## China War Good

### 2NC---China War Good

#### China war is inevitable---uncertainty from each side creates structural incentives that make war probable

Yoder, 1/28 Brandon K. Yoder, Ph.D., Department of Politics, University of Virginia, Research Fellow at the National University of Singapore Lee Kuan Yew School of Public Policy Centre on Asia and Globalisation, January 28th, 2019, “Uncertainty, Shifting Power and Credible Signals in US-China Relations: Why the “Thucydides Trap” Is Real, but Limited”, Journal of Chinese Political Science, Volume 24, Issue 1, <https://link.springer.com/article/10.1007/s11366-019-09606-1>, EO

This logic has not been well-recognized by either US foreign policymakers or scholars of US-China relations, however. On economic issues, the US adopted a strategy of unconditional cooperation for the first two decades of China’s rise. This strategy was not necessarily misguided. However, absent any degree of hedging by the US, China’s cooperation with the US-led economic order should have been seen as largely non-credible. A rising China had strong incentives to misrepresent any hypothetically-revisionist intentions it might have held, as long as doing so would elicit continued US accommodation that facilitated China’s rapid power gains. Yet many China experts took China’s cooperative behavior during this period at face value, ignoring its incentives to misrepresent and drawing overly optimistic conclusions that China truly shared American preferences for the international order [29, 32, 56, 61].

Even more troublingly, the Trump administration has recently expressed confident beliefs that China’s intentions are hostile, and consequently begun to implement policies of escalating economic containment toward China. Yet this conclusion is also unwarranted: China’s revisionist behavior has been generally limited to its territorial disputes in the South China Sea, whereas its economic and institutional actions are either ambiguous or supportive of the US-led liberal order [31].

Ironically, the Trump administration’s emerging strategy of economic containment, which has been adopted due to ill-formed pessimistic beliefs about China’s intentions, lends considerable (though incomplete) credibility to China’s cooperative signals on economic and institutional dimensions. To the extent that China continues to defend and advocate a rules-based liberal economic order in the face of Trump’s economic containment, this is a much more credible signal of China’s benign intentions than its previous cooperation under unconditional US accommodation. Thus, current US foreign policy turns the logic of hedging on its head: rather than hedging due to uncertainty and updating their beliefs in response to China’s subsequent behavior, policymakers have assumed China’s hostility and are initiating what appears to be a strategy of unconditional containment.

Power Shifts, Uncertainty, and US-China Relations

The Thucydides trap is not a new concept – it is fundamentally equivalent to what Jack Levy referred to more than three decades ago as the preventive motivation for war [9, 42]. When a declining state knows that its preferences conflict with those of a rising state, war can occur due to the well-known “commitment problem,” which refers to a rising state’s inability to commit to not use its future power gains to exploit the declining state [13, 54]. Under complete information, there is always a range of peaceful bargains that both the riser and decliner would prefer to war, if the bargain could be guaranteed to endure into the future. However, as the rising state gains power its bargaining leverage would increase, giving it an ex post incentive to revise the settlement in its own favor at the decliner’s expense. Thus, when the power shift is sufficiently large, the declining state prefers a winner-take-all war in the present to the eventual settlement the riser will impose in the future if the decliner were to acquiesce to the power shift.

Note, however, that the commitment problem obtains only when the rising and declining states have sufficiently divergent preferences over the shape of the international order. If the rising and declining states have highly compatible preferences, the decliner sacrifices little by allowing the riser to gain power. This “benign” riser (from the decliner’s perspective) would simply use its power to maintain the same order that the decliner prefers. Conversely, however, if the riser’s preferences are highly incompatible with the decliner’s, then it will use its power gains to radically revise the international order in ways that are at odds with the decliner’s preferences. It is with this sort of “hostile” rising state that commitment problems obtain under complete information, yielding strong incentives for the decliner to initiate preventive war. Commitment problems do not obtain when the rising state is known to be benign ([36]:119; [67]).

This raises the question of what the decliner should do when it is uncertain about the compatibility of the rising state’s preferences with its own. As discussed below, this is the situation that characterizes contemporary US-China relations. It is this sort of uncertainty that lies at the heart of the security dilemma, the phenomenon by which conflict can occur even between states with mutually-compatible preferences due to misplaced (but rational) distrust of the other’s intentions. Under the combination of shifting power and uncertainty, commitment problems potentially obtain if the rising state turns out to be hostile. In this case, the decliner may not be willing to risk accommodating the rising state if the consequences of exploitation by a hostile riser outweigh the benefits of cooperation with a benign one. Instead, the decliner would initiate preventive conflict. Yet because there is some probability that the rising state is actually benign, this opens up the possibility of “tragic” conflict between truly compatible states. If uncertainty about the riser’s intentions cannot be overcome, or at least mitigated, a sufficiently large power shift would produce war even between rational states whose interests do not conflict at all.

A prominent subset of realist scholars has compellingly argued that this is often the case: large power shifts engender formidable barriers to the credibility of rising states’ cooperative signals, such that uncertainty about others’ intentions is intractable and declining states must make worst-case assumptions about rising states’ intentions [9, 12, 45, 53]. This is because hostile rising states have strong incentives to misrepresent their intentions while relatively weak, by mimicking the cooperative behaviors of benign risers and refraining from attempting to revise the international order. These realists argue that for hostile risers the costs of foregoing immediate revision are outweighed by the prospects of avoiding opposition from the decliner and attempting revision under a more favorable distribution of power in the future. As such, if cooperative signals are likely to be sent by both benign and hostile risers alike, such signals are non-credible, and declining states should remain highly uncertain about any rising state’s future intentions. This exacerbates the security dilemma, and gives declining states strong incentives to take preventive action even against risers that have exhibited cooperative behavior.

