# 1AC

## 1AC — ADA (KU HW)

### 1AC — Advantage

#### The Advantage is Megaships —

#### The United States is expanding antitrust enforcement of international shipping

Seward & Kissell 3/2/22, Law firm specializing in antitrust. (Federal Maritime Commission and Department of Justice Announce New Steps to Strengthen Antitrust Enforcement Efforts in the Shipping Industry, <https://www.sewkis.com/publications/federal-maritime-commission-and-department-of-justice-announce-new-steps-to-strengthen-antitrust-enforcement-efforts-in-the-shipping-industry/>)

Building on our July 2021 alert regarding the signing of the first interagency Memorandum of Understanding (“MOU”) entered into by and between the Federal Maritime Commission (“FMC”) and the Department of Justice (“DOJ”), the DOJ and FMC on February 28 issued a joint release announcing additional steps that each agency would take to strengthen their partnership and support efforts to enforce the antitrust laws of the United States, reflecting their ongoing focus on promoting competition in the shipping industry. In press releases posted to each agency’s website, the Antitrust Division of DOJ and the FMC disclosed that “the Justice Department will provide the FMC with the support of attorneys and economists from the Antitrust Division for enforcement of violations of the Shipping Act and related laws” and that “the FMC will provide the Antitrust Division with support and maritime industry expertise for Sherman Act and Clayton Act enforcement actions.” This interagency initiative highlights an increasing level of sophistication and an ongoing focus by both DOJ and FMC to investigate and enforce violations of the Shipping Act and the antitrust laws of the United States. Simultaneously, the White House also on February 28 released a companion fact sheet that highlights ongoing enforcement efforts by the Executive Branch, with a particular focus on ocean carrier companies and alliances that operate in the container shipping industry. The fact sheet includes criticism of ocean carrier detention and demurrage fees and price increases, and contends that certain ocean carrier business practices have contributed to supply chain disruptions and port congestion. The fact sheet also notably states that the FMC will continue ramping up oversight of the global ocean shipping industry, and seeks additional reforms that “address the current antitrust immunity for ocean shipping alliances.” As shipping industry participants have speculated that supply chain pressures may last well into 2022, we expect that the government’s focus on fair competition in the shipping industry will continue.

#### They’re targeting all major shipping alliances

Consadine 21, Attorney with Seward & Kissell LLP. (Michael, Shipping Companies Beware: Antitrust Challenges Ahead as DOJ Focuses On Industry, <https://www.sewkis.com/publications/shipping-companies-beware-antitrust-challenges-ahead-as-doj-focuses-on-industry/>)

