### NC – Adv CP

#### The executive branch of the United States federal government should establish a binding internal policy banning intervention in Africa in the case of regional economic decline due to space mining.

### NC

#### Congress is inching towards a funding deal—but, it’s a deliberate dance to keep them focused on funding while avoiding political complications

Romm 2/2 [Tony Romm is the congressional economic policy reporter at The Washington Post, tracking infrastructure reform, government spending and the financial impacts of federal decision-making nationwide, "Democrats, GOP inch ahead toward potential deal to fund government, avert shutdown", 2/2/22, https://www.washingtonpost.com/us-policy/2022/02/02/democrats-republicans-spending-shutdown-covid/]

Top Democrats and Republicans inched forward Wednesday in pursuit of a deal that could fund the federal government for the remainder of the fiscal year, hoping to stave off a shutdown while potentially pumping new spending into health care, education, science and defense.

The continued negotiations marked the second consecutive day of developments on Capitol Hill, as lawmakers who oversee the federal purse increasingly have come to express a measure of confidence that they can act before an upcoming Feb. 18 deadline — and overcome months of prior political disputes and delays.

Since President Biden took office, the U.S. government has operated under short-term measures that sustain key federal agencies and programs largely at their existing spending levels. The stopgaps have kept the government running, but they have also delayed Democrats from delivering on some of the White House’s top priorities, from expanding affordable housing to confronting climate change.

Republicans appeared content to continue in that vein, essentially dealing a political blow to Biden’s agenda in the process. But the two sides have come to see mutual benefit in striking a longer-term resolution, putting aside their differences at a moment when the United States continues to confront the pandemic at home and faces new diplomatic challenges abroad. The omicron variant of the coronavirus has sparked fresh discussions about the need for another round of federal aid, while the intensifying standoff between Russia and Ukraine has emboldened a Republican-led push to spend more on defense.

Both spending priorities could be appended to any new government funding measure, provided the two sides can reach a deal in the first place. In a sign of progress, Republicans on Wednesday presented a counter-offer for federal spending over the rest of the 2022 fiscal year, which Democrats are reviewing. The GOP move had the effect of temporarily delaying a planned afternoon meeting of the House and Senate’s top appropriators, but it still reflected a new seriousness among negotiators who until now hadn’t traded such proposals.

Yet new political fault lines also emerged Wednesday. Taking to the chamber floor earlier in the day, Senate Minority Leader Mitch McConnell (R-Ky.) foreshadowed what could be staunch GOP opposition to another round of pandemic relief, as he cited roughly $6 trillion in spending that has been approved since the start of the public health emergency in 2020.

“Let’s start the discussion by talking about repurposing the hundreds of billions already sitting in the pipeline,” McConnell said.

Lawmakers begin discussing government spending deal as Democrats eye virus aid, paid leave

The promises and platitudes nonetheless amounted to noteworthy progress on Capitol Hill, a place where partisan disagreements these days have come to transform all but the most basic debates into intractable conflicts.

Twice in recent months, the appropriations process has nearly brought federal agencies to a screeching halt, threatening to shut down the government and hamstring the country’s response to the pandemic. Republicans at the end of last year even held up a swift resolution to the funding fight to launch an ill-fated political campaign against Biden’s vaccination and testing mandates targeting businesses. The Supreme Court later struck down some of the administration’s policies.

This year, lawmakers from both parties have pledged to steer clear of the same brinkmanship that characterized negotiations in fights past. Instead they have aimed for a deal that covers spending through the fiscal year, which concludes at the end of September. But they already face a race against the clock to act by Feb. 18, the date by which lawmakers must adopt another short-term measure or broker the sort of compromise that has so far eluded them during Biden’s presidency.

With the clock ticking, Democrats huddled Tuesday morning to discuss their political strategy. Emerging from the gathering, House Speaker Nancy Pelosi (D-Calif.) and Senate Majority Leader Charles E. Schumer (D-N.Y.) each offered their public, formal blessings for the nascent talks around a longer-term spending deal. Schumer added that the party’s negotiators are “on the same page,” though he and Pelosi noted they had not yet received an official counteroffer from their GOP counterparts.

The leaders of the House and Senate’s top panels overseeing appropriations then gathered on their own late Tuesday to try to put pen to paper. One of the participants in the bipartisan session, Sen. Richard C. Shelby (R-Ala.), later told reporters that lawmakers are still seeking an “agreement on our principles, then the [spending] top line will follow.”

Shelby acknowledged at the time that a slew of policy gaps still separate the parties, including the balance between “social spending versus national security.” But he joined his Democratic counterparts in maintaining that “we all want to try to get to yes,” adding: “We’re not there yet.”

Democrats seek significant boosts in federal domestic spending, now that the country for the first time in a decade is not bound to strict budget caps. Writing to her caucus last month, Pelosi endorsed the need for a “strong omnibus” that would “address critical priorities for our country, including for our national security and for communities at home.”

Yet some of the Democrats’ proposed spending increases and policy tweaks have troubled Shelby and his fellow Republicans. Beginning last year, they pointed to a series of “poison pills” — from Democratic plans to enhance the IRS to the party’s effort to loosen a long-standing ban on federal funding for abortion services — that could sink any talks on a deal. GOP lawmakers also have called for parity in defense and nondefense spending, a move that historically has troubled some Democrats, who have sought greater cuts to the Pentagon than even Biden has proposed.

“We’re looking for parity. We live in a troubled world and a lot of us think national security is important for this country,” Shelby, who leads the GOP on the Senate’s appropriations panel, stressed on Tuesday.

Democrats and Republicans otherwise appeared to downplay any potential disagreements following their flurry of meetings. Sen. Patrick J. Leahy (D-Vt.), the chairman of the chamber’s appropriations panel, described himself as “always optimistic.” Rep. Rosa L. DeLauro (D-Conn.), his counterpart in the House, declined to specify any timelines or expectations for the follow-up session set for Wednesday afternoon.

“The goal is to get an agreement,” DeLauro said.

But such a deal, known in congressional parlance as an omnibus, is likely to carry additional significance this year. The compromise could pave the way for billions of dollars to flow toward projects that would improve the nation’s roads, bridges, pipes, ports and Internet connections. Lawmakers approved the money as part of a bipartisan infrastructure law finalized in 2021, but the package requires them to complete the act of writing the check, so to speak, before the real work can begin.

The must-pass spending measure also could serve as a legislative vehicle for lawmakers to advance a slew of other critical priorities. That includes new disaster aid in response to recent hurricanes and the tornadoes in and around Kentucky last year, for example, along with billions of dollars to augment the country’s efforts to combat the coronavirus.

With cases still rampant from the omicron variant, Democrats in recent weeks have renewed their calls for more federal spending to boost testing, therapeutics and vaccine access, especially abroad. Others have sought to provide additional benefits to workers, including the revival of a program that offers limited, pandemic-related paid family and medical leave. And still other Democrats have joined with a small but growing crop of Republicans who hope to give the green light to new assistance targeting restaurants, gyms, stages and other small businesses.