This barrier to credible signaling during power shifts has also been applied to contemporary US-China relations. For many realists, it is entirely possible that “China is just practicing common sense and behaving itself until it is a more powerful and consolidated entity” ([33]:203), and “pursuing a peaceful policy today in order to strengthen itself to confront the United States tomorrow” ([40]:14). As such, a common conclusion has been that “we cannot tell much about China’s future behavior, because it [currently] has such limited capacity to act aggressively” ([46]:385).

#### Chinese CRISPR causes extinction---global bioweapons war and irreversible infertility

Adrian Rauchfleisch and Marko Kovic 17 {Adrian Rauchfleisch, Ph.D. is a co-founder and on the board of directors of the Zambia Institute for Policy Analysis and Research. Marko Kovic, CEO of arscognitionis. 6-6-2018. “Careless CRISPR in China: How to regulate the unimaginable?” https://zipar.org/short-term-challenge/careless-crispr-in-china/}//JM

What is CRISPR all about? CRISPR (or CRISPR-Cas9) stands for Clustered Regularly Interspaced Short Palindromic Repeats which are “systems that can be programmed to target specific stretches of genetic code and to edit DNA at precise locations”.3 In short, researchers can permanently modify genes in living organisms with CRISPR. In the early 2000s scientists first started to name specific repeat regions in bacterial genomes CRISPR. Around 2010 scientists showed that together with the protein Cas9 it is possible to target specific DNA sequences and in 2012 researchers demonstrated that it is possible to delete or replace any gene in an organism’s genome.4 As happens often in the history of science, different research groups published their discoveries at the same time5. This lead to a fierce patent fight that has been decided only recently.6 7 The whole patent fight calls into question how useful such patents are. After all, the CRISPR technology is based on knowledge accumulated in various labs around the world and mainly financed through public resources.8 A CRISPR-monster born in China While the major discoveries and the first commercialization of the technology all happened in the West, China took the CRISPR stage in 2015, a year that has been called CRISPR’s “monster” year by the MIT Technology Review.9 This is not surprising, as China has since 2013 the second largest R&D spending in the world10 and CRISPR is an explicit priority area for the Chinese Academy of Sciences.11 In the years between the initial discovery and 2015 Chinese scientists have pushed the boundaries of science. In 2015 even the Chinese public became aware or CRISPR as the data of Chinese search volumes on the Chinese Internet illustrates.12 Scientists in China have successfully modified the genes of living organisms such as monkeys, dogs, and goats.13 A group of scientists in Shanxi province, for example, successfully created a new type of goat with longer hair (more Cashmere wool) and stronger muscle growth (more meat for food consumption).14 The biggest Chinese breakthrough to date also happened in 2015, when a group of Chinese researchers managed to edit human embryos for the first time.15 This move came not without criticism. In 2015, a number of scientists called for a moratorium because “genome editing in human embryos using current technologies could have unpredictable effects on future generations”.16 Relative search volume for “CRISPR” over time on China’s second largest search engine Qihoo 360. Peak in November 2015 and stronger attention afterward. The genetically edited embryos of the first Chinese experiment showed some unintended mutations. 17 Still, in 2016, CRISPR was tested for the first time in a person during a clinical trial in Chengdu.18 At the moment, externally applied gels and creams are tested in China to treat patients infected with the human papillomavirus.19 Of course, such simple applications of CRISPR could help to cure many diseases in the future. At the same time, the risk of CRISPR is great, both if the technology is used for criminal purposes as well as if benevolent applications of CRISPR yield unintended or at least undesirable outcomes. CRISPR as existential risk Saying that CRISPR is risky is not very controversial – assuming that new technologies are inherently risky is a common heuristic. However, labeling CRISPR as an existential risk might sound outright alarmist. But it is not: CRISPR is indeed an anthropogenic existential risk, but that does not mean that humankind is just about to be wiped out by it. Existential risks are risks that threaten the existence of humankind. Existential risks have a maximally great scope (all humans are affected, even future generations that would have existed if not for the adverse outcome) and gravity (the risk is terminal).20 In addition, existential risks have some probability, usually above zero. CRISPR is an existential risk both in civilian and in criminal or military applications. In the latter scenario, it is easier to understand why: Weaponized CRISPR is a potentially potent bioweapon that could do great damage whilst being very precise and accurate. A global CRISPR bioweapon war, if it ever came to that, would not produce the same levels of physical destruction as global nuclear war, but it might introduce cumulative hazards comparable to nuclear winter. The criminal and military application of CRISPR is somewhat salient in current risk analysis. For example, then U.S. director of national intelligence James Clapper declared CRISPR a global threat in February 2016, along other threats such as North Korean nuclear weapons21. Civilian applications of CRISPR are aimed at helping people, not killing them. However, unintended consequences of premature wide-scale introductions of CRISPR products might create existential risk. Imagine a thought experiment: If some pharmaceutical company were to introduce a CRISPR anti-aging cream that really works and makes people biologically younger, that product would be in extremely high demand almost immediately. Now imagine that that cream had an unintended side-effect: Irreversible infertility. The CRISPR cream would, almost certainly, still be in extremely high demand, resulting in a precipitous drop in overall fertility. This could result in the loss of humankind’s reproductive capacity and thus in the (gradual) extinction of humankind. The existential risk of CRISPR (and similar technologies) is typical of the dilemma of human progress: The more technologically mature humankind becomes, the greater anthropogenic human risks become Gene editing race between China and the US In 2017, after China had taken the CRISPR lead, it was time for the US to push the boundaries. Just recently, results of an experiment from scientists in the US were published: The scientists involved in the experiment also modified genes in human embryos, just as their Chinese counterparts did, but this time, apparently no mutations occurred.22 The technology and research race between the two nations can best be illustrated with the number of publications originating in each country. Since 2002, when Jansen et al.23 coined the term CRISPR in their paper, 6,942 scientific papers were published up to now.24 Most papers originated from US institutions (2890) followed by Chinese (919), German (413) Japanese institutions (390). Even though CRISPR research is dominated by institutions situated in the US and China, it is a technology used all over the world. One major reason is the rather low cost of the procedure.25 It is even possible to buy a “DIY Bacterial Gene Engineering CRISPR Kit” to do your own gene editing at home.26 However, this kit only allows using the most basic form of CRISPR. Colour intensity indicates the number of papers originating in a specific country. We used the country of the institution of the corresponding author of a paper. Data from Web of Science – own visualization. How to regulate the unimaginable It is very likely that we just got a first glimpse of what will be possible in the future. After the first experiment in China with human embryos, scientists from all around the world gathered at a global summit in Washington DC in 2015.27 Unsurprisingly, it was difficult for the participants to reach an agreement as every country regulates research differently. In the end, a statement by the organizers “stopped short of calling for a ban on editing human embryos and germ cells for basic research”.28 In cases where the work of scientists affects society as a whole, governments usually start to regulate research. In the case of the US, for example, a majority of people is worried about the idea of gene-edited babies.29 In democratic societies, citizens can influence regulations and public debates about opportunities and threats are possible. In Switzerland, we had a national vote in 2016 about genetic testing of embryos.30 The majority approved to modify the law on medically assisted reproduction. However, in authoritarian countries, such decisions are made top-down without open public debates.

