decisions made abroad. The next Administration should acknowledge that not only can closed fuel-cycle research be conducted in a manner consistent with U.S. nonproliferation policy, it is necessary to enable effective implementation of that policy.

#### The plan solves—having a domestic reprocessing capability allows for direct engagement over fuel cycle decisions globally

NNSA ‘8

(“Nonproliferation Impact Assessment for the Global Nuclear Energy Partnership Programmatic Alternatives”, December 2008, http://nnsa.energy.gov/sites/default/files/nnsa/inlinefiles/GNEP\_NPIA.pdf)

Direct Impact: The most attractive feature of these fuel cycle alternatives is that they reduce dramatically the long-term radiotoxicity from spent fuel. As shown in Chapter 5, removing all the transuranics from the waste stream (except for very low process losses) would shorten dramatically the length of time for radioactive decay to reduce the radiotoxicity of the remaining waste below that of uranium ore (see Figure 6.2). This represents an advantage over other alternatives in facilitating acceptance of other countries’ spent fuel both in terms of technical options for waste management and in terms of public acceptance and political feasibility of such fuel services, though neither public acceptance nor political feasibility would be certain. The significance of this advantage depends on the relative availability and public acceptance of disposal capability for spent fuel or HLW. The ability to recycle spent fuel and minimize waste would broaden the range of possibilities for U.S. participation in the global nuclear energy and fuel market, particularly for back-end fuel services. Accordingly, these full actinide recycle alternatives could provide the greatest opportunities for the United States to influence international fuel cycle practices through direct engagement in the international market. **If U.S. Government policy *permitted* U.S. nuclear vendors** to offer an attractive range of products and services, that would strengthen the U.S. ability both to influence the policies of other supplier states and to influence the practices of customers through U.S. consent rights. To the extent that they displace LEU as nuclear fuel, full actinide recycle alternatives also **reduce the demand for enrichment** compared to the other alternatives (see Table 6.2), because the reprocessed materials (actinides) would be used as fuel to generate electricity. As noted above, this could **reduce incentives and opportunities** for additional countries to seek to enter the enrichment services business. The full actinide recycle alternatives would reduce demand for enrichment domestically in the advanced fuel cycle states, which could make it easier for existing suppliers to meet international demands. This would contribute to the ability of suppliers to provide comprehensive fuel services that include both assured supply at the front end and assured acceptance of spent fuel at the back end. It is reasonable to expect that any spent fuel recycling facilities in the United States would be dedicated primarily to meeting domestic nuclear energy and spent fuel management needs. Conceptually, a portion of the initial recycling capacity could be made available for reprocessing spent fuel from other countries under assured “take back” of spent fuel arrangements. Given the expected limits on initial recycling capacity the United States would have to decide on priorities for addressing those international needs.

#### We overwhelm other alternate causalities—enrichment technology is the largest internal link to proliferation

NNSA ‘8

(“Nonproliferation Impact Assessment for the Global Nuclear Energy Partnership Programmatic Alternatives”, December 2008, http://nnsa.energy.gov/sites/default/files/nnsa/inlinefiles/GNEP\_NPIA.pdf)

The proliferation risk of once-through fuel cycles arises primarily at the front end, through the demand for large-scale enrichment to produce fresh fuel. This is a common feature of all the once-through fuel cycle alternatives under consideration. A possible variant of the HWR option could avoid the need for enrichment by using natural uranium fuel, as CANDU reactors have done historically, but this resulted in large amounts of spent fuel and less efficient use of uranium resources. The level of enrichment and the overall amount of enrichment (in terms of separative work units or SWU) required varies depending on the fuel cycle in question (see Table 6.2). The enrichment level is also relevant because it takes **less effort** to produce weapons-grade uranium starting from LEU reactor fuel than from natural uranium (which is significant only in the context of a very small enrichment capability – see Table 6.3) and because it may **complicate safeguards** at enrichment plants by making it harder to detect undeclared HEU production. For centrifuge enrichment, there is no significant technical barrier between commercial and military enrichment. A plant capable of producing LEU for power plants could also be used to produce high-enriched uranium (HEU) for use in weapons, either by enriching uranium in multiple passes or by reconfiguring the connections among the centrifuges to optimize for HEU production, or by diverting some of the LEU product to a clandestine enrichment facility. Effective international safeguards can be designed to detect such activities in a timely manner, and the risk of detection may also deter some countries from attempting them. 90 As with reprocessing, **a small-scale enrichment program**, for example a facility that provided fuel for a single large nuclear power reactor, would be sufficient to produce a significant quantity 91 of weapons-grade HEU in less than a month. Every programmatic alternative considered in the GNEP PEIS involves some growth in nuclear power and with that some growth in demand for enrichment services. However, the primary proliferation risk comes not from the total amount of enrichment. Rather, it arises from the possibility that additional countries might acquire an enrichment capability, which they could use to produce weapons-grade uranium (see Table 6.3). Furthermore, an increase in the number of countries holding sensitive enrichment technology would complicate efforts to prevent the further spread of enrichment capabilities. Therefore, if the demand for enrichment services is satisfied by an expansion of capacity at a competitive price in countries that already have commercial enrichment programs, there should be less proliferation risk associated with that expansion of enrichment capacity. At present, all planned new commercial enrichment plants would be built in countries that already have such plants. Nonetheless, a large and rapid expansion of demand for enrichment could encourage additional countries to enter the market, particularly if growing demand raises the price of enrichment services. This risk may be marginally greater for the once-through fuel cycle alternatives.

#### U.S. nonprolif leadership key – alternative is ambivalence and nuclear brinkmanship

Ogilvie-White ’12 – senior analyst in international strategy at the Australian Strategic Policy Institute

(Dr. Tanya, “Position Vacant: Nonproliferation and Disarmament Leader, Asia”, PacNet, a publication of CSIS, Number 77A, 12-5-2012, http://csis.org/files/publication/Pac1277A.pdf)

During the past few weeks, there have seen some striking discussions in the international media about the future strategic order. One of the most interesting is an article by Ralph Cossa and David Santoro, which was originally published as a PacNet (PacNet #77, Nov. 26, 2012) and was then picked up by the Japan Times. Two short sentences half way through the piece particularly caught my eye: “The United States has limited power and influence to shape the major power agenda in the Asia-Pacific. The future of this agenda will be determined by decisions made in Beijing, New Delhi and Islamabad – not in Washington.” This is true over the longer-term, and the implications for world order are significant. It brings to mind William Walker’s new book, A Perpetual Menace, which raises concerns about the weaklydefined Asia-centric system of military engagement that is likely to replace the Eurocentric one. The big questions are: how will peace and stability be achieved as US preeminence wanes, and what values will underpin the new Asia-centric system? This discussion is becoming urgent, including in the nuclear context. One problem is that the existing nonproliferation regime has been largely shaped by the Eurocentric system (the Western powers and the Soviet Union/Russia) that is currently in decline. At the heart of this regime, the Nuclear Nonproliferation Treaty (NPT) has expanded and deepened its original role, achieved almost universal membership and withstood serious challenges, primarily because its strategic and political value has been recognized by the states that have dominated the Eurocentric system. Of these, the US has had the most significant impact on the Treaty’s success: when it has offered proactive support, great strides have been possible; when it has dropped the ball, as it did most dramatically during the George W. Bush years, the consequences have been serious. As power continues to shift eastward, it is likely that the nonproliferation regime will eventually slip out of the United States’ grip. Critics of the US may welcome this development, but the danger is that the leadership role will pass to a more ambivalent successor or be left vacant altogether. In a world in which states still dominate, and in which international governmental organizations, legal frameworks, and norms are dependent upon the support of the most powerful states, this would have huge implications, threatening to unravel a critical security regime that has taken nearly 50 years to build. At the moment, it is not clear whether the nuclear nonproliferation regime can be embedded into an Asia-dominated strategic order. It is not even clear that Asia’s potential superpowers want this to occur, or whether they would consider a future of further horizontal and vertical nuclear weapons proliferation as fairer, more equitable, and possibly even more stable than the current uneasy compromise between nuclear haves and have-nots. It’s a worrying situation, which in the worst-case scenario could trigger the same kind of short-sighted and dangerous nuclear brinkmanship that characterized the early years of the Cold War. Only this time there would be some appalling additions: more powerful weapons, new platforms, fragile nuclear-armed states, and nonstate actors that seek nuclear materials for use in terrorist acts. What Asia needs is leaders who possess the right combination of influence, vision, and courage to champion non-nuclear norms and create and sustain nonproliferation and disarmament momentum. What Asia has is rather different. China has often shown a blatant disregard for nonproliferation instruments and norms, and is expanding and modernizing its nuclear arsenal. India, which has steadfastly refused to join the NPT on the basis that it is discriminatory and does not serve its strategic interests, is linked into a nuclear triangle with China and Pakistan, from which it is unable and unwilling to detach itself. The only states in the region that currently show leadership potential lack the necessary strategic clout to back it up, and must rely on others. ASEAN is an important international actor in this respect, although it has not always been consistent where nonproliferation advocacy is concerned, and the organization’s future is increasingly vulnerable to divisive great power ambitions. Diplomatic coalitions that operate within the NPT review process are another important source of leadership, but – as Japan and Australia may discover in spearheading the Nonproliferation and Disarmament Initiative – they are notoriously difficult to manage and even harder to sustain over the longer-term.

#### Brink is now – bipolar deterrence will fail in multipolarity

**Rosenbaum ‘11**

(Ron, journalist, graduated Yale’s English Literature Graduate Program, “How The End Begins: The Road To A Nuclear World War III,” March 2nd, <http://www.npr.org/2011/03/02/134203232/Ron-Rosenbaum-World-On-The-Brink-Of-World-War-III>)

And so by the time the Israeli jets reached the northeast corner of Syria and turned toward the Syrian reactor on the Euphrates, threats and counterthreats may well have been zapping through the ether and suddenly both nuclear superpowers with approximately five thousand land-based nuclear missiles on "hair-trigger" alert were on the verge of — only one misperception or hasty overreaction, one degree of separation away — being drawn into a potential regional **nuclear war**. Then there's the wild card, Pakistan, with its "Islamic bomb," which is shorthand for some sixty to one hundred warheads under the kind of loose, decentralized control that could allow a regional commander with ties to Islamic nations such as Iran and Syria to step in and set off another variety of **regional nuclear war** with equal **potential for escalation**. All those signals, threats, and counterthreats flashing through the night could easily have been known to the "very senior" British minister quoted in The Spectator, assuming he had access to GCHQ, Government Communications Headquarters, the legendary British signals interception facility, which, in tandem with the U.S. government's NSA (National Security Agency and its spy satellite system), can listen in to just about everything, even to secret military encryptions, in near real time. What the very senior minister was describing was perhaps the most perilous — and emblematic — crisis of the second nuclear age thus far: it is a new world in which the bipolar "stability" of the "balance of terror" has degenerated into a chaotic state of multipolar nuclear powers with less control and less restraint and a greater chance of touching off a regional nuclear war that could escalate to global scale. Nuclear proliferation scholar Benjamin Frankel tells us the "inherent complexity" of the new nuclear age "dooms multipolar systems to instability making them susceptible to crisis and war." "The world has arrived at **a nuclear tipping point**," a Carnegie Endowment for International Peace study warned. "We are at the tipping point," former Senator Sam Nunn, co-founder of the Nuclear Threat Initiative, has said, "and we are headed in the wrong direction." "The current global nuclear order," declared Harvard's Graham Allison, "is **extremely fragile**." Already India and Pakistan nearly used their nuclear arsenals against each other in 1999 and 2002. That was still bipolar. The Syria raid, however, was the most dramatic embodiment of the difference between the bipolar Cold War type of nuclear war close calls, and the new type of multipolar chain reactions that could reach critical mass in our new nuclear age