Lawmakers begin talks on another round of coronavirus relief for businesses

Publicly, the White House has maintained in recent months that significant money remains as part of the roughly $1.9 trillion American Rescue Plan that Biden signed into law last spring. White House officials, meanwhile, have quietly started preparing a supplemental request focused on outstanding public health needs.

But the Biden administration by Tuesday afternoon had not transmitted any official request to the Capitol, Democratic leaders said. “We’re waiting for the administration to send us something. They haven’t sent us anything yet,” Schumer told reporters.

Some party aides acknowledged it had become a deliberate, delicate dance, reflecting an attempt to keep Congress focused on solidifying government funding levels without adding any other political complications.

#### Space policy causes immense partisan backlash that wrecks the delicate balance

Dreier 16 [Casey Dreier, Chief Advocate & Senior Space Policy Adviser for The Planetary Society, April 13, 2016. “Does Presidential Intervention Undermine Consensus for NASA?” https://www.planetary.org/blogs/casey-dreier/2016/0413-does-a-strong-president-help-or-hurt-consensus-on-NASA.html]

To see how this happens, I recommend reading the book “[Beyond Ideology](http://smile.amazon.com/Beyond-Ideology-Politics-Principles-Partisanship/dp/0226470768/ref=smi_www_rco2_go_smi_g2243582042?_encoding=UTF8&*Version*=1&*entries*=0&ie=UTF8)” by Frances Lee. The author’s larger premise is that issues having no intrinsic relation to stated party ideology have become increasingly polarized in recent years. This is a function of the two party nature of our political system. If your party coalition wins, the other one loses. It’s [It is] zero-sum. Your party can win in one of two ways: you can make a better pitch to voters by demonstrating the superiority of your agenda; or you can undermine and stymie the agenda of the opposition party, making them unpopular with voters, and pick up the seats that they lose. Since you’re the only other political party, you gain in either scenario. I’m not sure if you’ve noticed, but the “undermine and stymie” approach has been popular for quite some time now in the U.S. Congress. Given this situation, the President and their policies naturally become the symbolic target of the opposition party. Anything promoted by the President effectively induces opposition by association. Lee demonstrates the magnitude of this induced polarization on various types of issues. For highly polarized issues like the role of government in the economy, or social issues, the impact is minimal—the opposition has already been clearly defined and generally falls into clearly defined ideologies of the Republican and Democratic parties. But for issues that do not fit readily into a predefined political ideology—like space—the induced polarization by the President can be significant. In fact, Lee showed that space, science, and technology issues incur the greatest increase in partisanship based on their inclusion in the Presidential agenda. One need only look to at the responses by political operatives of the opposing party to the strong human spaceflight proposals by [Barack Obama in 2010](http://www.shelby.senate.gov/public/index.cfm/mobile/newsreleases?ID=25F3AD2E-802A-23AD-4960-F512B9E205D2), [George W. Bush in 2004](http://www.nbcnews.com/id/3950099/ns/technology_and_science-space/t/bush-sets-new-course-moon-beyond/#.Vw3UMRMrKHo), and [George H.W. Bush in 1989](http://www.nytimes.com/1989/07/21/us/president-calls-for-mars-mission-and-a-moon-base.html) to see this reflected in recent history. This isn’t to say that Presidents can’t have a significant impact on the space program. Clearly they can. But the broad consensus needed for stability after their departure from office may be undermined by the very priority they gave it during their tenure. It what amounts to a mixed blessing for NASA, the U.S. space program does have an unusually strong bipartisan group of politicians who support the program due to NASA centers in a variety of states throughout the union. Berger notes this throughout his article, and it does, in a way, act as force that is resistant to change for good and bad. This mitigates somewhat the pure polarization seen on other science and technology issues. But for a Journey to Mars—a major effort that would, at best, require stability and significant funding over many Presidential administrations—that may not be enough. Perhaps the solution is for the next President to maintain a light touch on space. Maybe they should speak softly through the budget process, and avoid the Kennedyesque speeches and declarations to Congress that induce the types of partisanship we so dearly need to avoid.

#### Bipart’s key—otherwise, yearlong CR ruins defense industrial base and military modernization

Gould 1/22 [Joe Gould is senior Pentagon reporter for Defense News, “Defense industry frets as funding talks crawl”, 1/21/2022, https://www.defensenews.com/congress/budget/2022/01/21/defense-industry-frets-as-funding-talks-crawl/]

Despite repeated warnings from uniformed Pentagon leaders and lawmakers of both parties that a full-year continuing resolution will hurt national security, some defense industry advocates are still worried about an impasse.

On Thursday, both chambers of Congress left town on recess until the week of Jan. 31, after making scant progress on a deal for an omnibus federal spending package. Amid partisan divisions over funding levels and policy provisions, House Speaker Nancy Pelosi, D-N.Y., warned that a full-year CR would create a national security crisis ― in an effort to pressure Republicans.

“It is a national security issue of the highest priority, with the threats that exist out there. To go to a continuing resolution instead of a decision-making omnibus bill is to weaken our security and our stability,” Pelosi told reporters Thursday. “The Republicans should know that, so we hope we will be able to bring that legislation to the floor before [the current CR] expires.”

With fiscal 2022 spending bills four months overdue, lawmakers and the Pentagon have warned against a yearlong CR that would freeze defense spending at the level of 2021 appropriations. CRs continue funding at the previous year’s level, preventing the Pentagon from starting new acquisition programs and ramping up production quantities.

And without a 2022 spending deal to set a new baseline, the president’s budget submission is in limbo and expected to come months late, which is sowing uncertainty for the military and its vendors.

President Joe Biden signed a defense policy bill that boosts his $753 billion national defense budget request for FY22 to $778 billion, a 3% increase. But Republicans have said they want more for defense, less than the 16% increase proposed by Democrats and an agreement on some politically charged policy riders.

By the reckoning of National Defense Industrial Association Chairman Arnold Punaro, lawmakers could meet somewhere in the middle with 8% increases for both defense and nondefense, but that’s far from a certainty. Democrats have raised fears some Republicans see budget gridlock as an advantage heading into midterm elections and don’t want a deal at all.

“We’re still in budget chaos,” Punaro told Defense News this week. “China’s on the march, Russia’s on the move and North Korea’s on the advance, and yet Congress is sitting on their duff, not passing a spending bill. It’s disgraceful.”

The lack of a 2022 deal as a baseline for defense amid escalating inflation presents a huge challenge for Pentagon planners crafting the FY23 budget request, Punaro said. He worried the administration could make a flat budget request, potentially costing the Pentagon billions of dollars in buying power.