### 2NC---CF---T/L

#### Err neg---all of their evidence comes from the position that civilian deaths are unacceptable, but all we actually need to win is that it doesn’t cause extinction

Matthew Kroenig 17 {Matthew Kroenig is an associate professor in the Department of Government and School of Foreign Service at Georgetown University and a senior fellow in the Brent Scowcroft Center on International Security at the Atlantic Council. Summer 2017. “The Limits of Damage Limitation.” https://muse-jhu-edu.proxy.lib.umich.edu/article/667398}//JM

In “Should the United States Reject MAD?” Charles Glaser and Steve Fetter argue that the United States should forgo a damage-limitation capability against China’s strategic forces.1 To arrive at this conclusion, however, they underestimate the advantages of a [End Page 199] damage-limitation strategy and do not even consider more feasible and desirable policy options for a strategic equilibrium with China. When these steps are corrected, it becomes clear that the United States should not forgo this capability. Rather, it should preserve its damage-limitation capability and quantitative nuclear superiority over China, while accepting the inevitability of China’s possession of an assured nuclear retaliatory capability. Glaser and Fetter begin by making the conceptual mistake of searching for an arbitrary threshold for meaningful damage limitation. In doing so, they underestimate the value of limiting damage in the event of nuclear war. Glaser and Fetter are correct that completely denying China’s nuclear deterrent is increasingly difficult if not impossible as China expands and modernizes its arsenal, but this is an unnecessarily high bar. Damage limitation is better conceived of as a continuous, not a binary, variable. There is no magical threshold beyond which the ability to limit damage in a nuclear war ceases to matter. Any U.S. president would want to protect as much of the country as possible in the event of a nuclear exchange, and any damage-limitation capability (even far below the threshold set by Glaser and Fetter) would therefore be valuable. To argue otherwise, one would have to argue that saving millions of American lives is unimportant or politically irrelevant, which is an untenable position.

#### We’d Win-

#### Models---it would only take 7% of our nukes---assumes their warrants

Heginbotham 15. [Eric; 2015; principal research scientist at MIT’s Center for International Studies and a specialist in Asian security issues, PhD in political science from MIT, former senior political scientist at the RAND Corporation, where he led research projects on China, Japan, and regional security issues and regularly briefed senior military, intelligence, and political leaders; “The U.S.-China Military Scorecard: Forces, Geography, and the Evolving Balance of Power, 1996–2017,” https://www.rand.org/pubs/research\_reports/RR392.html]