#### Prolif would be fast – cheaper and newer tech makes it easier to hide

**Heisbourg ’12 –** chairman of the International Institute for Strategic Studies

[François, chairman of the International Institute for Strategic Studies, special adviser at the Fondation pour la Recherche Stratégique, “How Bad Would the Further Spread of Nuclear Weapons Be?” http://www.npolicy.org/article.php?aid=1171&rtid=2]

**Ongoing proliferation differs from that of the first half-century of the nuclear era** in three essential ways: on the demand side, the set of putative nuclear actors is largely focused in the most strategically stressed regions of the world; on the supply side, **the actual or potential purveyors of proliferation are no longer principally the first, industrialized, generation of nuclear powers; the technology involved in proliferation is somewhat less demanding than it was during the first nuclear age**. Taken together, **these changes entail growing risks of nuclear use**. Demand is currently focusing on two regions, the Middle East and East Asia (broadly defined) and involves states and, potentially, non-state actors. In the Middle East, Iran’s nuclear program is the focus of the most intense concerns. A potential consequence in proliferation terms would be to lead regional rivals of Iran to acquire nuclear weapons in term: this concern was vividly in 2007 by the then President of France, Jacques Chirac (19) who specifically mentioned Egypt and Saudi Arabia. The likelihood of such a “proliferation chain-reaction” may have been increased by President Obama’s recent repudiation of containment as an option (20): short of Iran being persuaded or forced to abandon its nuclear ambitions, the neighboring states would presumably have to contemplate security options other than a Cold War style US defense guarantee. Given prior attempts by Iraq, Syria and Libya to become nuclear powers, the probability of a multipolar nuclear Middle East has to be rated as high in case Iran is perceived as having acquired a military nuclear capability. Beyond the Middle East, the possibility of civil war in nuclear-armed Pakistan leading to state failure and the possibility of nukes falling out of the hands of an effective central government. There are historical precedents for such a risk, most notably, but not only(21)in the wake of the collapse of the Soviet Union: timely and lasting action by outside powers, such as the US with the Nunn-Lugar initiative, and the successor states themselves has prevented fissile material from falling into unauthorized hands in significant quantities. Pakistan could pose similar problems in a singularly more hostile domestic environment. As things stand, non-state actors, such as post-Soviet mafiya bosses (interested in resale potential) or Al Qaeda (22) have sought, without apparent success, to benefit from opportunities arising from nuclear disorder in the former USSR and Central Asia. Mercifully, the price Al Qaeda was ready to pay was way below the going rate (upwards of hundreds of $million) for the sorts of services provided by the A.Q.Khan network (see below) to some of his clients. Although North Korea’s nuclear ambitions appear to be both more self-centered and more containable than is the case for Iran, the possibility of state collapse in combination with regional rivalry leave no room for complacency. More broadly we are facing the prospect of a multipolar nuclear Middle East, linked to an uncertain nuclear Pakistan already part of a nuclear South Asia tied via China to the Korean nexus in which nuclear America and Russia also have a stake. More broadly still, such a nuclear arc-of-crisis from the Mediterranean to the Sea of Japan, would presumably imply the breakdown of the NPT regime, or at least its reversion to the sort of status it had during the Seventies, when many of its currently significant members had not yet joined (23), unloosening both the demand and supply sides of proliferation. On the supply side, “old style” proliferation relied on official cooperation between first-generation nuclear or nuclearizing powers, of which the Manhattan project was a forerunner (with American, British and Canadian national contributions and multinational scientific teams), followed inter alia by post-1956 French-Israeli, post-1958 US-UK, pre-1958 USSR-China cooperation. If India relied heavily on the “unwitting cooperation” , notably on the part of Canada and the US involved in the Atoms for Peace CIRUS research reactor, Pakistan set up the first dedicated, broad spectrum, cross-border trading network to make up for the weakness of its limited industrial base. This import-focused organization thus went beyond traditional espionage-aided efforts (as practiced by the USSR during and after the Manhattan project) or case-by-case purloining or diversion of useful material on the global market (as practiced by Israeli operatives). Even before the Pakistani network had fulfilled its primary task of supplying the national program, it began its transformation into an export-oriented venture. Libya, Iran, North Korea and a fourth country which remains officially unnamed became the main outlets of what became the world’s first private-sector (albeit government originated and ,presumably, supported)proliferation company which was only wound down after strong Western pressure on Pakistan after 9/11. Although **the** by-now richly documented **A.Q.Khan network** (24) appears to have ceased to function in its previous incarnation, it **has** powerfully **demonstrated that there is an** international market **for proliferation which other operators can expect to exploit**. Furthermore, budding, resource-weak nuclear powers have a strong incentive to cover the cost of their investment by selling or bartering their nuclear-related assets, including delivery systems. The fruits of state-to-state cooperation between Iran, North Korea and Pakistan are clearly apparent in the close-to-identical genealogy of their nuclear-capable ballistic missiles of the No-Dong/Ghauri/Shahab families displayed in military parades and test launches. Not all such cooperation consists of televised objects. Even in the absence of game-changing breakthroughs, technical trends facilitate both demand and supply-side proliferation. For the time being, the plutonium route towards the bomb remains essentially as easy and as difficult as from the earliest years of the nuclear era. Provided a country runs a (difficult-to-hide) research or a power reactor from which low-irradiated fuel can be downloaded at will (such as CANDU-type natural uranium reactors), **reprocessing is** a comparatively straightforward and **undemanding** task. Forging and machining a multiple-isotope metal which is notorious for its numerous physical states and chemical toxicity is a substantial challenge, with the companion complications of devising a reliable implosion mechanism. Nuclear testing is highly desirable to establish confidence in the end-result. **Opportunities for taking the plutonium-proliferation road may increase somewhat as new techniques** (such as pyro-processing) **come on stream**. Developments in the enriched uranium field have been more substantial in facilitating proliferation. **The development of lighter and more efficient centrifuges make it easier for a state to extract enriched uranium speedily in smaller and less visible facilities**. Dealing with the resulting military-level HEU is a comparatively undemanding task. **The long-heralded advent of industrially effective and reliable laser enrichment technology may eventually further increase ease of access**. Downstream difficulties would still remain. Although implosion-mechanisms are not mandatory, they are desirable in order both to reduce the critical mass of U235 for a nuclear explosion and to make for a lighter and smaller more-readily deliverable weapons package. In sum, incremental improvements increase the risk of proliferation. However, non-state actors are not yet, and will not be on the basis of known technical trends, in a position to master the various steps of the two existing military nuclear fuel cycles, which remain the monopoly of states. Non-state actors would need the active complicity from (or from accomplices within) states, or benefit from the windfall of state collapse, to acquire a military nuclear capability. The threat of nuclear terrorism continues to be subordinated to developments involving state actors, a remark which is not meant to be reassuring since such developments (see above) are increasingly likely as proliferation spreads to new states and as state failure threatens in the ‘arc of proliferation’ extending from the Mediterranean to North-East Asia. Furthermore, non-state actors can be satisfied with levels of nuclear reliability and performance which states could not accept. A difficult-to-deliver or fizzle-prone nuclear device would not provide a state with the level of deterrence needed to shield it from pre-emptive or retaliatory action, whereas a terrorist group would not be seeking such immunity. A road or ship-delivered imperfect device, which would be closer to a radiological bomb than to a fully-fledged atomic weapon would provide its non-state owners with immense potential. The road to a non-state device does not need to be as well-paved.

#### Prolif causes first strikes, use-or-lose pressures, and deterrence breakdowns

**Kroenig ’12** – assistant professor in the Department of Government at Georgetown

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**The spread of nuclear weapons poses a number of severe threats to international peace** and U.S. national security **including: nuclear war, nuclear terrorism, emboldened nuclear powers, constrained freedom of action, weakened alliances, and further nuclear proliferation**. This section explores each of these threats in turn. Nuclear War. The greatest threat posed by the spread of nuclear weapons is nuclear war. **The more states in possession of nuclear weapons, the greater the probability that** somewhere, someday, **there is a catastrophic nuclear war. A nuclear exchange between the two superpowers during the Cold War could have arguably resulted in human extinction** and a nuclear exchange between states with smaller nuclear arsenals, such as India and Pakistan, could still result in millions of deaths and casualties, billions of dollars of economic devastation, environmental degradation, and a parade of other horrors. To date, nuclear weapons have only been used in warfare once. In 1945, the United States used one nuclear weapon each on Hiroshima and Nagasaki, bringing World War II to a close. Many analysts point to sixty-five-plus-year tradition of nuclear non-use as evidence that nuclear weapons are unusable, but **it would be naïve to think that nuclear weapons will never be used again**. After all, analysts in the 1990s argued that worldwide economic downturns like the great depression were a thing of the past, only to be surprised by the dot-com bubble bursting in the later 1990s and the Great Recession of the late Naughts.[53] This author, for one, would be surprised if nuclear weapons are not used in my lifetime. **Before reaching a state of MAD, new nuclear states go through a transition period in which they lack a secure-second strike capability. In this context, one or both states might believe that it has an incentive to use nuclear weapons first**. For example, if Iran acquires nuclear weapons neither Iran, nor its nuclear-armed rival, Israel, will have a secure, second-strike capability. Even though it is believed to have a large arsenal, given its small size and lack of strategic depth, Israel might not be confident that it could absorb a nuclear strike and respond with a devastating counterstrike. Similarly, Iran might eventually be able to build a large and survivable nuclear arsenal, but, when it first crosses the nuclear threshold, Tehran will have a small and vulnerable nuclear force. **In these pre-MAD situations, there are at least three ways that nuclear war could occur. First, the state with the nuclear advantage might** believe it has a splendid first strike capability. In a crisis, Israel might, therefore, decide to launch a preemptive nuclear strike to disarm Iran’s nuclear capabilities and eliminate the threat of nuclear war against Israel. Indeed, this incentive might be further increased by Israel’s aggressive strategic culture that emphasizes preemptive action. **Second, the state with a small and vulnerable nuclear arsenal**, in this case Iran, **might feel** use ‘em or loose ‘em pressures. That is, if Tehran believes that Israel might launch a preemptive strike, Iran might decide to strike first rather than risk having its entire nuclear arsenal destroyed. Third, as Thomas Schelling has argued, **nuclear war could result due to the** reciprocal fear of surprise **attack**.[54] **If there are advantages to striking first, one state might start a nuclear war in the belief that war is inevitable and that it would be better to go first than to go second**. In a future Israeli-Iranian crisis, for example, Israel and Iran might both prefer to avoid a nuclear war, but decide to strike first rather than suffer a devastating first attack from an opponent. Even in a world of MAD**, there is a risk of nuclear war. Rational deterrence theory assumes nuclear-armed states are governed by rational leaders that would not intentionally launch a suicidal nuclear war**. This assumption appears to have applied to past and current nuclear powers, but there is no guarantee that it will continue to hold in the future. For example, Iran’s theocratic government, despite its inflammatory rhetoric, has followed a fairly pragmatic foreign policy since 1979, but it contains leaders who genuinely hold millenarian religious worldviews who could one day ascend to power and have their finger on the nuclear trigger. **We cannot rule out the possibility that, as nuclear weapons continue to spread, *one* leader will choose to launch a nuclear war, knowing full well that it could result in self-destruction. One does not need to resort to irrationality, however, to imagine a nuclear war under MAD**. Nuclear weapons may deter leaders from intentionally launching full-scale wars, but they do not mean the end of international politics. As was discussed above, nuclear-armed states still have conflicts of interest and leaders still seek to coerce nuclear-armed adversaries. This leads to the credibility problem that is at the heart of modern deterrence theory: how can you threaten to launch a suicidal nuclear war? Deterrence theorists have devised at least two answers to this question. First, as stated above, leaders can choose to launch a limited nuclear war.[55] This strategy might be especially attractive to states in a position of conventional military inferiority that might have an incentive to escalate a crisis quickly. During the Cold War, the United States was willing to use nuclear weapons first to stop a Soviet invasion of Western Europe given NATO’s conventional inferiority in continental Europe. As Russia’s conventional military power has deteriorated since the end of the Cold War, Moscow has come to rely more heavily on nuclear use in its strategic doctrine. Indeed, Russian strategy calls for the use of nuclear weapons early in a conflict (something that most Western strategists would consider to be escalatory) as a way to de-escalate a crisis. Similarly, Pakistan’s military plans for nuclear use in the event of an invasion from conventionally stronger India. And finally, Chinese generals openly talk about the possibility of nuclear use against a U.S. superpower in a possible East Asia contingency. Second, as was also discussed above leaders can make a “threat that leaves something to chance.”[56] They can initiate a nuclear crisis. **By playing these risky games of nuclear brinkmanship, states can increases the risk of nuclear war in an attempt to force a less resolved adversary to back down**. Historical crises have not resulted in nuclear war, but many of them, including the 1962 Cuban Missile Crisis, have come close. And scholars have documented historical incidents when accidents could have led to war.[57] When we think about future nuclear crisis dyads, such as India and Pakistan and Iran and Israel, there are fewer sources of stability that existed during the Cold War, meaning that there is a very real risk that a future Middle East crisis could result in a devastating nuclear exchange.