Meanwhile, a full-year CR would yield $11 billion of lost growth, while 7% inflation would mean another $50 billion in lost buying power, according to defense consultant Jim McAleese, the founder of McAleese & Associates.

Though the current CR runs out on Feb. 18., recent negotiations in Congress have sparked some optimism.

Lead appropriators in the Senate met Jan. 13 with Senate Majority Leader Chuck Schumer and Senate Minority Leader Mitch McConnell to set the guidelines for negotiations. From there, lead House and Senate appropriators met to kick off talks, and Pelosi has said she’s been in discussions with House Appropriations Committee Chairwoman Rosa DeLauro, D-Conn.

Asked Thursday whether it’s realistic to get an agreement by Feb. 18, as Congress was about to leave town Senate Appropriations Committee Vice Chairman Richard Shelby, R-Ala., said: “That’s a good question. It’d be hard to get it by the 18th, but if we can make huge progress, we can probably get done soon.”

It’s unclear whether looming international crises with Russia and Ukraine, China and Taiwan, and North Korean missile tests would add pressure to pass defense spending. When asked about Pelosi’s comments, Shelby seemed to dig in.

“She’s right on that, but to underfund defense as some people would like to do, that would be a bigger challenge,” he said.

At a House Appropriations Committee hearing Jan. 12 about the effects of a potential full-year CR, the top officers of the Army, Navy, Air Force, Marine Corps and Space Force warned such a move would sabotage the military’s efforts to compete with China by stalling new weapons like hypersonic missiles.

“CRs effectively prevent modernization at speed,” said Marine Corps Commandant Gen. David Berger. “We actually stand to be outpaced by China — not because of their speed but because of our failure to comply with our own budgetary processes.”

The president and CEO of the Aerospace Industries Association, Eric Fanning, has warned that budget unpredictability is inefficient for the defense industry, which has to idle while the Pentagon waits for its projects to be funded. Amid the Capitol Hill activity, Fanning said he is “hopeful that the momentum continues.”

“The hearing painted a concerning picture of additional and unnecessary costs, as well risks to capabilities and to the industrial base in the short and long-terms. There was bipartisan agreement on how devastating a year-long CR could be,” Fanning said in a statement Thursday. “Over the last few days, there are positive signs that the message is getting through and the top appropriators from both parties are coming to the table.”

Lead Pentagon officials have talked for years about the need to harness the innovation of small tech firms. But CRs stifle those efforts, an executive at one of those firms, Anduril Industries, wrote in an essay this week.

#### Impact’s cyber and deterrence crash

Manchester ’19, [Josh, Founder of Champion Hill and General Partner at Foundation Capital, Venture-backed Startups Will Build the Defense Technology the Free World Needs Right Now, https://medium.com/@joshmanchester/venture-backed-startups-will-build-the-defense-technology-the-free-world-needs-right-now-d2cefa2b2196]