For several years, U.S. military publications have suggested that China is working on MIRVing ICBMs.37 The 2015 DoD report on Chinese military power stipulates, for the first time, that MIRVed missiles have been deployed operationally, specifically on the CSS-4 Mod 3 (a modified version of the DF-5A).38 In both our high and low estimates, therefore, we posit that number of Chinese CSS-4s (DF-5As) remains unchanged at 20, but that half of the force has been MIRVed, with each of the MIRVed missiles carrying three warheads.39 It is unclear why China would begin MIRVing with its force of DF-5s, which, due to their vulnerability, will not contribute much to second-strike survivability even with more warheads. Beyond 2017, it seems likely that China may MIRV its road-mobile DF-41, which is currently under development and which would yield more in terms of retaliatory credibility.40 **\*\*FOOTNOTE 40 BEGINS\*\*** 40 Given that existing mobile missiles (including the DF-31, DF-31A, and JL-2) are relatively small and would require miniaturized warheads, they are unlikely candidates. The DF-41 is said to be some 25-percent heavier than the CSS-10 Mod 2 (DF-31A). Jane’s Strategic Weapons Systems, “DF-41 (CSS-X-10),” January 6, 2015. **\*\*FOOTNOTE 40 ENDS\*\*** Both our high and low estimates for China posit that the number of CSS-10 Mod 1s (DF-31s) will remain unchanged at 12, but in the case of CSS-10 Mod 2s (DF-31As), there is some uncertainty with regard to the size of the force, and we estimate the potential inventory at between 24 and 48.41 There is also some uncertainty as to how many CSS-NX-14s (JL-2s) might be in service by 2017. Jane’s Fighting Ships reports four Jin-class submarines in service by the end of 2015, with a fifth to be commissioned in 2017.42 The JL-2 SLBM, carried by the Jin, encountered problems during testing, but DoD suggested that tests in 2012 were successful, and DoD’s 2014 Annual Report to Congress on Chinese military power reported that the Jin would undertake its first operational patrols shortly.43 We posit that China will have five Jin-class submarines in service by 2017, with between 50 percent and 100 percent of their full complement of 12 JL-2 SLBMs each (totaling between 30 and 60 missiles).44 Both the Jin-class platform and the missile it carries will be a dramatic improvement over the minimal capability offered by the single Xia-class (Type 092) submarine in past years. We assume that the single Xia-class SSBN will be taken out of service. If it remains in the inventory, its operational status and usefulness will be questionable. The U.S. nuclear arsenal size in 2017 will be constrained by the New START agreement with Russia and, as a result, will be smaller than it was in 2010. For the sake of simplicity, we use the end-point 2018 delivery system numbers for 2017, since it is uncertain when the United States will reach the New START 2018 limits (see Figure 12.7). We do not follow the New START definition of “deployed warheads.” Under New START, the United States and Russia are each limited to 700 deployed strategic delivery systems (ballistic missiles and nuclear-capable bombers), with up to 100 in reserve. The treaty allows each side up to 1,550 deployed warheads. However, New START counts nuclear-capable bombers as a single deployed warhead, despite the ability to place more weapons on the platforms during wartime.45 Using the New START numbers for 2017 delivery vehicles but a somewhat more liberal definition of warheads, the number of U.S. delivery systems will fall from 882 in 2010 to 700 and the number of deployed warheads will fall from 4,806 to 2,144.46 Based on current plans, it appears that the number of Minuteman III ICBMs will be reduced from 450 in 2010 to 400 in 2017, and all will be fitted with a single warhead. The United States will maintain its fleet of 14 Ohio-class SSBNs, but at least two will be in overhaul at any one time (and not count against limits), and each boat will sail with only 20 of its 24 tubes loaded with nuclear-capable Trident D-5 Mk-4A and Mk-5 SLBMs. The United States will maintain 60 nuclear-capable bombers, which we posit will include 44 B-52Hs and 16 B-2As. While we assume that there will be enough gravity bombs for each B-2A to carry a full complement of 20 weapons (for a total of 256 warheads), the load-out for B-52Hs will be limited by the inventory of air-launched cruise missiles (a total of 528 missiles and warheads). Finally, the United States expanded its number of GBIs from 24 to 30 in 2010, and, in March 2013, DoD announced a further increase to 44 by 2017.47 Chinese Vulnerability to First Strike, 2017 Even the low-end projected Chinese force structure outlined above suggests a more robust and survivable Chinese second-strike capability by 2017, though U.S. missile defense and intelligence efforts against PLAN SSBNs will likely continue to cause concerns in Beijing about the viability of its second-strike forces. In the low Chinese case, U.S. forces must target the CSS-10 Mod 1 (DF-31), CSS-10 Mod 2 (DF-31A), CSS-4 Mod 2 (DF-5A), and CSS-4 Mod 3 (DF-5B) ICBMs and SSBN bases harboring the Jin-class (Type 094) that employ SLBMs. At the lowest alert level, the United States can target and destroy all of the weapons that are located and susceptible to attack with an 80 percent chance of success using 157 weapons. While this represents approximately 7 percent of the total U.S. arsenal, it still leaves 1,987 warheads for other purposes. The number of surviving Chinese weapons (15) in the 2017 case is marginally larger than the surviving number in the 2010 case (13). In reality, the gains to survivability should be considered more significant than this modeling might suggest. The surviving systems in the 2017 modeling include three types of relatively modern systems: the CSS-10 Mod 1 (DF-31), the CSS-10 Mod 2 (DF-31A), and the CSS-NX-14 (JL-2), associated with the Jin-class (Type 094) submarine. With five operational submarines and 36 road-mobile ICBM launchers, it becomes more reasonable to imagine modest alert levels that would ensure that a portion of both the land- and sea-based legs of China’s nuclear dyad are kept deployed on an operational basis. While the Jinclass SSBNs will require a “shakedown” period, their introduction into operational service represents a major advance for Chinese nuclear forces and their survivability. The results of attacks against the 2017 upper bound (“high estimate”) case for Chinese missiles, which includes a larger number of CSS-10 Mod 2s (DF-31As) and CSS-N-14s (JL-2 missiles), are somewhat different. In this case, China possesses 160 warheads able to reach the United States prior to the attack, instead of 106. After the hypothetical U.S. first strike, 27 Chinese warheads remain, 12 more than in the “low estimate” case (see Figure 12.8). The additional Chinese missiles and the warheads atop them provide an additional buffer against the possible compromise of some portion of China’s alert forces, and they provide a more convincing second-strike capability in the face of U.S. missile defenses, even when those defenses are assumed to be relatively effective in engaging targets. Note that in neither the low nor high estimate cases does the MIRVing of DF-5 missiles contribute to survivability against a first strike, since the missiles themselves are highly vulnerable to attack. Beijing will continue to harbor concerns about U.S. missile defenses, as well about intelligence-gathering efforts directed against Chinese SSBNs. In the 2017 low Chinese case, the 44 interceptors deployed by the United States will outnumber surviving Chinese strategic warheads by nearly three to one. In the “high” case, the ratio is less than two to one. In the more distant future, if U.S. GBI missile deployment halts at 44 and each interceptor continues to carry only one warhead, the Chinese secondstrike capability will ultimately be able to overwhelm U.S. defenses, especially if China puts MIRVs in the more survivable portion of its missiles. However, Chinese confidence in the effectiveness of its second-strike capability will likely depend on the extent of U.S. interceptor deployment, as well as the state of U.S. missile defense technology and advances in Chinese penetration aids. It will also depend on the survivability of China’s alert forces, especially its SSBNs. In addition to hosting large numbers of survivable missiles, SSBNs are the only Chinese weapons that can launch missiles at U.S. targets from areas where the trajectories do not take them near U.S. GBI sites in Fort Greely, Alaska. Our counterforce first strike modeling, and the sensitivity of results to the size of mobile forces, helps explain why Beijing has reacted to the activities of special oceanographic surveillance ships equipped with SURTASS, such as with the USNS Impeccable (T-AGOS-23), near Yalong Submarine Base in March 2009. The sonar on these ships is designed “to perform acoustic collection surveillance to help locate and identify submarines.”48 As mentioned earlier, Yalong, with its underground submarine portal is a likely location for the new Jin-class (Type 094) SSBN. If the U.S. Navy can detect and trail Chinese SSBNs in the open sea, the Chinese second-strike capability once again becomes questionable, especially when U.S. anti-submarine warfare activities are combined with an active missile defense program. This prognosis, however, only pertains to the immediate future. Looking somewhat beyond 2017, China will likely be able to achieve a highly secure second-strike capability (even with very conservative estimates from China’s perspective), and further increases on its part beyond that point may raise more serious questions about its ultimate intentions. Conclusions Given the asymmetry in the respective number of nuclear weapons, it is hardly surprising that our modeling shows severe structural imbalances in outcomes (see Table 12.7). In every period, a U.S. first strike could destroy all targets with known locations with a relatively high degree of confidence, leaving a relatively small number of missiles on alert and therefore ostensibly not susceptible to attack. Given the small numbers of systems that might be deployed at any given point in time, Beijing would almost certainly have concerns about the effectiveness of its second-strike capability. Assuming a similar level of alert for each of the periods considered, our modeling suggests that the number of Chinese warheads that might survive a first strike has increased over time, from four in 1996 to six in 2003, 13 in 2010, and between 15 and 27 in 2017. More importantly, the systems deployed have become more dependable and survivable over time. In 1996, survivability depended entirely on the status of the Xia, with silo-based CSS-4 Mod 2s (DF-5As) being in fixed locations and therefore highly vulnerable to attack. Since 2003, however, new classes of road-mobile missiles, the CSS-10 Mod 1 (DF-31) and, later, the CSS-10 Mod 2 (DF-31A), have been deployed, representing a second type of mobile asset in the Chinese inventory. Unlike the CSS-4 Mod 2 (DF-5A), these missiles are solid-fueled and are therefore capable of launch on short notice. The Jin-class SSBN (Type 094), five of which are either complete or near completion, will replace the Xia-class (Type 092) by 2017 and provide a far more robust sea-based deterrent. Despite these developments, however, Beijing continues to harbor concerns about the survivability of its nuclear forces. Chinese leaders express particular unease about the future of U.S. missile defenses and their potential impact on the nuclear balance.52 While we did not attempt to model missile defense with any fidelity, our nuclear exchange modeling suggests that the planned number of deployed U.S. GBIs alone (without considering the SM-3 or other systems) could continue to outnumber China’s expected survivable second-strike warheads as late as 2017. Any expansion of the missile defense architecture or enhancements to its capabilities, such as a move toward multiple exo-atmospheric kill vehicles on each interceptor, would further heighten concerns in Beijing about its retaliatory capability. Moreover, Chinese planners may question whether the United States, with its sophisticated space-based and air-breathing ISR assets, might be able to locate and attack a larger portion of China’s nuclear forces than our modeling suggests. Our model probably assumes a higher-alert posture for China than it presently practices, though it is true that China now has much greater capability to keep a portion of its force on alert, should it choose that course. New generations of Chinese land-based missiles (e.g., the DF-31A) are movable but not highly mobile. Chinese analysts question whether, in fact, SURTASS-equipped ships near China are seeking to collect acoustic data on PLAN SSBNs to facilitate their trail and destruction during a crisis or conflict.53 And Chinese concerns about advanced conventional munitions affecting the strategic balance are also increasingly pronounced.