#### Prolif causes accidental nuclear war – high-alert and delegation increase the risk

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The proliferation optimist position, while having a distinguished pedigree, has several major problems. Many of these weaknesses have been chronicled in brilliant detail by Scott Sagan and other contemporary proliferation pessimists.[34] Rather than repeat these substantial efforts, I will use this section to offer some original critiques of the recent incarnations of proliferation optimism. First and foremost, proliferation optimists do not appear to understand contemporary deterrence theory. I do not say this lightly in an effort to marginalize or discredit my intellectual opponents. Rather, I make this claim with all due caution and with complete sincerity. A careful review of the contemporary proliferation optimism literature does not reflect an understanding of, or engagement with, the developments in academic deterrence theory in top scholarly journals such as the American Political Science Review and International Organization over the past few decades.[35] While early optimists like Viner and Brodie can be excused for not knowing better, the writings of contemporary proliferation optimists ignore the past fifty years of academic research on nuclear deterrence theory. In the 1940s, Viner, Brodie, and others argued that the advent of Mutually Assured Destruction (MAD) rendered war among major powers obsolete, but nuclear deterrence theory soon advanced beyond that simple understanding.[36] After all, great power political competition does not end with nuclear weapons. And nuclear-armed states still seek to threaten nuclear-armed adversaries. States cannot credibly threaten to launch a suicidal nuclear war, but they still want to coerce their adversaries. This leads to a credibility problem: how can states credibly threaten a nuclear-armed opponent? Since the 1960s academic nuclear deterrence theory has been devoted almost exclusively to answering this question.[37] And, unfortunately for proliferation optimists, the answers do not give us reasons to be optimistic. Thomas Schelling was the first to devise a rational means by which states can threaten nuclear-armed opponents.[38] He argued that **leaders cannot credibly threaten to intentionally launch a suicidal nuclear war, but they can** make a “threat that leaves something to chance.”[39] They can **engage in a process, the nuclear crisis, which increases the risk of nuclear war in an attempt to force a less resolved adversary to back down. As states escalate a nuclear crisis there is an increasing probability that the conflict will spiral out of control and result in an inadvertent or accidental nuclear exchange**. As long as the benefit of winning the crisis is greater than the incremental increase in the risk of nuclear war, threats to escalate nuclear crises are inherently credible. In these games of nuclear brinkmanship, the state that is willing to run the greatest risk of nuclear war before back down will win the crisis as long as it does not end in catastrophe. It is for this reason that Thomas Schelling called great power politics in the nuclear era a “competition in risk taking.”[40] This does not mean that **states** eagerly bid up the risk of nuclear war. Rather, they **face gut-wrenching decisions at each stage of the crisis. They can quit the crisis to avoid nuclear war, but only by ceding an important geopolitical issue to an opponent. Or they can the escalate the crisis** in an attempt to prevail, but only **at the risk of suffering a possible nuclear exchange.** **Since 1945 there were have been many high stakes nuclear crises** (by my count, there have been twenty**) in which “rational” states like the United States run a risk of nuclear war and inch very close to the** brink **of nuclear war**.[41] By asking whether states can be deterred or not, therefore, proliferation optimists are asking the wrong question. The right question to ask is: what risk of nuclear war is a specific state willing to run against a particular opponent in a given crisis? Optimists are likely correct when they assert that Iran will not intentionally commit national suicide by launching a bolt-from-the-blue nuclear attack on the United States or Israel. This does not mean that Iran will never use nuclear weapons, however. Indeed, it is almost inconceivable to think that a nuclear-armed Iran would not, at some point, find itself in a crisis with another nuclear-armed power and that it would not be willing to run any risk of nuclear war in order to achieve its objectives. If a nuclear-armed Iran and the United States or Israel have a geopolitical conflict in the future, over say the internal politics of Syria, an Israeli conflict with Iran’s client Hezbollah, the U.S. presence in the Persian Gulf, passage through the Strait of Hormuz, or some other issue, do we believe that Iran would immediately capitulate? Or is it possible that Iran would push back, possibly even brandishing nuclear weapons in an attempt to deter its adversaries? If the latter, there is a real risk that proliferation to Iran could result in nuclear war. **An optimist might counter that nuclear weapons will never be used**, even in a crisis situation, because states have such a strong incentive, namely national survival, to ensure that nuclear weapons are not used. **But, this** objection **ignores the** **fact** **that** **leaders operate under** competing pressures**. Leaders in nuclear-armed states also have *very strong incentives* to convince their adversaries that nuclear weapons could very well be used. Historically we have seen that in crises, leaders *purposely* do things like put nuclear weapons on high alert and delegate nuclear launch authority to low level commanders, purposely increasing the risk of** accidental nuclear war **in an attempt to force less-resolved opponents to back down**.

## Contention 2 Russia

#### Relations with Russia are declining now – expanded areas of cooperation are key

Gearan ’13

(Anne, “Sour U.S.-Russia Relations Threaten Obama’s Foreign Policy Agenda”, IRIB World Service, 1-15-2013, http://english.irib.ir/voj/analyses/commentaries/item/84492-sour-us-russia-relations-threaten-obama)

A poisonous unraveling of U.S. relations with Russia in recent months represents more than the failure of President Obama’s first-term attempt to “reset” badly frayed bilateral relations. It threatens pillars of Obama’s second-term foreign policy agenda as well.¶ From Syria and Iran to North Korea and Afghanistan, Russian President Vladimir Putin holds cards that he can use to help or hurt Obama administration objectives.¶ Obama badly needs Russian help to get U.S. troops and gear out of landlocked Afghanistan. He also wants Russian cooperation — or at least a quiet agreement not to interfere — on other international fronts.¶ Putin, however, appears to see little reason to help. Since his election last year to a third term as president, his political stock has risen among many Russians as he has confronted the West, and the United States in particular. The pro-democracy street demonstrations of a year ago have evaporated, leaving the former KGB officer in clear control.¶ In December, both countries passed punitive laws that capped a year of deteriorating relations. A U.S. law targeting Russia’s human rights record and a tit-for-tat law banning American adoption of Russian children reflected domestic politics and national chauvinism, and they reinforced many of the worst suspicions that each nation holds about the other.¶ The low point puts Obama in the uncomfortable position of deciding how far to bend to appease Putin, who began his tenure last spring by snubbing Obama’s invitation for an Oval Office visit.¶ Obama has long been expected to visit Russia this year, although no summit has been scheduled.¶ “The real question for Putin and Obama is, putting aside the issues on which they are just bound to disagree — like democracy and Syria — what are the issues that matter to them on which they can cooperate?” said Stephen Sestanovich, a Russia expert at the Council on Foreign Relations.¶ “The likelihood is that over the next term, for both of them, that is likely to be a shorter list than it was in the past four years.”¶ Limited leverage¶ Like the United States, Russia holds a veto in the U.N. Security Council, and its membership in other diplomatic clubs confers outsize international clout to the former superpower.¶ By saying no, Putin can stymie U.S. goals in matters far beyond his own shores — and far removed from Russia’s long-standing beef with the United States over the latter’s plans to erect a missile defense shield in Europe.¶ U.S. leverage is limited. Obama is unlikely to either drop the missile defense plan or revisit steps that have eased commercial trade between both nations. Russia appears less swayed by the prospect of arms-control concessions than in the past.¶ From Russia’s perspective, Obama has ignored or overridden its concerns on two major issues — missile defense and the military intervention in Libya. Both instances contributed to the Russian perception that the United States’ main leverage is its ability to roll over friends and foes alike.¶ No U.S. president since Ronald Reagan has had a better relationship with Russia in his second term than in the first, Sestanovich said. But none has started the second with as deep and recent a setback as the harsh exchanges of December.¶ Congress issued a broad denunciation of Russian human rights practices, applying new travel and financial restrictions on Russians accused of rights abuses. The law is named for a Russian lawyer who died in prison in 2009. Obama signed off on the measure, dropping objections he had voiced earlier.¶ Moscow called the legislation “odious.”¶ “We certainly understand the hidden agenda of this political game started by those who are against the improvement of Russian-American relations,” Russia’s Foreign Ministry said. “They are eager to use any pretext to punish Russia for its independent and principled position in international affairs.”¶ Russia retaliated by enacting the law banning American adoptions of Russian children, leaving hundreds of waiting families in limbo. The Dima Yakovlev law is named for a Russian-born toddler who died in 2008 after being left alone in a hot car by his adoptive American father. The Kremlin eased its position slightly Thursday, saying the law would not go into effect until next year.¶ Downward spiral¶ The Obama administration knew Putin would not be easy to deal with, but the rapid decline in relations was a surprise, according to officials and analysts.¶ The United States says that a new Russian law requiring organizations and journalists receiving international funding to register as foreign agents is intended to quash criticism of Putin’s government.¶ Putin expelled the U.S. Agency for International Development without notice in September, ending two decades of work that provided medical and other services alongside what he sees as subversive support for democracy.¶ Moscow next stunned Washington by announcing the end of an arms control agreement that has been a foundation of U.S.- Russian cooperation since the fall of the Soviet Union.¶ The 1991 pact had been renewed twice and, by U.S. figures, had allowed deactivation of more than 7,650 strategic warheads.¶ “Our overall approach remains to try to cooperate with Russia as much as we can on as many issues as we can,” including Iran, Afghanistan and Syria, said State Department spokeswoman Victoria Nuland.¶ “But we’re also going to be very clear and very frank when we disagree, as we do with regard to human rights practices, quality of democracy in Russia and as we have in the past on Syria and other things,” she said.¶ In some instances, the U.S. response has been tough. Secretary of State Hillary Rodham Clinton said last month that Russia is trying to reassert political and economic influence across nations that were once part of the Soviet Union.¶ “There is a move to re-Sovietize the region” in the guise of regional integration, Clinton told a group of lawyers and rights advocates in Ireland.¶ “Let’s make no mistake about it,” she said. “We know what the goal is, and we are trying to figure out effective ways to slow down or prevent it.”¶ Clinton’s unguarded remarks reflected U.S. dismay at the backsliding of political and press freedoms in Russia and neighboring states, and wider frustration with Moscow. Her warning, coming hours before she met Russia’s foreign minister for difficult talks about the civil war in Syria, also illustrated the paradox for Washington in condemning perceived Russian excesses while asking for Russian help.¶ Russia is a key ally of Syria and maintains a naval base on its Mediterranean coast. For a variety of reasons, Russia has refused to back attempts to challenge the rule of Syrian President Bashar al-Assad. The standoff effectively freezes any meaningful action against Assad nearly two years into a war that the United Nations estimates has killed more than 60,000 Syrians, mostly by foreign insurgents supported by the West, the US in particular.¶ The U.S. relationship with Russia is uneasy under the best of circumstances and has succeeded chiefly in areas of mutual security interest, such as arms control. Obama has been unable to expand those areas of cooperation, despite genial relations with Putin’s predecessor, Dmitry Medvedev.