With U.S. defense spending exceeding $700 billion per year, how could the United States be on the brink of a national security emergency? Simply put, America’s national security competitors are outflanking an Industrial-Age U.S. military machine that, like a lumbering dinosaur, is not adapting fast enough to its changing environment. The Pentagon desperately needs rapid innovation. Yet the current defense industry structure is not compatible with U.S. venture capital and high-growth technology industries for several reasons: · The U.S. military’s industrial base is centered on a few huge oligopoly suppliers known within the Beltway as “the Primes” — Lockheed Martin, Boeing, Raytheon, General Dynamics, and Northrop Grumman. These companies, ancient by tech startup standards, have optimized themselves to sustain a 20th century Industrial Age World War II-style force structure which supports the political decision-makers across the country who appropriate the funding that industrial base receives. The Primes are great at building very large platforms that cost billions of dollars and take 15–30 years to field. The Primes are also historically heavy on hardware talent and much lighter on software talent. · The Primes receive the vast majority of defense spending. Defense budgets have historically not unlocked for startups. While a defense private equity industry exists to aggregate small companies and flip them downstream to the Primes, venture capital investors, who have a much higher return threshold, know that it’s hard to have venture outcomes (in other words, to make money) when a company can’t win large market share or survive as a stand-alone business. · Venture-backed tech industries have matured as an asset class in peacetime and most mainstream U.S. venture firms in existence today do not have institutional cultures or histories that include defense innovation, apart from cybersecurity. · Major tech companies, like the FAANGs (Facebook, Apple, Amazon, Netflix, Google and Microsoft too), are generally unwilling to work on defense related projects, and sometimes must deal with employee protests when they do. · Many observers perceive this as an indicator that software engineers generally don’t want to work on defense-related innovation. · Finally, in a bizarre set of twists, some of the organizations that comprise the Limited Partners of venture capital firms (the blue chip endowments and foundations of the U.S. Eastern establishment, often founded on the fortunes of great American industrialists from decades ago, along with public pension funds throughout the country) are [sometimes accidentally funding Chinese defense technology](https://www.buzzfeednews.com/article/ryanmac/us-money-funding-facial-recognition-sensetime-megvii) while often restricting their U.S. venture managers from making defense investments. Foundations and endowments in particular often have negotiated Limited Partnership Agreements with the venture firms they finance precluding them from investing in anything that could have military usage. The irony is that these same tax-exempt pools of capital are frequently investors in Chinese venture funds which provide software to make smarter and more deadly Chinese weapons and to the advanced surveillance systems that have turned China’s Xinjiang province into a virtual Uighur prison camp and a human rights disaster. No single individual or entity has caused this state of events to transpire; it is simply the accumulation of various cultural aspects of the capital formation process of the venture industry and its portfolio companies. Fortunately, we believe that almost all these characteristics will rapidly change over the next few years. But first let’s discuss some additional background. Venture capital has come of age in a time of unprecedented peace The U.S. venture capital industry is about 100 years old. Bessemer Ventures was formed in 1911 and originally had just the family fortune of Henry Phipps Jr., a co-founder of Carnegie Steel, as its sole limited partner. Despite these deep roots, the U.S. venture industry has only institutionalized as an asset class since the mid-1990s. Until then it was extremely clubby and very small. Sequoia Capital, KPCB, Charles River Ventures, and NEA were all founded in the 1970s and Accel Partners in the 1980s. But it has really only been since the mid-1990s (Benchmark Capital was founded in 1995, as was my own former firm, Foundation Capital) that the industry has institutionalized and grown substantially, first in the desktop computing and internet boom, and second during the combination of platform shifts over the last ten years that have given us mobile computing, social media, e-commerce, cloud computing, software-as-a-service and all of their associated new business models. For a quarter of a century, the institutional, mainstream venture investing ecosystem, at the startup, venture firm and limited partner levels, developed business processes, mental models, networks, and expertise in certain technical areas and heuristics — in aggregate, an industry culture — that have created one of the most dynamic parts of the U.S. economy. The U.S. tech industry is also one of the most unique aspects of American life — and a powerful, difficult-to-replicate form of “soft power,” featuring an inclusivity for aspirational immigrant founders — a feature perhaps unequalled in human history. From a long-term U.S. historical viewpoint, it is striking that the venture industry’s maturation has occurred during a unique period in American history when the United States had no major great power competitor, either ideologically or technologically. The Cold War ended in 1991, the Soviet Union dissolved, and Russia was in disarray for the next 15 years. This period of peace was not without its own unique trials, but the security challenges associated with terrorism, counterinsurgency, and lower-intensity military activity have not required the sort of Herculean societal and political efforts that were drawn upon during the Cold War or World War II. We should all be grateful every day that this has been the reality of the last 25 years. A useful analogy might be made with gold. In 1933, President Roosevelt made it illegal for U.S. citizens to own gold. In 1934, Benjamin Graham published the first edition of Security Analysis. In January 1975 it became legal to own gold again. Graham died in 1976. It was therefore illegal to own gold during key years of the development of modern security analysis. From this gap came gold bugs — the weirdos who seemed to always talk about nothing else, and didn’t get invited to key social events. No analogies are perfect but this captures some of the similarities between venture and defense today. Cybersecurity investors understand the cybersecurity parts of U.S. defense. But most mainstream Silicon Valley venture firms do not spend time on other parts of defense due to the industry’s institutionalization during this recent period of relative peace and American dominance — which has also been a time when the lion’s share of defense spending has gone to the Primes, as discussed. Sadly, peace is ahistorical. Great power competitions are a feature of humanity, not a bug. Periods of time when a major power, or superpower, are not challenged in some profound fashion by one or more other powers, regardless of whether they are driven by fear, prestige, economic interest, or ideology — are, in short, rare when looking back on the sojourn of homo sapiens on planet earth. The period when the free world had a monopoly on power has now ended. The tech-defense status quo is inverting The only previously delineated area where we don’t expect much change is from the FAANGs. These massive companies are best viewed as small nation-states themselves with global stakeholders. For example, many of their employees are not U.S. citizens and may not want their employers engaged in U.S. defense work. We think everything else will invert. · We believe defense budgets will begin unlocking for young startups. Many key national security decision-makers in Washington are now seeking better, faster alternatives to the byzantine Pentagon acquisitions process. Thought leaders like Will Roper, in charge of the U.S. Air Force’s $40 billion annual research and acquisition budget, are [eagerly welcoming the contributions that smaller, nimble venture-capital funded entrepreneurs can make](https://federalnewsnetwork.com/dod-reporters-notebook-jared-serbu/2019/03/air-force-looks-to-build-big-idea-pipeline-to-expand-its-industrial-base/). Roper, and others in the Pentagon, are reforming their practices to make it easier for genuine innovators to compete against the legacy defense oligopoly. When recently asked at a conference what problem keeps him up at night, Roper replied, “The industrial base.” · Given the hardware roots of the Primes, they are ill-suited to provide solutions to many of the most pressing problems today. The Defense Department will increasingly allocate resources to startups solving software problems for which the Primes have no existing stock of machine learning engineers. · As this happens some venture firms will experience cultural shifts toward more defense investing. As venture capitalists see that startups are receiving large purchase orders from various Defense Department units, they will develop strategies to deploy capital toward defense innovation. A good example is [last week’s award by the Air Force of $121 million to Pivotal Software in San Francisco](https://dod.defense.gov/News/Contracts/Contract-View/Article/1861753/source/GovDelivery/). · Institutional limited partners as a group will likely slowly allocate away from any China-based manager who could be investing in Chinese military technologies. Some LPs with the freedom to do so may remove restrictions on defense investing from limited partnership agreements. · We believe it is a myth that software engineers do not want to work on defense. This is a classic case of preference falsification, the social phenomenon in which people do not speak their true minds about a given topic, though their actions often indicate otherwise. We believe that talented engineers are often very attracted to defense-related work because it often offers the hardest problems to solve. An enormous opportunity therefore exists for startups: to hire the engineers who don’t want to work for ancient and outdated Primes, and who aren’t very welcome at the FAANGS, but who wish to create the technologies that an increasingly eager democratic government needs to defend itself and its allies. Companies in our own portfolio, like [SpaceX](https://www.spacex.com/), [Rigetti Computing](https://www.rigetti.com/), [Anduril Industries](https://www.anduril.com/), and [Umbra Lab](https://umbralab.com/) are executing this strategy. The hardest technical problems today are defense-related How can data from satellites, drones, land-based radar, ships, and other sources be stitched together, in real time, to find long-range missiles on mobile transporters, hiding among the background in cities, forests, and mountains? How can friendly troops, who have separated into very small units in order to hide and survive, be connected to each other electronically, and be resupplied from historically long ranges? How and to what degree and in what conditions should an adversary’s sensor networks be spoofed? What type of false electronic picture can be painted? The aggregation of targeting data for an air wing takes 72 hours today and has a heavy human component. Can this complex optimization problem be solved autonomously, such that the targeting list for pilots is developed in 15 minutes? How does a deployed force of perhaps 50,000 personnel, with planes, ships, and land forces, continue to fight when satellite links have been knocked out, and “reachback” to the U.S., for data processing, is no longer possible? Can deep learning be used for crisis diplomacy? Put another way, since DeepMind’s AlphaZero can teach itself to move pieces forward on a board to win a game, can it learn to move them backwards, to de-escalate a crisis? These problems, and many others, are asking to be solved by entrepreneurs. Phase change There is a looming breakdown in deterrence. If the U.S. defense establishment is unable to adapt to the new great power competitive environment, then adversaries will be tempted to grab for a fait accompli, with war the result. This has been the pattern since Homer wrote The Iliad; there is no evidence to conclude human behavior is different in the 21st Century. We believe the prevention of this scenario involves rapid technical innovation. The defense environment is more favorable now for upstart firms than anytime in the past several decades. If you are a founder building technology to ensure the survival of government by consent, our firm would like to talk to you.

### CP

#### Spacefaring Nations should:

#### increase funding for space-situational awareness technology, and

#### warn all states about known impending collisions on their space assets

#### develop satellites with automated collision avoidance systems.

#### Planks 1 and 2 solves collisions, assures allies, and avoids key sharing key secrets

Hitchens and Johnson-Freese 16 (Theresa Hitchens and Joan Johnson-Freese. Johnson-Freese is a professor of national security affairs at the Naval War College in Newport, Rhode Island. Theresa Hitchens is a Senior Research Scholar at the University of Maryland’s Center for International and Security Studies at Maryland (CISSM), and former Director of the United Nations Institute for Disarmament Research (UNIDIR). “Toward a New National Security Space Strategy Time for a Strategic Rebalancing,” Atlantic Council Strategy Papers, No. 5, 2016, <https://www.atlanticcouncil.org/images/publications/AC_StrategyPapers_No5_Space_WEB1.pdf>)

Improved SSA is a foundational capability for any US space strategy in any and all circumstances, given the rapid changes in the space environment. The national space security community has recognized this repeatedly, although funding has arguably not been commensurate with the rhetoric. Attempts are now being made to rectify the funding situation because of the Russia/China threat scare. According to the Government Accountability Office (GAO), the Obama administration is planning to spend about $6 billion between 2015 and 2020 to beef up SSA capabilities—largely within the Pentagon, but also at contributing agencies NOAA and NASA.50 Calculating exact spending on SSA activities, however, is not possible due to the way the Defense Department tracks (or, rather, does not track) related spending. According to the GAO report:

• Compiling a budget for all SSA-related efforts is a challenge because many assets that support the SSA mission do not have it as their primary mission.