#### Their countermeasures are hypothetical and easily overcome

Austin Long et al. 17 {Dr. Austin Long is a Senior Political Scientist at the RAND Corporation and non-resident Senior Fellow at the Foreign Policy Research Institute. 1/7/2017. “The Limits of Damage Limitation.” https://search.lib.umich.edu/articles?query=The+Limits+of+Damage+Limitation}//JM

Glaser and Fetter conclude their analysis without extending the measure-countermeasure competition very far. In so doing, they fall prey to the “fallacy of the last move,” as though there were no counters to the countermeasures they propose.2 For instance, China can employ decoy mobile missile complexes, but countering decoys is routine in long-term military competitions.3

In the case of surveillance of mobile missiles, U.S. space-based radar (SBR) or other [End Page 193] wide-area surveillance could be used to cue other sensors, such as those using multi- or hyperspectral imaging. These sensors could then detect subtle differences between a decoy missile complex and an actual missile complex. Stealth is likewise no panacea; it too is subject to countermeasures. Of course, responses on both sides can continue. But without more detailed analysis, it is difficult to say whether the United States or China will win the measure-countermeasure battle over a protracted period of time.

Likewise, Glaser and Fetter’s argument that China can deploy its mobile ICBMs in mountainous areas to limit SBR line of sight ignores SBR’s overhead perspective.4 Further, the road networks in valleys between mountains that could block radar coverage are often limited and steep. This would canalize mobile ICBMs operating in these areas and impose significant operational penalties. The countermeasure in this case might cost more in an operational sense than it would benefit the mobile missile force; for example, a brake failure on a descending transporter erector launcher (TEL) would be a disaster, and a very slow climb would make a located TEL a sitting duck.

Moreover, Chinese use of underground facilities and tunnels to conceal TELs might end up being perversely helpful to U.S. planners. The United States has dedicated enormous resources to intelligence capabilities intended to detect and map underground facilities.5 If U.S. intelligence is able to detect the entrances or exits to such facilities, then they would become highly vulnerable to attack.