#### Relations are neither resilient nor inevitable – only building new sources of trust into relations saves then

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(Andranik, professor at the Institute of International Relations in Moscow, “Russia and Obama's Second Term”, The National Interest, 1-30-2013, http://nationalinterest.org/commentary/russia-obamas-second-term-8037)

First, the problem here is that it is unrealistic to expect large, sovereign countries to share strategic interests with other countries that aren’t focused on a troublesome third country. Over the past fifty years, the sole example that comes to mind of a successful strategic dialogue is the American strategic outreach to China during the Nixon administration. It was initiated by Henry Kissinger, whose firm employs Tom Graham. The success of this dialogue can be explained by the perception in both the United States and China that the Soviet Union represented a threat to the existence of both; hence, their readiness to join forces against a common enemy.¶ Second, two countries can have convergent vital interests only if both are roughly equal in resources and power. Otherwise, the weaker one experiences a loss of sovereignty as a result of its smaller economic and military-political potential, and that negates the strategic character of the relationship.¶ Consider the widespread perception in the 1990s and at the beginning of the twenty-first century that Russia and the United States could forge a strategic relationship. It never happened because the United States felt it was so strong and self-sufficient that strategic cooperation came down to the American expectation that Russia should bend its own vital interests and submit to American foreign policy. Only then could peaceful, constructive and effective cooperation ensue. Graham and Trenin discuss, for example, current U.S. and Russian strategic interests with regard to China. But isn’t there a greater convergence in Russian and Chinese interests on the matter of containing Washington’s arrogant and unilateral foreign policy that attempts to dominate the world?¶ Regarding the development of Arctic resources, the United States’ refusal to sign the Convention on the Law of the Sea betrays a U.S. lack of interest in dividing Arctic resources in a way that coincides with international law. Rather, Washington wants to keep its hands untied for any action in the Arctic.¶ Strategic dialogue necessitates a certain level of trust between parties. But the talks between the two countries on the antimissile shield that the U.S. wishes to install in Europe testify to the lack of such trust. Americans insist that the shield is designed to parry hypothetical Iranian missiles; but a succession of U.S. presidents and other high-level officials also insist that the idea of a nuclear Iran is unacceptable. They declare that, should Iran continue to advance down the road to a nuclear weapon, the United States or Israel would destroy the program’s infrastructure.¶ With the emergence of a multipolar world, the need arises for power balances in various regions. Thus do we see countries attempting to protect their national interests by forming ad hoc coalitions instead of full-time alliances, whose time has passed, in the view of many analysts. This is why strategic dialogue, while perhaps notionally desirable, is not really feasible because it is difficult to determine which questions are tactical and which are strategic. For Moscow, a matter of strategic discussion with the United States is U.S. interference in Russia’s internal affairs. Another is America’s interference in countries in the post-Soviet sphere. But it is difficult to imagine any U.S. administration engaging in serious discussions on such matters without being attacked domestically for betraying U.S. national and geopolitical interests. It is obvious that there cannot be entirely cooperative or entirely competitive relations between two large countries with intersecting and conflicting interests.

#### Cooperation on nuclear energy is the key issue – it builds stakeholders, leverage, and bridges the trust gap – solves alt causes, and this evidence assumes Putin

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(Richard, World Politics Review Senior Editor, “Global Insights: U.S.-Russia Arms Control Prospects Under Putin”, World Politics Review, 3-6-2012, <http://www.worldpoliticsreview.com/articles/11681/global-insights-u-s-russia-arms-control-prospects-under-putin>)

This weekend’s election in Russia has unsurprisingly returned Vladimir Putin to the country’s presidency. In contrast to the preordained outcome of the Russian voting, the winner of this November’s U.S. presidential election is not yet known. But whoever occupies the White House in 2013 will need to consider the bilateral arms control relationship with Russia in coming years. And although the implementation of the New START agreement is going well, there are sharp differences in Washington and Moscow over where to go next. Moscow’s main concerns focus on U.S. missile defense and U.S. superiority in conventional forces. Both conditions work against Russia’s willingness to cut its offensive nuclear forces even further, which is the U.S. priority, especially with regard to the issue of Russian tactical nuclear weapons. In his recent Moscow News article on Russian foreign policy, Putin railed against what he called the U.S. quest for “absolute security.” In his words, the problem is that “absolute invulnerability for one country would in theory require absolute vulnerability for all others.” Instead, Putin again insisted on the right of all states to equal security, as well as Russia’s right to maintain the capacity to attack the United States with nuclear weapons if necessary. Putin argued that faced with U.S. plans for deploying a European-based missile defense system, Russia had two options: a symmetrical response of creating its own system or an asymmetrical strategy of strengthening Russia’s offensive strategic weapons to ensure that they are capable of overcoming any NATO system and thereby preserving mutual deterrence. The first choice being too costly and technically challenging, he said Russia would follow the second course. In Moscow’s view, the problem of equal security also applies to the imbalance in conventional forces in Europe. The United States recently followed Russia’s lead in ending implementation of the original Conventional Forces in Europe (CFE) Treaty. Russian officials have also given up on the idea of ratifying the Adapted CFE Treaty, since NATO insists that Russia withdraw its military forces from Georgia as part of its Istanbul Commitments. Given these complications, Russians are uninterested in various U.S. proposals for a “grand bargain” that would seek to address the CFE and tactical nuclear weapons in Europe simultaneously. Russian policymakers have also expressed a new complaint in the form of their open doubt over the United States’ ability to ratify the kinds of binding legal agreements that Moscow demands. They note the difficulties that the Obama administration had in securing U.S. Senate ratification of New START, which required a White House commitment to modernize the U.S. nuclear arsenal, even if that is now falling victim to budgetary pressures. Russians insist that they want another legally binding agreement to constrain U.S. missile defenses. The Obama administration has been offering a politically binding agreement on missile defense, but has refused to accept legally binding constraints on how the missile defense program might develop. Although U.S. officials stress that they will not try to negate Russia’s nuclear deterrent, whose massive size and great sophistication would make such an effort impossible in any case, Congress would never accept a legally binding agreement that commits the United States to deliberately constrain its ability to protect Americans and their allies from foreign missile attacks. At best, the administration is willing to offer nonbinding political guarantees that they will not seek to negate Russia’s strategic nuclear deterrent. Russian officials refuse to accept mere political declarations on such important issues. They claim the United States earlier violated such agreements when it enlarged NATO after the Cold War and moved NATO forces into former Soviet-bloc states. In contrast, they note that even when the United States withdrew from the Anti-Ballistic Missile Treaty in 2001, the predictable and legal manner in which the withdrawal was carried out reassured Putin and others in Moscow who opposed the U.S. decision. Russians also point out that political agreements lend themselves to different interpretations depending on who is viewing the issue. Although they do not seem to worry about another Obama presidency, they claim to fear that some future U.S. administration will try to expand U.S. missile defenses to be able to intercept Russian strategic missiles. These differences highlight the uncertain climate surrounding the nuclear arms control agenda, which is compounded by Russian concerns about U.S. space, cyber and other weapons. But progress could be possible in several other areas. First, Russians are eager to help counter nuclear terrorism through the mechanisms of the Nuclear Security Summit forums and the Global Initiative to Combat Nuclear Terrorism. Both countries want to revive the civilian use of nuclear power under safe and secure conditions, making sure that those countries now considering starting nuclear energy programs receive training and guidance on how to avoid accidents and protect the nuclear material at their facilities. Second, Russian-U.S. collaboration on regional proliferation challenges is important, since both countries are veto-wielding members of the U.N. Security Council. Russian officials are unlikely to accept any more U.N. sanctions on Iran given their different assessment of Iranian motives, unless incontrovertible evidence that Tehran is seeking a nuclear weapon emerges. But cooperation is possible regarding North Korea, where Russia and the United States share the goal of stabilizing the Korean Peninsula. Third, the Carnegie Endowment and other institutions have been developing a number of potential informal confidence and transparency-building measures that the two sides could pursue. These would help to lead toward a new strategic arms control treaty in a few years if the bilateral relationship improves, but could serve a valuable stabilizing function even without one. These measures include renewed efforts to expand the application of restrictions in the Intermediate Nuclear Forces Treaty and other bilateral arms control agreements to other countries, as well as measures to increase transparency regarding the capacity of each sides’ nuclear weapons-production complexes to construct new nuclear forces in any attempt to rapidly break out of a strategic arms control agreement. Finally, Russians are eager to work on civilian nuclear energy cooperation with the United States. The two sides’ recently ratified 123 agreement allows Russian and U.S. firms to cooperate to produce new types of civilian power reactors that would be less prone to proliferation than existing models. Such collaboration could prove very useful in helping develop new commercial stakeholders in both countries that have an interest in maintaining good Russian-U.S. relations. The economic relationship between Russia and the United States remains relatively undeveloped, since Americans buy Russia’s main exports -- oil, gas and weapons -- elsewhere, while various impediments hobble mutual investments. At present, the constituencies favoring strong bilateral ties in both countries are small, consisting mainly of arms control advocates and foreign policy experts. As a result, the Russian-U.S. agenda is still dominated by *Cold War*-type issues, including nuclear arms control, which position the two parties in an adversarial relationship. Only by moving away from this orientation can both sides begin to overcome the mutual confidence gap that *exacerbates* many of their other differences. Though Putin’s return to the presidency could augur a hard line on a number of issues where the U.S. and Russian positions diverge, his pragmatism and opportunism could lead to progress in the areas where the two sides’ interests overlap.