• DOD is not required to and does not track the budgets specific to its SSA efforts for multiple-mission systems, and it does not estimate what percentage would be allocated to SSA.

• For example, some portion of the ballistic missile defense sensors budget, which averages about $538 million per fiscal year over the next few years, supports SSA, but DOD does not track the efforts of multi-mission sensors in a manner that would provide such data.

• SSA-related efforts performed using intelligence community sensor systems are also not included in the core SSA budget because those efforts and their budgets are classified.51

SSA is also an area ripe for possible leveraging of commercial and foreign capabilities, both to provide resilience and to complicate an adversary’s calculations regarding an attack—one of the stated goals of the Obama administration’s NSP. However, that potential has yet to be fully exploited, and greater emphasis should be put on doing so.

On June 1, 2015, US Strategic Command (STRATCOM) initiated a six-month pilot program to research how to integrate commercial operators (and their SSA data) into the JSpOC, called the Commercial Integration Cell. The initial effort involves six operators: Intelsat, SES Government Solutions, Inmarsat, Eutelsat, DigitalGlobe, and Iridium Communications. The goal is to assess whether JSpOC operations can be enhanced via integration of industry capabilities and insights, and, if so, how.52 The pilot program comes after years of lobbying by industry, including through SDA, for closer cooperation and collaboration between commercial operators and the US military on space-object data tracking. One major hurdle has been that the computer systems and models used by JSpOC are antiquated, and incompatible with more up-to-date industry practices. While updates are planned, given the lack of adequate budget resources, this situation is not likely to be rectified anytime soon. This misalignment between ways and means should be addressed as soon as possible by the incoming administration.

Another question is the extent to which US allies will be allowed access to the improved SSA data, including the interference warnings and collision analysis it will provide.53 The issue with allies is not just technical, but also, and primarily, political. The uncertainty in the private sector about JSpOC-industry collaboration and data sharing is underscored by AGI’s COMSpOC. AGI is seeking to tap into the expanded (and unfilled by JSpOC) need for such data in the commercial marketplace, both in the United States and abroad.54

Lieutenant General John W. Raymond, Commander of the Joint Functional Component Command for Space, told the House Armed Services Strategic Forces Subcommittee on March 25, 2015, that STRATCOM is working on a new “tiered SSA Sharing Strategy.” Raymond stated: “The tenets of this strategy are to share more information in a timelier manner with the broadest range of partners. We aim to promote an interactive, exchange-based relationship with satellite 35 owners and operators where all parties gain. This open exchange of information also supports U.S. and allied efforts to detect, identify, and attribute actions in space that are contrary to responsible use and the long-term sustainability of the space environment.” He further noted that, as of March 2015, there were forty-six SSA-sharing agreements in place with forty-six commercial firms, eight nations, and two intergovernmental organizations, with ten more in the works.55 (The number of such SSA agreements, as of March 2016, is now at sixty-three.)56

The word “tiered” in Raymond’s statement is central, as part of the issue for the Defense Department is figuring out what data to share with whom, at what level of specificity and accuracy. There has traditionally been reluctance about “giving away the store,” particularly because many allies more closely integrate their civilian and military space operations, with less of a focus on protecting national security secrets. It is hard to underestimate the challenges— for example, simply regarding security clearances for access to US data. Further, some nations are leery of relying too closely on information provided by the US military. For this very reason, the European Union (EU) in 2009 launched an effort to pursue independent SSA capabilities— an effort that has proceeded in fits and starts, due to internal EU concerns about the sharing of both information and funding. As of early 2015, the nascent program is being funded by fourteen participating EU states, focusing largely on figuring out how to better coordinate European activities, but also looking at how to improve capabilities.57According to the European Space Agency (ESA): “To date, Europe’s access to information on what is happening in space has been largely dependent on non-European sources. In recent years, for example, data to trigger alerts on potential collisions between European satellites and debris objects have only come through the good will of other spacefaring nations. For this and other reasons, Europe needs an autonomous SSA capability.”58 It remains unclear how the EU SSA system, once established, will interact with that of the United States. This should be a major focus of future US space diplomacy and cooperation, to ensure that the systems are compatible and accessible—in part, to provide mission assurance.

The United States signaled its desire to forge the closest partnership on SSA sharing with Australia, Canada, and the United Kingdom, via a Memorandum of Understanding on Combined Space Operations, signed in September 2014.59 The details of the MoU, however, are vague.60 It should be noted that all three countries have assets that could contribute to US efforts, and would not simply benefit from a one-way absorption of US data.

Also, it is not only US allies who require better SSA in order to operate satellites safely and securely. More than seventy countries operate satellites, with 1,381 operating satellites in orbit at the end of 2015.61 Many of these operators lack sufficient SSA. In the July 2013 report adopted by the UN General Assembly in October 2013, the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities cited the need for improved global access to space data, both for safety purposes and for building trust. The report stated that, beyond a lack of space capacity, “the inability of many States to acquire significant space-based information” is a factor “contributing to the lack of confidence.”62 Russia has proposed to the COPUOS Scientific and Technical Subcommittee that the UN Office of Outer Space Affairs consider the development of an international, open database of on-orbit objects (both operational satellites and debris) to fill this gap.63 The United States and its allies have rejected the Russian proposal, largely for budgetary reasons, but the United States has been internally mulling over a possible proposition to create an informal international group to discuss the challenges to sharing SSA data and how to overcome them. This would be a promising first step, and a testimony to continued leadership in SSA by the United States, consistent with a national space strategy aimed at reducing risks. Inevitably, some form of open-access space-object database is going to be required, simply to ensure on-orbit safety—particularly in LEO, as the number of so-called Cubesats (very small satellites) rises 37 dramatically. The United States should take the lead on developing a workable space-traffic management regime underpinned by SSA.