Additionally, Glaser and Fetter acknowledge but do not assess two other systems that we have argued elsewhere could be used to hunt mobile missiles: stealthy penetrating unmanned aerial vehicles and unattended ground sensors.6 Admittedly, classification makes it difficult to fully evaluate these systems; nevertheless, they could contribute greatly to tracking mobile missiles. Both of these technologies are amplified by efforts to automate and rapidly integrate the data they provide for mobile missile hunting.7

The difficulties in obtaining survivable C2 that bedeviled the superpowers during the Cold War belie Glaser and Fetter’s somewhat blithe assessment of Chinese C2.8 C2 problems may be even more challenging today, as mobile command posts (even those in the air) can be tracked and targeted with the same sensors that track mobile missiles. In addition, non-kinetic options for disrupting C2 have proliferated over the past four decades. Even during the Cold War, the United States had apparently developed [End Page 194] electronic warfare techniques to disable Soviet strategic C2 systems.9 Today, the possibility for offensive cyber operations against such systems is believed to be substantially greater.10

OPERATIONAL AND TECHNICAL DIFFICULTIES: WARTIME ENDURANCE

Survivable second-strike forces must endure through all phases of a conflict. Yet Glaser and Fetter give short shrift to the potentially low wartime endurance of Chinese forces.

Glaser and Fetter assert that strict radio communications procedures and use of land-lines will suffice to keep Chinese mobile ICBMs secure. These countermeasures are difficult to sustain over time, however, and all are subject to potential attacker responses. Mobile operations will likely impose demands for frequent communications when coordinating movement, halts, fueling, and rest breaks between the TEL and multiple support vehicles. It is also likely, given Cold War experience and current Chinese practices, that Chinese mobile ICBMs would communicate their status to higher headquarters at least sporadically.11 Unlike ballistic missile submarines, mobile missile patrols travel in open territory. Road conditions, weather, crew health, and other factors could negatively affect such patrols, which are also potentially vulnerable to attack from special operations units or other ground forces.

In the face of these possibilities, sustained communications silence will become increasingly difficult over time. If communications are radio frequency, they are vulnerable to interception by U.S. signals intelligence sensors. Low probability of intercept transmissions will reduce but not eliminate that vulnerability for frequently communicating and difficult to duplicate TELs, which can be the target of barrage attack if imprecisely located. The use of dedicated military landlines would greatly restrict patrol areas while increasing mobile missile vulnerabilities if those lines were detected. Commercial landlines would impose fewer operational restrictions, but could be more easily penetrated. The United States was able to tap Soviet undersea naval communications in the Cold War; if motivated, it could likely tap Chinese commercial phone lines before a conflict begins.12

In addition, Glaser and Fetter argue that China could jam or attack SBR satellites during wartime. This is by far the most compelling of their countermeasure arguments. In wartime, though, jammers can potentially be targeted, and the fact that an area is being protected by jamming could cue other sensors to the likely mobile ICBM patrol area. Anti-satellite systems can likewise be targeted. Wartime is likely to produce first-strike advantages in the surveillance-countersurveillance competition, which will not benefit the party that has to move from a vulnerable to a less vulnerable posture. [End Page 195]

Furthermore, as Glaser and Fetter point out, “[F]or its DF-31As to survive, China must be able to launch them from unprepared sites.” Glaser and Fetter’s assumption, however, that China will be able to rely on “the Global Positioning System and other modern positioning and navigation services” is a dubious wartime proposition (p. 66). It seems more likely that Chinese mobile ICBMs will fire only from sites that have been pre-surveyed and geolocated in peacetime. Given the DF-31A’s weight and maneuverability challenges, this will impose even more limitations on China’s wartime operations.

POLITICAL AND ORGANIZATIONAL DIFFICULTIES

Even if the Chinese prove capable of technically demanding wartime operations, history suggests that they may face political and organizational challenges in preparing their forces during peacetime. This is especially true in the area of nuclear C2. All states face a sharp trade-off between negative control (assurances against unauthorized use) and positive control (assurances for authorized use) over their nuclear weapons. This trade-off produces strong incentives not to pursue the pre-delegation and launch-on-warning measures that Glaser and Fetter assume China will implement. These incentives may be particularly strong in authoritarian states, where the threat of internal unrest to nuclear forces, strains in civil-military relations, and worries about political succession may all bias decisions toward prioritizing negative control over survivable nuclear C2.

This pattern was demonstrated in the only other comparable case: the Cold War Soviet Union.13 Moscow’s civilian leadership abhorred pre-delegation. The Soviets also prioritized negative control in their launch procedures, which required no less than three members of the high command to authorize weapons release and two generals to generate portions of the launch code. As Glaser and Fetter themselves point out, China presently appears to favor negative control over an invulnerable posture for its mobile ICBMs in peacetime (pp. 72–73).

In sum, Glaser and Fetter omit from their analysis technical, organizational, and political factors favorable to U.S. damage-limiting capabilities. Yet damage limitation could be inadvisable even if technically plausible. We now turn to the political utility of damage limitation.

### --2NC---AT: Subs

#### SSBNs fail

Kristensen and Norris, ’18 Hans M. Kristensen, director of the Nuclear Information Project at the Federation of American Scientists and his collaboration with researchers at NRDC in 2010 resulted in an estimate of the size of the U.S. nuclear weapons stockpile that was only 13 weapons off the actual number declassified by the U.S. government, and Robert S. Norris, senior fellow with the Federation of American Scientists in Washington, DC and a former senior research associate with the Natural Resources Defense Council, June 25th, 2018, “Chinese nuclear forces”, Bulletin of the Atomic Scientists, Volume 74, Issue 4: Special issue: Missile Defense, around the world and, perhaps, in space, <https://www.tandfonline.com/doi/full/10.1080/00963402.2018.1486620>, EO

China currently operates a fleet of four Jin-class (Type 094) nuclear-powered ballistic missile submarines (SSBNs). All are based at the Longposan naval base near Yulin on Hainan Island.

Each Jin SSBN is designed to carry up to 12 JL-2s (CSS-N-14), a submarine-launched ballistic missile (SLBM) that is a modified version of the DF-31. Each JL-2 is equipped with a single warhead (and, possibly, penetration aids). The JL-2 has not been flight-tested to its full range but is thought to have a range of 7,000-plus km. A 2015 Pentagon report estimated its range is 7,400 km (US Defense Department 2015, 9), and a 2016 Pentagon report put the range at 7,200 km (US Defense Department 2016, 26). The 2017 NASIC report sets the range at 7,000-plus km (US Air Force, National Air and Space Intelligence Center 2017, 33). That would be sufficient to target Alaska, Guam, Hawaii, Russia, and India from waters near China – but unless the submarine carrying the weapon sailed significantly eastward, it could not target the continental United States.