#### Plan sparks reprocessing cooperation ---- puts the US and Russia back on the same side

Pifer et al ’10 – from brookings

(Steven, Joseph Cirincione, Clifford Gaddy, “Resetting U.S.-Russian Leadership on Nuclear Arms Reductions and Non-Proliferation”, Brookings Institution, January 2010, http://www.brookings.edu/~/media/research/files/papers/2010/1/us%20russia%20nuclear%20pifer/01\_us\_russia\_nuclear\_pifer.pdf)

Reprocessing (recycling) of spent nuclear fuel is highly contentious. Proponents cite a fuel security argument. Some have also argued that, because reprocessing burns up hazardous materials, it helps solve the waste problem. The United States and other opponents of reprocessing counter that it is not cost-effective and that any other advantages it may have are far outweighed by the risk of proliferation of the most sensitive nuclear materials and technologies. Reprocessing involves even more urgent proliferation issues than enrichment. South Korea is a case in point. South Korea has an agreement with the United States, which will expire in 2014, not to reprocess spent fuel it received from the United States. A South Korean decision to reprocess its spent fuel domestically after 2014 could increase incentives for other countries to pursue reprocessing. This case exemplifies the danger that, when a country chooses reprocessing for economic security reasons, it may trigger efforts by other nations to seek the technology for military security reasons. Under the Bush Administration’s GNEP initiative, the United States retreated from its traditional stance of opposing all reprocessing. The Obama administration has returned to the traditional U.S. position. Since Russia has long been a stalwart supporter of reprocessing and fast reactors, this again puts the United States and Russia on opposite sides of the reprocessing debate. The United States and Russia could engage in a frank discussion aimed at clarifying and ultimately reconciling their positions on reprocessing of spent nuclear fuel as a prerequisite to any substantial joint action in reducing the proliferation risk from reprocessing. Regardless of whether or not nations choose to develop their own enrichment and reprocessing facilities, the problem of disposal and storage of nuclear waste will continue to grow. Long-term storage of the most hazardous and militarily sensitive nuclear waste materials is the paradigmatic problem requiring not only cooperation among states but bold leadership to achieve that cooperation. No country has yet been willing to definitively offer its territory for an international waste storage center. Russia has come closest, with a proposal for an international long-term waste storage and disposal facility. The United States could back previous Russian proposals for an international long-term waste storage and disposal facility in Russia. New technology can help reduce the proliferation risk inherent in expansion of nuclear power by developing more proliferation-resistant fuel cycles (including use of the relatively proliferation-resistant fuel, thorium), new reactor designs (for instance, “battery-like,” replaceable modular units) and technologies for waste management. Both GNEP and GNPI have strong R&D components. The United States has kept the R&D component of GNEP, albeit at a reduced funding level. The U.S. and Russian governments could continue to fund and expand domestic and multinational R&D programs related to proliferation-resistant technologies for the fuel cycle and reactor design. Increasing integration of the world nuclear industry, both through mergers and acquisitions and through commercial partnerships, can lead to greater efficiency in the sector and is generally to be welcomed. Integration also calls for more government-industry coordination and cooperation **on a multilateral basis**. The United States and Russia could support further collaboration between their countries’ commercial suppliers in the nuclear industry. **They should** remove barriers **to such collaboration.**

#### Reprocessing builds sustainable U.S.-Russia nuclear cooperation

Einhorn et al ‘8 - CSIS

(Robert, Rose Gottemoeller, Fred McGoldrick, Daniel Poneman, Jon Wolfsthal, “The U.S.-Russia Civil Nuclear Agreement A Framework for Cooperation”, Center for Strategic and International Studies, May 2008, http://csis.org/files/media/csis/pubs/080522-einhorn-u.s.-russia-web.pdf)

Advanced Fuel-Cycle Research and Spent Fuel Storage Technologies. Russia is seeking to close its nuclear fuel cycle, meaning that it hopes to create a self-sustaining energy source by reusing spent nuclear fuel and minimizing the volumes of waste that need to be processed and disposed of. This will require considerable work in the area of spent nuclear fuel storage and treatment as well as use of plutonium-based fuels (both MOX and other types) in advanced fast reactors. The United States and Russia both have experience in conventional, wet reprocessing that could be used to support research into newer approaches for spent fuel recycling and waste management. In particular, the United States has been developing a “dry” reprocessing technology for several decades that is of interest to Russia for management of fast reactor fuels. Russia has pursued recycling technologies more concertedly over the past several decades, but it may still benefit from U.S. and international research on these programs. Recycling technologies are particularly sensitive since they can be used to recover materials directly usable in nuclear weapons and are subject to special provisions under U.S. law. Also, Russian officials in the past have tried to use the idea of an International Spent Fuel Storage Center (ISFSC) to help build internal support for the development of technologies needed for extended spent fuel storage in Russia. Prolonged spent fuel storage could provide important additional time to develop advanced fuel-cycling technologies. The reduced interest in Russia providing spent fuel storage services for third countries (see below), however, does not reduce Russia’s need to develop more advanced dry and wet fuel storage capabilities as it pursues a closed cycle. More important, however, is the need for Russia to develop alternatives to current wet reprocessing technologies that produce large amounts of radioactive waste. Russia is keenly interested in developing more advanced and lower waste product reprocessing streams and has expressed support for working with the U.S. GNEP program, which envisions several kinds of separation technologies. The head of Russia’s Rosatom, Sergei Kiriyenko, has said that U.S.-Russia peaceful nuclear cooperation would include joint development of new nuclear technologies, including fourthgeneration reactors. In this connection it is worth noting that, on July 13, 2006, the Generation IV International Forum (GIF), a group of the world’s leading nuclear nations working together to develop more efficient and less waste-intensive advanced reactors to meet future energy challenges, voted unanimously to extend an offer of membership to China and Russia.

#### The plan would build government-industry coordination between the U.S. and Russia

Pifer et al ’10 – brookings

(Steven, Joseph Cirincione, Clifford Gaddy, “Resetting U.S.-Russian Leadership on Nuclear Arms Reductions and Non-Proliferation”, Brookings Institution, January 2010, http://www.brookings.edu/~/media/research/files/papers/2010/1/us%20russia%20nuclear%20pifer/01\_us\_russia\_nuclear\_pifer.pdf)

Vice President Biden announced the Obama administration’s intention to reset relations with Russia in a February 7, 2009 speech to the Munich Security Conference. Reset thereafter became the watchword as the administration set about restoring a U.S.-Russian relationship that, by the end of 2008, had fallen to its lowest point since the collapse of the Soviet Union in 1991. During their first meeting in London on April 1, 2009, Presidents Obama and Medvedev discussed ways to build a more positive relationship. They attached particular importance to nuclear arms reductions and non-proliferation: “As leaders of the two largest nuclear weapons states, we agreed to work together to fulfill our obligations under Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and demonstrate our leadership in reducing the number of nuclear weapons in the world. We committed our two countries to achieving a nuclear free world… We agreed to pursue new and verifiable reductions in our strategic offensive arsenals in a step-by-step process… We intend to carry out joint efforts to strengthen the international regime for non-proliferation of weapons of mass destruction and their means of delivery… Together, we seek to secure nuclear weapons and materials, while promoting the safe use of nuclear energy for peaceful purposes.” 1 The focus on nuclear weapons is understandable. Detonation of a nuclear device in an American or Russian city would be a catastrophic event, to say nothing of the consequences of large-scale use of nuclear weapons in an inter-state conflict. The risk increases with the spread of nuclear weapons and the threat that they could fall into the hands of a terrorist group that might not be deterrable. It is difficult to imagine anything that would pose a greater threat to American national security. Broadened and sustained U.S.-Russian leadership on nuclear arms reductions and nuclear non-proliferation is necessary to strengthen global security and the NPT regime. As the United States and Russia control 95 percent of the world’s nuclear weapons, their efforts to enhance the NPT regime at the May 2010 NPT review conference will have little credibility if they are not reducing their nuclear arsenals. U.S.-Russian leadership on nuclear issues can also be good for the broader bilateral relationship between Washington and Moscow. U.S. and Russian interests coincide on many issues regarding nuclear non-proliferation, including finding ways to make civil nuclear energy available while minimizing the attendant proliferation risks. Expanding cooperation on these issues, including leading joint efforts in the non-proliferation field, can contribute to a more positive and cooperative bilateral relationship as well as reducing the risks of nuclear proliferation.

#### That sends a new signal of improving relations

**Rojansky ’10 –** deputy director Russia and Eurasia Program at Carnegie

(Matthew Rojansky, “As New START Debate Rages, Quiet Nuclear Progress With Russia”, U.S. News and World Report, 12-9-2010, <http://www.usnews.com/opinion/articles/2010/12/09/as-new-start-debate-rages-quiet-nuclear-progress-with-russia>)

Beyond benefiting relations, cooperation on peaceful nuclear energy makes financial sense. The United States and Russia have invested substantially in civilian nuclear research and development, and both share basic interests in capitalizing on the global "nuclear energy renaissance" by developing proliferation-resistant reactor technologies, increasing environmental safety, and making nuclear energy more economically competitive. And when it comes to civil nuclear power, Russia brings a lot to the table. For instance, the United States does not operate so-called "fast breeder" reactors and reprocessing facilities that don't produce nuclear waste that can be used for weapons, but Russia does. And, while the United States hasn't built a single new n uclear power plant since 1973, Russia opened its first fast breeder reactor that very year and plans to bring 26 new nuclear facilities online before 2030. And the Kremlin has already allocated some $3.6 billion for research on fast breeders and other projects under a program dedicated to the next generation of nuclear technology. **With U.S. support, Russia** has **developed** a **sophisticated infrastructure** to securely store spent nuclear fuel—and Moscow even offered to store and reprocess spent fuel from the United States, while no American state has been willing to do the same. Russian companies already supply roughly half of the uranium consumed in U.S. and European power plants and will need to supply more in the future as the United States is only able to produce a fifth—at most—of its nuclear fuel stock domestically. Fortunately, Russia's nuclear industry is interested in expanding its uranium enrichment and **reprocessing activity in the U.S. market and** potentially **cooperating with American firms,** including GE and Westinghouse, on bids for contracts in other countries. Closer U.S.-Russia cooperation on nuclear power means better nuclear security. As a major player in civil nuclear markets worldwide, Russia has a unique window into potential risks and opportunities to insist on measures that protect sensitive sites and technologies. Russia, with U.S. support, also has the chance to compete more effectively with China's nuclear industry, which is less scrupulous in its nonproliferation commitments. The importance of partnering with Russia was made clear during Secretary Clinton's recent trip to Central Asia. Belarus, the former Soviet republic, agreed to give up its stock of highly enriched uranium by 2012 in return for U.S. help in developing a new nuclear power reactor. But Russia has had its eye on this potentially lucrative project, and has the right experience to work effectively with Belarus's Soviet-era infrastructure. Washington should cooperate—instead of compete—with Moscow to build an environmentally safe, proliferation-proof reactor in Belarus. A quarter century after the Chernobyl disaster, **this would be a *powerful symbol* that both sides can move beyond the Cold War legacy.**