#### Plank 3 solves miscalc

Green 14 (Brian D. Green, “Space Situational Awareness Data Sharing: Safety Tool or Security Threat?” A thesis submitted to McGill University in partial fulfillment of the requirements of the degree of MASTER OF LAWS, December 2014, <http://digitool.library.mcgill.ca/webclient/StreamGate?folder_id=0&dvs=1569190779049~368>)

Countries with SSA capabilities would not need to reveal those types of critical information to provide warnings when a collision appears imminent, and thus could provide such warnings even for the benefit of a hostile country. If, for example, the United States detected that Iran’s Sina-1 satellite was in danger of colliding with another space object, it could issue Iran the warning without compromising the security of its own assets. If the US or an ally was in control of the satellite that was in danger of colliding, it could also perform or recommend a collision avoidance maneuver on its own. In either case, collision avoidance procedures would not require a country to provide potentially sensitive details such as a satellite’s current mission tasking, sensor resolution, or design blueprints. However, they could both avert a space-debris producing accident and show good faith in a way that could keep international tensions from escalating.

## Case

### Adv1

#### Squo solves debris – private tracking, surveillance, in-orbit servicing and green satellite tech all happening now – private sector and P3s are key and outpacing government monitoring

CSTP 20 – OECD Committee, The strategic objectives of the Committee as defined in its Mandate and by the work priorities agreed by Member countries' Ministers responsible for science and technology provide the framework for the Secretariat's proposals for activities to be developed or initiated under the aegis of the Committee itself or its subsidiary bodies (NESTI, TIP, GSF, BNCT and IPSO) [This paper was approved and declassified by written procedure by the Committee for Scientific and Technological Policy (CSTP) on 11 March 2020 and prepared for publication by the OECD Secretariat, “SPACE SUSTAINABILITYTHE ECONOMICS OF SPACE DEBRIS IN PERSPECTIVE,” OECD Science, Technology and Industry Policy Papers, April 2020, No. 87, https://www.oecd-ilibrary.org/science-and-technology/space-sustainability\_a339de43-en]

An emerging “space debris economy”?

* Will we see a more intensive use of cubesats and miniaturised technologies in lower orbits? Cubesats have been the fastest-growing category of launched satellites in the last years and, when launched at lower altitudes, are naturally compliant with debris mitigation guidelines. They are also ever more performant and affordable, and dedicated launch opportunities become more widespread. Furthermore, they increasingly receive preferential treatment in risk-based national legislations (e.g. introduction of sliding scale in the UK Outer Space Act for insurance requirements).
* Space surveillance and tracking capabilities, in both GEO and LEO: New (private) sources of situational awareness data are becoming increasingly important, with data analytics and modelling fuelled by advances in digital technologies. Private sector debris catalogues and tracking capabilities for the geostationary orbit may now be almost as good as government capabilities (IDA, 2016[76]), while solutions for the low-earth orbit are emerging. Start-ups such as LeoLabs provide data and services based on low-cost ground equipment and sophisticated data analysis. The company, which in October 2019 had three radars in the United States and New Zealand, has developed a cloud-based “Space Regulatory and Sustainability Platform” for the New Zealand Space Agency, a first of its kind, destined to track objects launched from New Zealand to ensure compliance with permit conditions (MBIE, 2019[77]). A novel project called TruSat intends to use blockchain technology to crowdsource and validate satellite orbital positions worldwide via open source software (TruSat, 2019[78]). The US Air Force Research Laboratory has signed agreements with several commercial space situational awareness data providers (e.g. Numerica, LeoLabs, ExoAnalytics) to get access to sensor networks and algorithms (Numerica, 2019[79]). The Space Situational Awareness (SSA) open-architecture data-sharing platform under development by the US Department of Commerce, including data from different government agencies, is also expected to spur innovative value-added products and services.
* In-orbit servicing solutions: Several governmental agencies and commercial companies have developed, or are in the process of acquiring, some capabilities for in-orbit servicing (e.g. NASA, DARPA, ESA, JAXA). In-orbit servicing involves a number of complex operations in space: the servicing of space platforms (e.g. satellite, space station) to replenish consumables and degradables (e.g. propellants, batteries, solar array); replacing failed functionality; and/or enhancing the mission through software and hardware upgrades. This is a major challenge as, when on orbit, space platforms can move at speeds of several kilometres a minute. The first commercial in-orbit servicing mission was launched in 2019, by a MEV-1 spacecraft developed by Orbital ATK for an Intelsat geostationary satellite. The main short-term market is seen in the life extension of geostationary satellites, with some 300 potential candidates, at least in theory (Kennedy, 2018[80]). However, the key benefits of in-orbit servicing are expected in the future. Satellite design is currently heavily restricted by extreme launch conditions, but the possibility of servicing could enable a much more flexible and modular satellite design, able to take advantage of the latest advances in materials and electronics, beyond software upgrades (Jaffart, 2018[81]). Market forecasts estimate a USD 3 billion market for in-orbit servicing over the 2017-27 period, mainly driven by life extension services (Northern Sky Research, 2018[82]).
* Active debris removal solutions: Active debris removal is at a less mature technological level, but several firms are preparing demonstration missions (e.g. Astroscale in 2020). Potential candidates for removal include more than 200 critical debris objects (3-9 tonnes); mainly rocket bodies, but also the European Envisat satellite. JAXA, has formally launched a project to remove a large piece of debris by 2025 (a Japanese rocket body) in a public-private partnership (Japanese Delegation to UNCOPUOS, 2019[83]). Both Airbus and Thales Alenia Space are developing in-orbit servicing vehicles with debris removal functions, some of which have been tested on the RemoveDEBRIS mission (Surrey Space Centre, 2019[84]; OECD, 2019[11]).

• “Green” satellite design and technology: The demand for space-environment friendly satellite design is picking up. This includes features to reduce or avoid debris creation (explosion-safe batteries, deorbit technologies) and/or facilitating active removal (e.g. markers or grapple fixtures). One example is OneWeb, which is installing grapple fixtures on their satellites. In Europe, all future Sentinel satellites will be designed for demise. Affordable deorbit technologies are already being tested on orbit. Canada’s three-kilo CanX-7 satellite was launched in 2016 and is currently using its four 1 m2 drag sails to deorbit at a significantly faster rate than it would have without the sails. Amazon’s Kuiper constellation intends to use unpressurised and non-explosive propellant to mitigate accidental explosions, and satellites losing contact with ground control would automatically deactivate themselves, first by self-passivation and orbit-lowering, then depleting all energy reservoirs and switching off charging circuits (FCC, 2019[85]). SpaceX’ Starlink satellites are equipped with automated collision avoidance systems (although it is unclear which role the system played in the near-collision with the ESA Aeolus satellite).

A recent promising initiative is the “Space Sustainability Rating” scheme, originally conceived by teams from the MIT Media Lab, European Space Agency, and World Economic Forum. The initiative intends to be similar to the most widely used green building rating system in the construction industry, called the LEED certification for Leadership in Energy and Environmental Design. The objective is to promote mission designs and operational concepts that mitigate debris creation, and create a label that can encourage operators to behave more responsibly.