We are uncertain how many SSBNs China plans to build. The US Office of Naval Intelligence predicted more than a decade ago that China might build five Jin-class SSBNs (Kristensen 2007). The 2015 Pentagon report agreed with that projection, saying “up to five may enter service” before China begins work on a next-generation SSBN (US Defense Department 2015, 9), and the US Director of National Intelligence stated in 2018 that China “might produce additional JIN-class nuclear-powered ballistic missile submarines” (Coats, 7).

Although the Jin-class is more advanced than China’s first experimental SSBN – the single and now inoperable Xia (Type 092) – it is still a very noisy design (Kristensen 2009b). It seems more likely that China will end production after five boats and turn its efforts to develop and produce a better third-generation (Type 096) SSBN over the next decade. The next SSBN is expected to carry a new missile, the JL-3.

It remains uncertain whether Jin submarines have ever sailed on deterrent patrols with nuclear weapons on board. US Chief of Naval Operations Vice Admiral Joseph Mulloy said in early 2015 that one Chinese SSBN had gone on a 95-day patrol (Osborne 2015). In late 2015, STRATCOM Commander Admiral Cecil Haney said Chinese SSBNs had been at sea, and that he didn’t know if they had nukes on board but had to assume they did (Gertz 2015). In early 2016, the head of the US Defense Intelligence Agency said the Chinese navy “deployed the JIN-class nuclear-powered ballistic missile submarine in 2015” on an extended patrol far from Chinese waters (Stewart 2016, 12).

These statements indicate that although one of the Jin submarines apparently sailed on an extended voyage in 2015, it is not clear that it carried nuclear warheads, or whether it was conducting a formal deterrent patrol. The voyage might have been a first step towards developing the capability to conduct deterrent patrols in the future.

To achieve that capability, the Chinese SSBN fleet will face several doctrinal, technical, and operational constraints. Although Chinese missile forces frequently practice the procedures required to load warheads onto missiles, China’s Central Military Commission has long resisted handing out nuclear warheads to the armed services to deploy on missiles under normal circumstances. Giving custody of nuclear warheads to deployed submarines during peacetime would constitute a significant change of Chinese policy. Moreover, before doing so, the Central Military Commission and China’s navy would first have to build up experience to operate an SSBN force during realistic military operations, which would require development of improved command-and-control technologies and procedures.

The SSBNs would also need a destination. Even if China deployed nuclear-armed SSBNs to sea in a crisis, where would they sail? For a JL-2 to be able to strike targets in the continental United States, a Jin SSBN would have to sail across the East China Sea and well into the Pacific Ocean, through dangerous choke points where it would draw attention and be vulnerable to hostile antisubmarine warfare (see Figure 1).

China’s main concern is making sure that its minimum nuclear deterrent would survive a first strike, and for that reason it spends considerable resources on modernizing and hiding its land-based missiles. This frankly makes its submarine program puzzling, for it seems much riskier for China to deploy nuclear weapons at sea, where submarines can be sunk by adversaries, than to hide the nuclear weapons deep inside China’s vast landmass (Kristensen 2014).

### --2NC---AT: Fratricide

#### Accuracy improvements solve fratricide

Keir Lieber and Daryl Press 17 {Keir A. Lieber is Associate Professor in the Edmund A. Walsh School of Foreign Service and the Department of Government at Georgetown University. Daryl G. Press is Associate Professor in the Department of Government at Dartmouth College. Spring 2017. “The New Era of Counterforce.” https://muse-jhu-edu.proxy.lib.umich.edu/article/657917}//JM

THE FADING PROBLEM OF FRATRICIDE One type of fratricide occurs when the prompt effects of nuclear detonations—radiation, heat, and overpressure—destroy or deflect nearby warheads. To protect those warheads, targeters must separate the incoming weapons by at least 3–5 seconds.33 A second source of fratricide is harder to overcome. Destroying hard targets typically requires low-altitude detonations (so-called ground bursts), which vaporize material on the ground. When the debris begins to cool, 6–8 seconds after the detonation, it solidifies and forms a dust cloud that envelops the target. Even small dust particles can be lethal to incoming warheads speeding through the cloud to the target. Particles in the debris cloud take approximately 20 minutes to settle back to ground.34 For decades, these two sources of fratricide, acting together, posed a major [End Page 21] problem for nuclear planners.35 Multiple warheads could be aimed at a single target if they were separated by at least 3–5 seconds (to avoid interfering with each other); yet, all inbound warheads had to arrive within 6–8 seconds of the first (before the dust cloud formed). As a result, assigning more than two weapons to each target would produce only marginal gains: if the first one resulted in a miss, the target would likely be shielded when the third or fourth warhead arrived.36 Improvements in accuracy, however, have greatly mitigated the problem of fratricide. As figure 1 shows, the proportion of misses—the main culprit of fratricide—compared to hits is fading. To be clear, some weapons will still fail; that is, they will be prevented from destroying their targets because of malfunctioning missile boosters, faulty guidance systems, or defective warheads. Those kinds of failures, however, do not generally cause fratricide, because the warheads do not detonate near the target. Only those that miss—that is, those that travel to the target area and detonate outside the LR—will create a dust cloud that shields the target from other incoming weapons. In short, leaps in accuracy are essentially reducing the set of three outcomes (hit, fail, or miss) to just two: hit or fail. The "miss" category, the key cause of fratricide, has virtually disappeared.37

### --2NC---AT: China BMD

#### Not a thing

David Gomper and Michael Libicki 19 {David C. Gompert is Distinguished Visiting Professor at the US Naval Academy and was US Principal Deputy Director of National Intelligence from 2009 to 2010. Martin Libicki is the Maryellen and Richard L. Keyser Distinguished Visiting Professor in Cyber Security Studies at the US Naval Academy. 6-12-2019. “Cyber War and Nuclear Peace.” https://sci-hub.tw/https://doi.org/10.1080/00396338.2019.1637122}//JM

Again, nuclear stability depends on fear of retaliation devastating enough to overwhelm any justification for a first strike. Of interest here is whether cyber warfare directed against an enemy’s NC3 could allay that fear by reducing the certainty or efficacy of retaliation. The answer to that question depends on which of the big nuclear powers one considers. Because it has the most survivable retaliatory forces, and because neither Russia nor China has BMD or the equivalent of global conventional strike, the United States has the least reason to worry about the strength of its strategic deterrent.