#### That resiliency and motivation that spills up to policymakers

Einhorn et al ‘8 – from CSIS

(Robert, Rose Gottemoeller, Fred McGoldrick, Daniel Poneman, Jon Wolfsthal, “The U.S.-Russia Civil Nuclear Agreement A Framework for Cooperation”, Center for Strategic and International Studies, May 2008, http://csis.org/files/media/csis/pubs/080522-einhorn-u.s.-russia-web.pdf)

Russian officials and industry representatives also expect, rightly or wrongly, that a 123 Agreement may improve U.S.-Russia bilateral relations generally. Although that relationship has become strained in recent years on a variety of fronts, groups within Russia—including the nuclear industry—are eager to maintain and expand cooperative ties in areas where interests converge, including the future expansion of nuclear energy. As leaders in nuclear energy technology with a strong incentive to prevent the further spread of nuclear weapons, Russia and the United States have a common stake in expanding the use of nuclear power in a way that minimizes the risk of proliferation. With the current U.S. administration looking to revive the U.S. nuclear industry and explore approaches to the fuel cycle similar to those long advanced in Russia, the outlook on civil nuclear energy in both countries has never been closer. Cooperation in this area can provide policymakers on both sides an incentive to maintain positive relations, especially in trying times. Also, beyond the technical benefits of a 123 Agreement, there is a sense in Russian technical and political circles than the implementation of a 123 Agreement would be a useful step in putting the U.S.-Russia security relationship on a more stable footing. Many in Russia have complained that past security and technical assistance has had too much of a donor (U.S.)–recipient (Russia) quality, which has hampered cooperation in some areas. Changing this dynamic could lead to Russia taking greater responsibility for internal nuclear security efforts, including possibly expanding existing efforts to additional civil facilities and into new areas of work related to counterterrorism.

#### Declining relations causes nuclear war – makes miscalculation more likely and deterrence doesn’t check

Barrett et al ’13 – researchers at various risk think tanks

(Anthony M. Barrett, Seth D. Baum, and Kelly R. Hostletler, prominent members/researchers at the Global Catastrophic Risk Institute, Center for Research on Environmental Decisions at Columbia, and the Department of Geography at Penn State, “Analyzing and Reducing the Risks of Inadvertent Nuclear War Between the United States¶ and Russia”, forthcoming in Science and Global Security. This version dated 6 January 2013.)

War involving significant fractions of the U.S. and Russian nuclear arsenals, which are¶ by far the largest of any nations, could have globally catastrophic effects such as severely¶ reducing food production for years,¶ 1,2,3,4,5,6¶ potentially leading to collapse of modern civilization¶ worldwide and even the extinction of humanity.¶ 7,8,9,10¶ Nuclear war between the US and Russia¶ could occur by various routes, including accidental or unauthorized launch; deliberate first attack¶ by one nation; and inadvertent attack. In an accidental or unauthorized launch or detonation,¶ system safeguards or procedures to maintain control over nuclear weapons fail in such a way that¶ a nuclear weapon or missile launches or explodes without direction from leaders. In a deliberate¶ first attack, the attacking nation decides to attack based on accurate information about the state of¶ affairs. In an inadvertent attack, the attacking nation mistakenly concludes that it is under attack¶ and launches nuclear weapons in what it believes is a counterattack.¶ 11,12¶ (Brinkmanship¶ strategies incorporate elements of all of the above, in that they involve deliberate manipulation of¶ the risk of otherwise unauthorized or inadvertent attack as part of coercive threats that “leave¶ something to chance,” i.e., “taking steps that raise the risk that the crisis will go out of control¶ and end in a general nuclear exchange.”¶ 13,14¶ ) ¶ Over the years, nuclear strategy was aimed primarily at minimizing risks of intentional¶ attack through development of deterrence capabilities, though numerous measures were also¶ taken to reduce probabilities of accidents, unauthorized attack, and inadvertent war.¶ 15,16,17¶ For¶ purposes of deterrence, both U.S. and Soviet/Russian forces have maintained significant¶ capabilities to have some forces survive a first attack by the other side and to launch a¶ subsequent counter-attack. However, concerns about the extreme disruptions that a first attack¶ would cause in the other side’s forces and command-and-control capabilities led to both sides’¶ 1development of capabilities to detect a first attack and launch a counter-attack before suffering¶ damage from the first attack.¶ 18,19,20¶ Many people believe that with the end of the Cold War and with improved relations¶ between the United States and Russia, the risk of East-West nuclear war was significantly¶ reduced.¶ 21,22¶ However, it has also been argued that inadvertent nuclear war between the United¶ States and Russia has continued to present a substantial risk.¶ 23,24,25,26,27,28,29,30,31,32,33¶ While the¶ United States and Russia are not actively threatening each other with war, they have remained¶ ready to launch nuclear missiles in response to indications of attack.¶ 34,35,36,37,38¶ False indicators of nuclear attack could be caused in several ways. First, a wide range of¶ events have already been mistakenly interpreted as indicators of attack, including weather¶ phenomena, a faulty computer chip, wild animal activity, and control-room training tapes loaded¶ at the wrong time.¶ 39¶ Second, terrorist groups or other actors might cause attacks on either the¶ United States or Russia that resemble some kind of nuclear attack by the other nation by actions¶ such as exploding a stolen or improvised nuclear bomb,¶ 40,41,42¶ especially if such an event occurs¶ during a crisis between the United States and Russia.¶ 43¶ A variety of nuclear terrorism scenarios¶ are possible.¶ 44¶ Al Qaeda has sought to obtain or construct nuclear weapons and to use them¶ against the United States.¶ 45,46,47¶ Other methods could involve attempts to circumvent nuclear¶ weapon launch control safeguards or exploit holes in their security.¶ 48,49¶ It has long been argued that the probability of inadvertent nuclear war is significantly¶ higher during U.S.-Russian crisis conditions,¶ 50,51,52,53¶ with the Cuban Missile Crisis being a prime¶ historical example of such a crisis.¶ 54,55,56,57,58¶ It is possible that U.S.-Russian relations will¶ significantly deteriorate in the future, increasing nuclear tensions.¶ 59¶ There are a variety of ways¶ for a third party to raise tensions between the United States and Russia, making one or both¶ nations more likely to misinterpret events as attacks.¶ 60,61,62,63

#### And, U.S.-Russia nuclear cooperation would accelerate Rosatom’s nuclear modernization plans

Dewey et al ’10

(Taylor, Logan Ensign, Stanford University, Natalya Matytsyna, The Higher School of Economics, Polina Beresneva, Moscow State University, Stanford U.S. Russia Forum Journal 2009-2010, <http://joinsurf.com/news/62/16/SURF-2009-2010-Journal-Article-4-of-8>)

Russia is currently pursuing the strategy of expanding its global role as an energy provider. This role will necessitate expanding the domestic production of nuclear energy as a way of freeing up fossil fuels, particularly natural gas, for export. Inherent in this strategy is the expansion of Russia’s nuclear export business to transform Rosatom into a major player in the world nuclear energy market and Russia into the default country for nuclear fuel-cycle services. Russia’s interest in concluding a nuclear cooperation agreement with the United States is grounded, in large part, in its desire to implement this strategy. Although Russia is not dependent on obtaining access to US technology and is already actively pursuing its nuclear energy goals regardless, cooperation with the US could help to render Russia’s strategy more efficient. While Russia’s nuclear industry has been far more active than its US counterpart over the past several decades, there are still gaps in the Russian nuclear engineering chain and areas where US technical expertise could improve the outlook for Russian exports. This is especially true in the area of control and safety systems, known as automated control and technical processes (ACPS). To improve their ability to pursue nuclear exports in larger, more lucrative and more internationally acceptable markets, Russian officials and industry are increasingly interested in developing joint initiatives with the United States and other countries. In the past, China and other countries have asked that some reactors purchased from Russia be equipped with non-Russian made ACPS. Partnering with German and French companies appears to have helped Russian firms win bids to build two reactors in Bulgaria. Complete control systems cannot be exported from the United States unless the recipient or partner has a 123 Agreement in place. Beyond the export market, Russian officials have expressed interest in enhancing cooperation with US companies to increase the efficiency and safety of reactors already operating in Russia. In addition, the United States has valuable expertise in the area of reactor life extension. Russia is also eager to reduce the maintenance costs of its nuclear reactor operations. According to official Russian government projections, Russia’s nuclear operators are hoping to reduce their maintenance costs by 20 percent by the year 2015. The United States nuclear industry has already reduced its maintenance costs by almost half (from 3.4 to 1.68 cents/kilowatt hour) since the mid- 1980s. The US experience may be of real value as Russia works to meet its targets.

#### That’s key to Russia’s economy

World Nuclear News ’12

(“Russia speeds up nuclear investment”, 11-22-2012, http://www.world-nuclear-news.org/NP\_Russia\_speeds\_up\_nuclear\_investment\_2211121.html)

Russian leaders have affirmed the strategic and economic importance of nuclear technology to the country, announcing that spending will rise and a major development program will be accelerated.¶ Nuclear power was praised extensively by prime minister Dmitry Medvedev at Novovoronezh nuclear power plant yesterday when he chaired a special meeting on economic modernisation and innovation. Nuclear technology is one of Russia's leading industries, said Medvedev, with applications in all spheres of life: "the economy, the power industry, space exploration, aviation, medicine, agriculture, production of composite materials and informatics."¶ Accordingly, as the state nuclear corporation, Rosatom invests in research and development to the tune of RUB23 billion ($737 million) per year, as part of an annual state budget for nuclear programs of RUB60 billion ($1.9 billion). The head of Rosatom, Sergei Kiriyenko, told the meeting that plans foresee the figure for research and development reaching RUB42 billion ($1.3 billion) in 2020. This is about ten times its value in 2007 when the country began consolidating its nuclear activities within Rosatom. One key program for the country is being brought forward by a decade. Kiriyenko said the federal target program up to 2020 had been intended to demonstrate incoming fast reactor technology and associated fuel-cycle infrastructure by that date so that it can come into use by 2030. Now, he said, the goal is to have 'not individual elements' being demonstrated, 'but a full range' in operation by 2020.¶ Two months ago Rosatom confirmed a plan to install the pilot BREST-300 lead-cooled fast reactor at the Siberian Chemical Combine (SCC) at Seversk in the Tomsk region. This would also mean the construction of the first plant to make the reactor's dense nitride fuel elements. Plans would see the construction of this 300 MWe reactor start in 2016 so that it could generate power from 2020. It would be the forerunner of a nationwide series of 1200 MWe versions.¶ The SCC already hosts a uranium enrichment plant with capacity of 3 million separative work units per year that is able to handle uranium recovered from reprocessing. This is complimented by a mixed-oxide (MOX) fuel plant, while a uranium conversion plant is also being built and planned for operation after 2016 to meet all Russian demand.¶ 'We will gather everything at the site,' said Kiriyenko, referring to the SCC. He added that Rostom would soon ask the government for funding so that it can create an 'experimental circuit to close the nuclear fuel cycle', also to be set up at the SCC.¶ Rosatom's long-term strategy up to 2050 involves moving to inherently safe nuclear plants using fast reactors with a closed fuel cycle and MOX fuel. The country's federal target program envisages nuclear providing 45-50% at that time, with the share rising to 70-80% by the end of the century.