#### Loss of satellites will shut down terrestrial mining

Les Johnson 13, Deputy Manager for NASA's Advanced Concepts Office at the Marshall Space Flight Center, Co-Investigator for the JAXA T-Rex Space Tether Experiment and PI of NASA's ProSEDS Experiment, Master's Degree in Physics from Vanderbilt University, Popular Science Writer, and NASA Technologist, Frequent Contributor to the Journal of the British Interplanetary Society and Member of the American Institute of Aeronautics and Astronautics, National Space Society, the World Future Society, and MENSA, Sky Alert!: When Satellites Fail, p. 105

Resource Location

Looking for rare minerals to be mined for our many gadgets, household appliances, and industrial machines? Soil type is often a strong indicator of whether or not underground deposits of metals and minerals are located. By using satellite data to identify promising surface structural features and different soil types, mining companies can better identify promising mining locations, wasting less time and effort in finding the best places to obtain much-needed industrial resources. Without satellite images, the finding and assessment of promising new mines would grind to a halt as the industries retooled back into the days of much slower and labor-intensive field surveys (but without GPS!).

#### It won’t impact important satellites.

#### Kessler’s confined to High LEO, but all the good stuff’s in other orbits. Their evidence doesn’t understand how space works---there are totally separate altitudes that never interact like Low LEO, Mid Orbit, and GEO and it’s physically impossible to spill up or down

#### STM is empirically effective at preventing collisions and is improving and military-to-military data sharing solves any risk of miscalc

CSTP 20 – OECD Committee, The strategic objectives of the Committee as defined in its Mandate and by the work priorities agreed by Member countries' Ministers responsible for science and technology provide the framework for the Secretariat's proposals for activities to be developed or initiated under the aegis of the Committee itself or its subsidiary bodies (NESTI, TIP, GSF, BNCT and IPSO) [This paper was approved and declassified by written procedure by the Committee for Scientific and Technological Policy (CSTP) on 11 March 2020 and prepared for publication by the OECD Secretariat, “SPACE SUSTAINABILITYTHE ECONOMICS OF SPACE DEBRIS IN PERSPECTIVE,” OECD Science, Technology and Industry Policy Papers, April 2020, No. 87, https://www.oecd-ilibrary.org/science-and-technology/space-sustainability\_a339de43-en]

Added to this are the issues of space traffic management. Collision avoidance processes are currently often manual and ad-hoc (ESA, 2019[46]). This is illustrated by the September 2019 low-earth orbit incident involving the European Space Agency earth observation satellite Aeolus and Space X’ Starlink 44 satellite. Starlink 44 was temporarily lowered to near 320 km altitude to conduct deorbit tests, thus entering a region already occupied by the Aeolus satellite. When the US Air Force issued a close proximity warning (surpassing the Agency’s safety threshold of 1 in 10 000 collision probability), ESA operators conducted an avoidance manoeuvre (ESA, 2019[46]). Operators for both satellites were in contact before and after the manoeuvre, but SpaceX has later communicated that a communications bug prevented the Starlink operator from seeing the correspondence with the probability increase.

To address some of these challenges, the United States is taking a new approach to commercial space traffic management, moving it from the Department of Defense to the Department of Commerce. The US Space Policy Directives 2 and 3, issued in 2018, establish the Department of Commerce as the lead civil agency for commercial space situational awareness (SSA) and space traffic management (STM). Whereas military-to-military SSA data-sharing agreements will continue as before, the Office for Space Commerce in the Department of Commerce will provide services to commercial stakeholders. One important initiative, as set out in the Space Policy Directive 3, is an open-architecture data-sharing platform, including data from international government and private operators. Some basic services will be provided free of charge, with commercial providers able to provide add-on services. In July 2019, the Department of Defense sent the first sets of satellite and tracking data to this new repository, dubbed the Unified Data Library. The Office for Space Commerce has also been tasked with co-ordinating activities across US agencies to create and update standards, practices and guidelines related to debris mitigation and space traffic management (e.g. update government debris mitigation standard practices, establish new guidelines for commercial satellite design). This will be integrated into respective licensing processes.

The industry itself is also taking steps. The Space Data Association was created in 2009 and includes both incumbent and more recent satellite operators. The organisation shares operational data and promotes industry best practices

### african adv

#### Doesn’t say war, lists alt causes, and says it will devolve to small-time proxies that don’t escalate – Harker reads yellow

Yeisley 11 [(USAF Lieutenant Colonel Mark O. Yeisley, assistant professor of international relations at the School of Advanced Air and Space Studies, Maxwell AFB, Alabama. MA Colorado State, PhD in international relations from Duke University) “Bipolarity, Proxy Wars, and the Rise of China,” Strategic Studies Quarterly, Winter 2011, <https://www.jstor.org/stable/26270538?seq=1#metadata_info_tab_contents>] TDI

Bipolarity, Nuclear Weapons, and Sino-US Proxy Conflict in Africa

It is likely China will achieve economic and then military parity with the United States in the next two decades. China currently possesses 240 nuclear warheads and 135 ballistic missiles capable of reaching the United States or its allies; that number of nuclear warheads is estimated to double by the mid 2020s.43 As during the Cold War, a bipolar system in which war between the United States and China is too costly will lead to policy decisions that seek conflict resolution elsewhere.44 But why would China’s rising necessarily lead to geostrategic competition with the United States, and where would this most likely occur? Unlike the Cold War, access to strategic resources rather than ideology would lie at the heart of future US-Sino competition, and the new “great game” will most likely be played in Africa.

Despite Communist Party control of its government, China is not interested in spreading its version of communism and is much more pragmatic in its objectives—securing resources to meet the needs of its citizens and improve their standard of living.45 Some estimates show that China will overtake the United States to become the world’s largest economy by 2015, and rising powers usually take the necessary steps to “ensure markets, materials, and transportation routes.”46 China is the leading global consumer of aluminum, copper, lead, nickel, zinc, tin, and iron ore, and its metal needs now represent more than 25 percent of the world’s total.47 In contrast, from 1970 to 1995, US consumption of all materials, including metals, accounted for one-third of the global total despite representing only 5 percent of the world’s population.48 China is the largest energy consumer, according to the International Energy Agency, surpassing the United States in consumption of oil, coal, and natural gas in 2009.49 As the two largest consumers of both global energy and materials, the United States and China must seek foreign policy prescriptions to fulfill future resource needs. While the United States can alleviate some of its energy needs via bio- or coal-based fuels, hydrogen, or natural gas alternatives, China currently lacks the technological know-how to do so and remains tied to a mainly nonrenewable energy resource base. Since the majority of these needs are nonrenewable, competition of necessity will be zero-sum and will be conducted via all instruments of power.50