### --2NC---AT: A2AD

#### We’d beat A2AD

**Gompert et al. 16** – David, former Principal Deputy Director of National Intelligence and is a Senior Fellow for the RAND Corporation, Astrid Cevallos is a Project Associate at the RAND Corporation, Cristina Garafola is a policy analyst at the RAND Corporation (“War with China: Thinking Through the Unthinkable”, RAND Corporation, 2016//Kosack

While intensity depends on the use and loss of engaged U.S. strike and Chinese A2AD capabilities, the significance of total military potential, including reinforcements and mobilization capacity, could increase the longer the war’s duration. Likewise, economic resilience, political support, and international assistance could affect the ability of one or both sides to continue fighting. Both the United States and China have considerable, if asymmetric, capacity to prolong a conflict that neither one is militarily compelled or politically ready to end. A critical question is whether one side or the other can achieve such a clear advantage in the early stages of an intense conflict that the other has little choice but to concede. The U.S. ability to achieve such an advantage is declining as China improves its A2AD capabilities. At the same time, China’s increasing ability to prevent a decisive, early U.S. advantage does not necessarily translate into its ability to conclude a war quickly on its terms. Because a mild conflict would place smaller demands on total war-making capacity than a severe one would, it could have a greater potential than the latter to drag on—even becoming a “frozen conflict.” Conversely, and obviously, a long, severe conflict would involve greater costs on both sides than other cases in military, economic, and political terms. That a long, severe conflict would be the most costly does not mean it is the least likely. The disposition at any moment to keep fighting depends not only on results, losses, and costs to that point but also on expectations of what is to come. As long as neither side expects to lose, hostilities might continue. The United States presently has more military capacity than China to wage a long, severe war. For one thing, the United States has substantial forces located in or designated for other regions that it could bring to bear on a conflict in the Western Pacific, though security conditions in those regions might make it reluctant to do so.16 (Over the years, the Pentagon has crept away from its traditional standard of having sufficient total forces to win two major wars simultaneously.) Furthermore, U.S. forces today could degrade Chinese A2AD capabilities faster than Chinese A2AD capabilities could degrade U.S. forces. While both might suffer significant losses in early severe hostilities, U.S. prospects currently look better than China’s. Future conditions could differ, owing to the potential for greater losses of U.S. forces from Chinese A2AD and, in turn, reduced Chinese losses from those U.S. forces. Moreover, as U.S. military-operational advantages wane, China’s position as the “home team” could become less of a liability and more of an asset, owing to internal lines of communication and movement. A corollary of these shifting military odds is that the expected duration of war, however intense, could increase as Chinese capabilities improve, for the simple reason that China will retain more warfighting capability and face less pressure to yield. More generally stated, the less lopsided a war is likely to be, the less likely it is to end quickly in victory by the stronger side. Since Chinese and U.S. capabilities, operating concepts, incentives, and expectations all point to severe hostilities, this could mean that a war could last longer and be costlier than has been assumed or, paradoxically, than either side would want.

### --2NC---AT: Uncertainty

#### Yes there is some uncertainty in data, but at best it’s a difference in like 5 nukes---that’s negligible for nuclear winter math

#### In fact it’s a neg argument because China has an incentive to overhype their capabilities for deterrent effect, whereas the US has every incentive to hide their knowledge and best capabilities

### --2NC---AT: China First

#### No Chinese early warning or first strike

David C. Logan 17, PhD student in Princeton University’s Woodrow Wilson School of Public and International Affairs and a Graduate Fellow and Deputy Director of the Strategic Education Initiative at Princeton’s Center for International Security Studies, 11/8/17, “HARD CONSTRAINTS ON CHINA’S NUCLEAR FORCES,” https://warontherocks.com/2017/11/china-nuclear-weapons-breakout/

China’s nuclear forces and policies are constrained, first and foremost, by the country’s distinctive approach to nuclear weapons. As Jeffrey Lewis has written, Chinese leadership has historically believed that nuclear deterrence is largely unaffected by the size and configuration of the adversary’s nuclear arsenal, so long as the country can threaten a counterstrike of a few — or even one — nuclear warheads. Marshall Nie Rongzhen, a leading figure in China’s early nuclear weapons program, called this “the minimum means of reprisal.” Recent research by Fiona Cunningham and M. Taylor Fravel, based on reviews of Chinese doctrinal and academic writings and interviews with Chinese military and civilian experts, indicates that these fundamental views have not changed and that China is likely to continue adhering to its relatively restrained strategy of “assured retaliation.” In recent Track-1.5 and Track-2 dialogues between the United States and China, Chinese participants have said that China could credibly threaten the United States with only “a few,” a “handful of,” or even “one” nuclear warhead.

Designed to support more limited goals, China’s nuclear forces are generally believed to be smaller and less alerted than those of other states. The country has yet to develop an early warning system and some experts believe China would wait several days after suffering a nuclear strike before launching its own nuclear counterattack. Observers believe Beijing does not mate its nuclear warheads to missiles in peacetime, instead storing them separately. According to the counting rules of the New START treaty, China has nearly zero deployed nuclear weapons.