#### Russian economic collapse causes extinction

Filger ‘9

(Sheldon, Author and Writer @ the Huffington Post, Former VP for Resource Development at New York’s United Way, “Russian Economy Faces Disastrous Free Fall Contraction,” http://www.globaleconomiccrisis.com/blog/archives/356)

In Russia historically, economic health and political stability are intertwined to a degree that is rarely encountered in other major industrialized economies. It was the economic stagnation of the former Soviet Union that led to its political downfall. Similarly, Medvedev and Putin, both intimately acquainted with their nation’s history, are unquestionably alarmed at the prospect that Russia’s economic crisis will endanger the nation’s political stability, achieved at great cost after years of chaos following the demise of the Soviet Union. Already, strikes and protests are occurring among rank and file workers facing unemployment or non-payment of their salaries. Recent polling demonstrates that the once supreme popularity ratings of Putin and Medvedev are eroding rapidly. Beyond the political elites are the financial oligarchs, who have been forced to deleverage, even unloading their yachts and executive jets in a desperate attempt to raise cash. Should the Russian economy deteriorate to the point where economic collapse is not out of the question, the impact will go far beyond the obvious accelerant such an outcome would be for the Global Economic Crisis. There is a geopolitical dimension that is even more relevant then the economic context. Despite its economic vulnerabilities and perceived decline from superpower status, Russia remains one of only two nations on earth with a nuclear arsenal of sufficient scope and capability to destroy the world as we know it. For that reason, it is not only President Medvedev and Prime Minister Putin who will be lying awake at nights over the prospect that a national economic crisis can transform itself into a virulent and destabilizing social and political upheaval. It just may be possible that U.S. President Barack Obama’s national security team has already briefed him about the consequences of a major economic meltdown in Russia for the peace of the world. After all, the most recent national intelligence estimates put out by the U.S. intelligence community have already concluded that the Global Economic Crisis represents the greatest national security threat to the United States, due to its facilitating political instability in the world. During the years Boris Yeltsin ruled Russia, security forces responsible for guarding the nation’s nuclear arsenal went without pay for months at a time, leading to fears that desperate personnel would illicitly sell nuclear weapons to terrorist organizations. If the current economic crisis in Russia were to deteriorate much further, how secure would the Russian nuclear arsenal remain? It may be that the financial impact of the Global Economic Crisis is its least dangerous consequence.

#### Finally, it would transition Russia away from PUREX – prevents more loose material

Dewey et al ’10

(Taylor, Logan Ensign, Stanford University, Natalya Matytsyna, The Higher School of Economics, Polina Beresneva, Moscow State University, Stanford U.S. Russia Forum Journal 2009-2010, <http://joinsurf.com/news/62/16/SURF-2009-2010-Journal-Article-4-of-8>)

The US government is pursuing several international nuclear energy programs, including the development of advanced, proliferation-resistant fuel cycles. The hope is to design and develop new fuel-cycle approaches that will enable nuclear power to expand without increasing the risk of nuclear proliferation. These two goals (expanding nuclear energy and developing new nuclear concepts), combined with a policy that seeks to avoid the worldwide spread of uranium enrichment and plutonium reprocessing facilities, has led the United States to propose broader international cooperation with a number of advanced nuclear states, including Russia. Of particular interest from a nonproliferation point of view is how a proposed 123 Agreement might affect U.S-Russia relations on the long-standing and often controversial issue of the recycling and civil use of plutonium. In the United States, the newly formed efforts to address the future of the fuel cycle include technical efforts to develop fuel processing technologies that are more proliferation resistant than the PUREX (Plutonium-URanium EXtraction) process currently being used in Russia and France, which leaves waste usable for building weapons. Cooperation on recycling is somewhat controversial since the US nuclear fuel cycle is currently built around the once-through fuel cycle where spent fuel (containing uranium and weapon-usable plutonium) is stored intact while awaiting permanent geologic disposal. It is hoped that the cooperative development of new approaches with Russia will help wean states, including Russia, off of PUREX and other processes that could produce separated direct weapon usable material and will help discourage the spread of enrichment and reprocessing technologies.

#### That spent nuclear fuel would be vulnerable to theft – and terrorists would have the means and motive to launch an attack on the U.S.

Menesick ’11 – public policy analyst

(Stephen, “Preventing the Unthinkable: An Overview of Threats, Risks, and US Policy Response to Nuclear Terrorism,” Global Security Studies, p. 5-6, http://globalsecuritystudies.com/Menesick%20Nuclear%20Final.pdf)

The outlook in Russia is bleaker. After the Cold War, many Russian nuclear weapons were extremely vulnerable—left nearly unsecured across the country. Since then, the Russian government has made a considerable effort to strengthen security and upgrade technology that guards nuclear weapons and material (Bunn, 2006). However, significant risks still remain. Because of the sheer quantity of weapons in Russia, and the difficulty of managing such a large number of weapons, external risks of outright theft are always a concern. Reports by Russian officials have confirmed that terrorists have conducted intelligence gathering operations on Russian stockpiles, and to date, it is the only country where documentation of terrorist surveillance exists (Bunn 2010, 35). Equipping all sites with state of the art security measures has been a difficult challenge. The Russian government, and consequently the security contractors who are responsible for the upkeep of these facilities, suffers from a lack of financial resources (Joyner & Parkhouse 2009, 215). Additionally, significant internal threats are present. Because the government employs independent security companies to coordinate much of management of nuclear materials, there are two channels for insiders to aid terrorist groups—high level government officials and low level technical personnel. Both groups have incentive to divulge information at the right price, and Russia has a political environment that has been rife with corruption for decades (Bunn 2010, 32-33 and Joyner & Parkhouse 2009, 216). Finally, there is the security risk of Highly Enriched Uranium-fueled reactors (HEU’s). Because of its chemical composition and refinement, HEU can be used easily to make crude nuclear weapons even by non-experts (Norwegian Project Secretariat). Because of the ease with which a weapon can be made out of HEU, it is easy to see why terrorist acquisition is a direct security risk. As of 2009, about half of the 200 remaining reactors were still using HEU fuel, and do not have capability to be converted to lower enriched uranium (LEU) (World Nuclear Association 2011). Most of these are in Russia, where the government has invested little in research to convert their own reactors to LEU power or other alternatives (World Nuclear Association 2011). Further, and most alarming, is that the security at many of these HEU sites is inadequate to prevent theft of HEU, making research reactors a prime target for terrorists seeking to obtain nuclear material (Bunn, 2010, 45). If a terrorist group only acquires nuclear material, and not a functional weapon, they will have to successfully create a weapon that they can detonate. Unfortunately, this is an achievable end that can be done with little resources or expertise. As discussed above, Highly Enriched Uranium is pure enough that it can be made into a devastating weapon relatively easily, and it is also the most likely nuclear material that terrorists would get their hands on. The perception of modern nuclear weapons may be that they are highly technical instruments of warfare backed by complex science. While this may be true, a “crude” nuclear weapon, one that takes little skill to create, would still be incredibly deadly—capable of destroying the downtown of a major city (Bunn, 2010, 16). The process of building a weapon of this type is not entirely simple, and anyone who wanted to construct such a device would need a technical team with at least some experience. However, in comparison to the nuclear weapons manufactured today, a crude bomb would be a more feasible project, as it would not have to comply with rigorous military and safety specifications. Thus, it is plausible to see that this kind of power is not out of reach for dedicated terrorist groups, should they acquire nuclear material (Ferguson & Potter 2003, 116). Having acquired nuclear material and created a weapon, the final obstacle a terrorist group would need to pass would be delivery and detonation in the target location. Likely, this would involve them smuggling a bomb or device into the United States, and then into a major city, undetected. Nuclear material is quite difficult to track, especially the small amounts that would be needed for a crude weapon (Bunn 2010, 18). Journalists have repeatedly demonstrated the ease with which radioactive materials can be transported and shielded from detection while traveling (Ferguson & Potter 2003, 141). Even with the most advanced technology, HEU is among the most difficult kind of radiological material to detect (Montgomery 2009, 79). Also, terrorists could use existing port and transport systems in place, as they are relatively unsecure. Customs and Border Patrol inspects only around 6% of cargo containers entering the US (Medalia 2005). Even with increased security measures and Port Authority reorganization in 2003, there are still plausible scenarios for terrorist groups sneaking radioactive materials into the US via boat undetected (Ferguson & Potter 2003, 300). Furthermore, terrorists could avoid this obstacle entirely by taking materials that were already inside the US. Once inside the US, delivery and detonation to target site would also not be insurmountable. As Matthew Bunn and E. P. Maslin write: The length of national borders, the diversity of means of transport, the vast scale of legitimate traffic across borders, and the ease of shielding the radiation from plutonium or especially from HEU all operate in favor of the terrorists. Building the overall system of legal infrastructure, intelligence, law enforcement, border and customs forces, and radiation detectors needed to find and recover stolen nuclear weapons or materials, or to interdict these as they crossnational borders, is an extraordinarily difficult challenge. (Bun & Maslin 2010) In order for a terrorist group to be “successful” in carrying out a nuclear attack, many elements must come together. There is no doubt that the end result of a nuclear terrorist attack would be terrible, so even with a low probability of attack, the high impact possibility means steps should still be taken to prevent it. In each link of the chain of attack, there are security measures that have been put in place, and continue to be upgraded. However, as discussed above, there are still vulnerabilities in each step of the process that, if they all were orchestrated together, terrorists could exploit to pull off an attack with a nuclear weapon. The most critical of these links is acquisition of a bomb or nuclear material, because it is the only one that truly prevents an attack from occurring. Once a terrorist group has nuclear material, they can find people willing to make it into a usable weapon if they cannot themselves.

#### Extinction—nuclear terrorist attack on the U.S. would cause retaliation, especially during tensions with Russia

Ayson 10 - Professor of Strategic Studies and Director of the Centre for Strategic Studies: New Zealand at the Victoria University of Wellington (Robert, July. “After a Terrorist Nuclear Attack: Envisaging Catalytic Effects.” Studies in Conflict & Terrorism, Vol. 33, Issue 7. InformaWorld.)