Africa is home to a wealth of mineral and energy resources, much of which still remains largely unexploited. Seven African states possess huge endowments of oil, and four of these have equally substantial amounts of natural gas.51 Africa also enjoys large deposits of bauxite (used to make aluminum), copper, lead, nickel, zinc, and iron ore, all of which are imported and highly desired by China. Recent activity serves to prove that China seeks greater access to natural resources in Africa by avidly promoting Chinese development in a large number of African nations. South Africa, the continent’s largest economy, has recently allowed China to help develop its vast mineral wealth; it is China’s number one African source of manganese, iron, and copper.52 Chinese involvement in Africa is not wholly extractive; the continent provides a booming export market for China’s goods and a forum to augment its soft power in the region by offering alternatives to the political and economic baggage that accompanies US foreign aid.53

Of primary interest is open access to Africa’s significant deposits of oil and other energy resources. For example, China has 4,000 military personnel in Sudan to protect its interests in energy and mineral investments there; it also owns 40 percent of the Greater Nile Oil Production Company.54 Estimates indicate that within the next few decades China will obtain 40 percent of its oil and gas supplies from Africa.55 Trade and investment in Africa have also been on the rise; trade has grown more than 10 percent annually in the past decade. Between 2002 and 2004, African exports to China doubled, ranking it third behind the United States and France in trade with the continent. Chinese investment is also growing; more than 700 Chinese business operations across Africa total over $1 billion. Aid and direct economic assistance are increasing as well, and China has forgiven the debt of some 31 African nations.56

Africa is thus a vital foreign interest for the Chinese and must be for the United States; access to its mineral and petroleum wealth is crucial to the survival of each.57 Although the US and Chinese economies are tightly interconnected, the nonrenewable nature of these assets means competition will remain a zero-sum game. Nearly all African states have been independent entities for less than 50 years; consolidating robust domestic state institutions and stable governments remains problematic.58 Studies have shown that weak governments are often prime targets for civil conflicts that prove costly to control.59 Many African nations possess both strategic resources and weak regimes, making them vulnerable to internal conflict and thus valuable candidates for assistance from China or the United States to help settle their domestic grievances. With access to African resources of vital strategic interest to each side, competition could likely occur by proxy via diplomatic, economic, or military assistance to one (or both) of the parties involved.

Realist claims that focusing on third-world issues is misplaced are thus fallacious; war in a future US-China bipolar system remains as costly as it was during the Cold War. Because of the fragile nature of many African regimes, domestic grievances are more prone to result in conflict; US and Chinese strategic interests will dictate an intrusive foreign policy to be both prudent and vital. US-Sino proxy conflicts over control of African resources will likely become necessary if these great powers are to sustain their national security postures, especially in terms of strategic defense.60

#### No uniqueness – covid tanked the African economy and they don’t have a card that its high now

#### Impact is far off – assumes a complete transition away from terrestrial mining, which would take decades – that means there’s plenty of time to adapt

#### No shortage and markets adjust—best sources

Jason Miklian 11, researcher at the Peace Research Institute Oslo, January 21, 2011, “I Was a Rare Earths Day Trader,” online: <http://www.foreignpolicy.com/articles/2011/01/21/i_was_a_rare_earths_day_trader?page=full>

Cooler heads have weighed in on rare earths, but since the frenzy began they've largely been ignored. Six months before the China-Japan incident, the U.S. Geological Survey issued a report showing that the world has a 1,000-year global supply ofproven rare-earth reserves, 63 of them outside China. The U.S. Defense Department released its own assessment in November saying that the national security implications of China's rare-earth lockdown -- a key factor in the initial burst of panic -- had been overblown. Demand for rare earths, meanwhile, is almost totally inelastic, and the market is already adjusting to concerns over a Chinese monopoly. The big buyers in Japan started importing from India and Vietnam three years ago, and Molycorp alone may be delivering more than six times what the United States needs by 2012.

#### No middle east or Africa escalation, and great powers wouldn’t get involved

Mead 14 – Walter Russell Mead, James Clarke Chace Professor of Foreign Affairs and Humanities at Bard College and Professor of American foreign policy at Yale University, Editor-at-Large of The American Interest magazine and a non-resident Scholar at the Hudson Institute, 2014 (“Have We Gone From a Post-War to a Pre-War World?” *Huffington Post*, July 7th, <http://www.huffingtonpost.com/walter-russell-mead/new-global-war_b_5562664.html>)

The Middle East today bears an ominous resemblance to the Balkans of that period. The contemporary Middle East has an unstable blend of ethnicities and religions uneasily coexisting within boundaries arbitrarily marked off by external empires. Ninety-five years after the French and the British first parceled out the lands of the fallen Ottoman caliphate, that arrangement is now coming to an end. Events in Iraq and Syria suggest that the Middle East could be in for carnage and upheaval as great as anything the Balkans saw. The great powers are losing the ability to hold their clients in check; the Middle East today is at least as explosive as the Balkan region was a century ago.

GERMANS THEN, CHINESE NOW

What blew the Archduke's murder up into a catastrophic world war, though, was not the tribal struggle in southeastern Europe. It took the hegemonic ambitions of the German Empire to turn a local conflict into a universal conflagration. Having eclipsed France as the dominant military power in Europe, Germany aimed to surpass Britain on the seas and to recast the emerging world order along lines that better suited it. Yet the rising power was also insecure, fearing that worried neighbors would gang up against it. In the crisis in the Balkans, Germany both felt a need to back its weak ally Austria and saw a chance to deal with its opponents on favorable terms.

Could something like that happen again? China today is both rising and turning to the sea in ways that Kaiser Wilhelm would understand. Like Germany in 1914, China has emerged in the last 30 years as a major economic power, and it has chosen to invest a growing share of its growing wealth in military spending.

But here the analogy begins to get complicated and even breaks down a bit. Neither China nor any Chinese ally is competing directly with the United States and its allies in the Middle East. China isn't (yet) taking a side in the Sunni-Shia dispute, and all it really wants in the Middle East is quiet; China wants that oil to flow as peacefully and cheaply as possible.

AMERICA HAS ALL THE ALLIES

And there's another difference: alliance systems. The Great Powers of 1914 were divided into two roughly equal military blocs: Austria, Germany, Italy and potentially the Ottoman Empire confronted Russia, France and potentially Britain.

Today the global U.S. alliance system has no rival or peer; while China, Russia and a handful of lesser powers are disengaged from, and in some cases even hostile to, the U.S. system, the military balance isn't even close.

While crises between China and U.S. allies on its periphery like the Philippines could escalate into US-China crises, we don't have anything comparable to the complex and finely balanced international system at the time of World War I. Austria-Hungary attacked Serbia and as a direct result of that Germany attacked Belgium. It's hard to see how, for example, a Turkish attack on Syria could cause China to attack Vietnam. Today's crises are simpler, more direct and more easily controlled by the top powers.