But these two nuclear worlds—a non-state actor nuclear attack and a catastrophic interstate nuclear exchange—are not necessarily separable. It is just possible that some sort of terrorist attack, and especially an act of nuclear terrorism, could precipitate a chain of events leading to a massive exchange of nuclear weapons between two or more of the states that possess them. In this context, today’s and tomorrow’s terrorist groups might assume the place allotted during the early Cold War years to new state possessors of small nuclear arsenals who were seen as raising the risks of a catalytic nuclear war between the superpowers started by third parties. These risks were considered in the late 1950s and early 1960s as concerns grew about nuclear proliferation, the so-called n+1 problem. It may require a considerable amount of imagination to depict an especially plausible situation where an act of nuclear terrorism could lead to such a massive inter-state nuclear war. For example, in the event of a terrorist nuclear attack on the United States, it might well be wondered just how Russia and/or China could plausibly be brought into the picture, not least because they seem unlikely to be fingered as the most obvious state sponsors or encouragers of terrorist groups. They would seem far too responsible to be involved in supporting that sort of terrorist behavior that could just as easily threaten them as well. Some possibilities, however remote, do suggest themselves. For example, how might the United States react if it was thought or discovered that the fissile material used in the act of nuclear terrorism had come from Russian stocks,40 and if for some reason Moscow denied any responsibility for nuclear laxity? The correct attribution of that nuclear material to a particular country might not be a case of science fiction given the observation by Michael May et al. that while the debris resulting from a nuclear explosion would be “spread over a wide area in tiny fragments, its radioactivity makes it detectable, identifiable and collectable, and a wealth of information can be obtained from its analysis: the efficiency of the explosion, the materials used and, most important … some indication of where the nuclear material came from.”41 Alternatively, if the act of nuclear terrorism came as a complete surprise, and American officials refused to believe that a terrorist group was fully responsible (or responsible at all) suspicion would shift immediately to state possessors. Ruling out Western ally countries like the United Kingdom and France, and probably Israel and India as well, authorities in Washington would be left with a very short list consisting of North Korea, perhaps Iran if its program continues, and possibly Pakistan. But at what stage would Russia and China be definitely ruled out in this high stakes game of nuclear Cluedo? In particular, if the act of nuclear terrorism occurred against a backdrop of existing tension in Washington’s relations with Russia and/or China, and at a time when threats had already been traded between these major powers, would officials and political leaders not be tempted to assume the worst? Of course, the chances of this occurring would only seem to increase if the United States was already involved in some sort of limited armed conflict with Russia and/or China, or if they were confronting each other from a distance in a proxy war, as unlikely as these developments may seem at the present time. The reverse might well apply too: should a nuclear terrorist attack occur in Russia or China during a period of heightened tension or even limited conflict with the United States, could Moscow and Beijing resist the pressures that might rise domestically to consider the United States as a possible perpetrator or encourager of the attack? Washington’s early response to a terrorist nuclear attack on its own soil might also raise the possibility of an unwanted (and nuclear aided) confrontation with Russia and/or China. For example, in the noise and confusion during the immediate aftermath of the terrorist nuclear attack, the U.S. president might be expected to place the country’s armed forces, including its nuclear arsenal, on a higher stage of alert. In such a tense environment, when careful planning runs up against the friction of reality, it is just possible that Moscow and/or China might mistakenly read this as a sign of U.S. intentions to use force (and possibly nuclear force) against them. In that situation, the temptations to preempt such actions might grow, although it must be admitted that any preemption would probably still meet with a devastating response. As part of its initial response to the act of nuclear terrorism (as discussed earlier) Washington might decide to order a significant conventional (or nuclear) retaliatory or disarming attack against the leadership of the terrorist group and/or states seen to support that group. Depending on the identity and especially the location of these targets, Russia and/or China might interpret such action as being far too close for their comfort, and potentially as an infringement on their spheres of influence and even on their sovereignty. One far-fetched but perhaps not impossible scenario might stem from a judgment in Washington that some of the main aiders and abetters of the terrorist action resided somewhere such as Chechnya, perhaps in connection with what Allison claims is the “Chechen insurgents’ … long-standing interest in all things nuclear.”42 American pressure on that part of the world would almost certainly raise alarms in Moscow that might require a degree of advanced consultation from Washington that the latter found itself unable or unwilling to provide. There is also the question of how other nuclear-armed states respond to the act of nuclear terrorism on another member of that special club. It could reasonably be expected that following a nuclear terrorist attack on the United States, bothRussia and China would extend immediate sympathy and support to Washington and would work alongside the United States in the Security Council. But there is just a chance, albeit a slim one, where the support of Russia and/or China is less automatic in some cases than in others. For example, what would happen if the United States wished to discuss its right to retaliate against groups based in their territory? If, for some reason, Washington found the responses of Russia and China deeply underwhelming, (neither “for us or against us”) might it also suspect that they secretly were in cahoots with the group, increasing (again perhaps ever so slightly) the chances of a major exchange. If the terrorist group had some connections to groups in Russia and China, or existed in areas of the world over which Russia and China held sway, and if Washington felt that Moscow or Beijing were placing a curiously modest level of pressure on them, what conclusions might it then draw about their culpability

## Contention 3 Solvency

#### Federal lifting of the restriction solves – now is key

Hertel ’11 – professor of nuclear and radiological engineering at Georgia Tech

(Nolan E. Hertel, “Pro & Con: Should U.S. lift ban on reprocessing nuclear fuel?”, AJC, 5-16-2011, http://www.ajc.com/news/news/opinion/pro-con-should-us-lift-ban-on-reprocessing-nuclear/nQtYg/)

By now there should be no doubt that something ought to be done to remove the ever-increasing amount of spent fuel at nuclear power plants across the United States. If the need to resolve the nuclear waste problem wasn’t evident before, then the threat of release of spent fuel radiation from Japan’s disabled nuclear plant has made it imperative now.¶ The solution lies with the U.S. Department of Energy. It needs to move the spent fuel from nuclear power plants to a central location for interim storage, as Congress has directed it to do. But in the meantime, the government needs to lift a decades-old ban on the use of reprocessing technology to recycle spent fuel.¶ France, which gets 80 percent of its electricity from nuclear power, recycles its used fuel. More than a dozen other countries, including Great Britain, Russia and Japan, also utilize it. In the mid-1970s, then-President Jimmy Carter banned U.S. use of the technology on grounds that it would contribute to nuclear proliferation.¶ Now we’re seeing the results of that ill-advised ban. There is 2,410 metric tons of spent fuel stored at the Hatch and Vogtle nuclear plants in Georgia — and the amount is rising each year. Altogether, more than 62,500 tons is kept at nuclear plant sites across the U.S. Spent fuel is not waste. If not for the ban on recycling, valuable uranium and plutonium could be extracted and chemically reprocessed to make a mixed-oxide fuel for use in reactors to generate additional electricity.¶ Reprocessing is safe and reliable. Despite concerns that separated plutonium from recycling could wind up in the hands of rogue governments or terrorist groups, tight safeguards have prevented any diversion of the nuclear material for weapons production.¶ A blue-ribbon commission of nuclear experts on nuclear-waste management, which was created earlier this year after President Barack Obama terminated the Yucca Mountain project, is considering the revival of recycling. The commission is expected to mobilize our national laboratories for a research effort to develop advanced technologies that increase the value of recycling.¶ Though an abundance of global uranium resources has reduced the commercial appeal of recycling in the near term, the need for it is expected to grow in the years ahead as construction moves along on dozens of nuclear power plants around the world.¶ Therefore, now is the time to establish a national policy in support of nuclear recycling, so that we can obtain the full benefits of spent fuel and not continue to store such valuable material as if it’s nuclear waste.

#### Utilities would reprocess – concerns about spent nuclear fuel and Fukushima overwhelm the BRC’s report

Beattie ’11

(Jeff, “Areva Exec: U.S. Utilities Rallying Behind Reprocessing.”, Energy Daily, Issue 108, p.3, 6-7-2011, accessed on EbscoHost)

Despite questions raised about the near-term feasibility of the technology by the Obama administration's expert panel on radioactive waste management, U.S. utilities are becoming increasingly interested in the possible development of a large-scale nuclear reprocessing facility to handle their spent reactor fuel, the head of Areva's U.S. unit said Monday.¶ Jacques Besnainou, chief executive officer of Areva Inc., told reporters at a press breakfast sponsored by The Energy Daily and Areva that his company's talks with U.S. utilities on the possibility of a new domestic spent fuel reprocessing facility have "accelerated" as utility leaders have watched the crisis unfold at the Fukushima Daiichi plant and have begun re-thinking how to best manage radioactive spent fuel at their plants.¶ Indeed, he said Areva Inc., the U.S. subsidiary of French nuclear giant Areva, plans to unveil an alliance with U.S. utilities later this year to forcefully push for the construction of an integrated recycling center in the United States.¶ In expansive remarks, Besnainou also said the continued large-scale storage of spent fuel at U.S. reactors was "immoral" in that it left a huge liability to the next generation.¶ And he suggested that the administration's expert panel on nuclear waste is merely "kicking the can down the road" with a recent set of interim recommendations that the United States should re-frame its nuclear waste management plans around finding one or more volunteer communities to host interim storage sites for fuel currently stored at dozens of reactor sites around the country.¶ Futher, Besnainou suggested that the U.S. government likely would have a hard time finding a community willing to host a controversial spent fuel storage facility because it would provide few jobs and economic benefits.¶ In contrast, he said he believes there could be a competition among states and communities to host a reprocessing plant because of the large number of jobs and economic growth it could provide, both during construction and operation.

**Finally, certainty in government regulatory environments is critical to reprocessing**

**Berry and Tolley 10** – professors of energy and economic policy

(Professors R. Stephen Berry and George S. Tolley, “Nuclear Fuel Reprocessing Future Prospects and Viability”, University of Chicago Humanities, 11-29-2010, http://humanities.uchicago.edu/orgs/institute/bigproblems/Team7-1210.pdf)

The American and French nuclear power industries developed along divergent paths. The U.S. nuclear power industry as a whole experienced a rapid decline beginning in the 1970’s and culminating with the Three Mile Island accident in 1979 (TMI, a partial core meltdown in Reactor 2 at the Three Mile Island Nuclear Generating Station, remains as one of the most significant accidents in the commercial nuclear energy industry in the in the U.S.) 52. Following a period from the mid-1950’s to the mid 1970’s when the U.S. built more nuclear power plants than any other country (231 through 1974), the U.S. only built 15 after 1974 and none after 1977. 53 This shift away from nuclear power was reversed in the late 1990’s as nuclear energy was perceived as a sustainable energy solution to combat specific environmental concerns. In France, the nuclear power industry achieved a successful implementation and was prospering for many years both before and after TMI. Further, in France, nuclear power generates more than 75% of France’s electricity while in the U.S. nuclear power has never accounted for more than 20% of its electricity. 54 These varying paths of nuclear power development in the U.S. and France stem largely from government’s credible commitment or lack thereof to the industry. By analyzing the political and regulatory frameworks present in the U.S. and France, it is possible to gain a further understanding of the nuclear power industries in the U.S. and France, but more importantly discern the potential frameworks to develop nuclear reprocessing in the U.S. The differentiation in the U.S. and French nuclear industries was largely based on the government’s level of commitment over time. In the U.S., the government’s commitment to the industry was initially strong, but abated over time, while France’s government maintained a strong commitment over time. 55 **The level of a government’s credible commitment to** the nuclear energy industry and specifically **nuclear reprocessing will play an** important role **in shaping the flow of capital into the technology**. 56 As the industry is currently constructed, utilities are sensitive to licensing and construction costs, which may be difficult to predict based on a government’s ability to commit to the industry. Utilities must obtain construction licenses from regulatory bodies to build nuclear facilities. These investment decisions necessitate large sunk costs which must be incurred a number of years prior to operating the plant. **The** decision making process **of the utility is ultimately influenced by** uncertainty **surrounding the regulatory process** that can ease or complicate the process. This uncertainty increases the risk associated with these types of investments and disincentivizes investment in the technology. Therefore an “analysis of the differences in institutional environment attributes can further understanding of government’s credible commitment to the industry.” 57 In understanding the existing differentiation in the institutional environment for both the U.S. and France, it is possible to elucidate how these unique situations have created varying transaction costs for their respective industries.