On July 12, 2021, the FMC and DOJ signed its first interagency MOU to foster cooperation in the enforcement of antitrust and other laws related to the maritime industry. Key provisions of the MOU provide that the agencies will: i) share information and materials relevant to the competitive conditions in the U.S.-international ocean liner shipping industry, including terminal services provided to ocean liners, and ii) confer, at least annually, to discuss and review enforcement and regulatory matters. Unlike the FMC, DOJ has the authority to bring criminal charges against alleged offenders of antitrust laws. In the past, DOJ has made its presence known by issuing statements regarding certain alliance agreements (vessel-sharing agreements); this MOU raises the stakes as it suggests more intense scrutiny by DOJ. FMC Activity, Audit Program and Recent Litigation On July 19, 2021, within days of the Executive Order and the signing of the MOU, the FMC also disclosed the Vessel-Operating Common Carrier Audit Program to review carrier compliance with FMC’s detention and demurrage rule. As part of this new audit program, the FMC will audit the top nine carriers by market share ― i.e., Maersk, MSC, CMA CGM, COSCO Group, Hapag-Lloyd, ONE, Evergreen, HMM and Yang Ming. Initially, the FMC will request information from the carriers to create a database of quarterly reports on detention and demurrage practices, and will follow with individual carrier interviews. The audit may also focus on other aspects of these companies’ practices and operations, such as billing, appeals procedures, penalties assessed by the lines, and any other restrictive practices. Significantly, the FMC has already been auditing carriers to address issues concerning intermodal congestion related to COVID-19 and to identify operational solutions to cargo delivery system challenges. The FMC is apparently poised to investigate eight carriers ― CMA CGM, Hapag-Lloyd, HMM, Matson, MSC, OOCL, SM Line and Zim ― that were identified as having implemented congestion-related surcharges. In August, the FMC requested information about these surcharges from these carriers. The FMC’s inquiry may focus on whether surcharges were implemented following proper notice, if their purpose was clearly defined, and whether there were clear events or conditions that triggered or terminated the surcharges. The FMC suggested enforcement action may occur if tariffs are improperly established. Shipping customers are also imploring the FMC to investigate shipping practices. On July 28, 2021, MCS Industries, a Pennsylvania-based home furnishings manufacturer, filed an administrative proceeding against COSCO and MSC, alleging that the carriers had violated provisions of the Shipping Act and refused to honor their service contracts, calling for the FMC to conduct an investigation of these companies’ shipping practices. COSCO and MSC have denied the allegations and noted, among other things, that MCS’s complaint should be heard in the fora specified in its respective service contracts with the carriers. An administrative law judge was appointed to hear the matter, the outcome of which should be closely watched by industry participants. DOJ Antitrust Landscape DOJ’s coordinated efforts with the FMC have implications for the shipping industry as DOJ antitrust prosecutions have been both expansive and punitive. DOJ’s jurisdiction includes foreign business activities that have a “substantial and intended effect in the U.S.” That broad reach has impacted numerous companies throughout the world in various industries ranging from auto parts to air cargo. Companies in such industries have paid millions of dollars in penalties and many of their employees have been imprisoned. The shipping industry has not been spared. In a long-running investigation, a Norwegian shipping company and its executives were indicted for their participation in an antitrust conspiracy focused on the allocation of customers and routes, rigging bids, and fixing prices for the sale of international ocean shipments of roll-on, roll-off cargo to and from the United States. The company pled guilty and was sentenced to pay a $21 million fine; four individuals have already been sentenced to serve prison terms. Four other companies also pled guilty for their roles in the conspiracy, leading to the assessment of more than $255 million in criminal fines.

#### BUT the Shipping Act creates immunity for vessel-sharing agreements

UNCTAD 18, UN Conference on Trade and Development – Report of Intergovernmental Group of Experts on Competition Law and Policy, (Challenges faced by developing countries in competition and regulation in the maritime transport sector, https://unctad.org/system/files/official-document/ciclpd49\_en.pdf

The Federal Maritime Commission [FMC] is the independent regulatory agency responsible for the regulation of seaborne transportation in the foreign commerce of the United States for the benefit of United States exporters, importers and the United States consumer. 25 Its mission is to ensure competitive and efficient maritime transportation services for shippers, by monitoring agreements among carriers and service contracts with regard to their effects on prices and services. The amendment of the Shipping Act (1916) in 1961 established the Commission and gave it the power to disapprove agreements between liner shipping carriers that were not in the public interest. In this regard, a violation of antitrust laws would be considered against the public interest. The Shipping Act (1984) removed both the public interest clause and the requirement for approval by the Commission for agreements between liner shipping carriers. Vessel-sharing agreements and other cooperative agreements are also permitted under the Act. 23. The United States has a statutory antitrust exemption for liner conferences. The Shipping Act, as amended by the Ocean Shipping Reform Act (1998), provides an alternative competition enforcement regime and includes limited antitrust immunity for agreements between liner shipping carriers from competition law. The Act introduced reforms that ended the authority of liner conferences to regulate the service contracts of members. In addition, the Act allows conference members to negotiate independent confidential service contracts with shippers and prohibits other members from retaliating against shippers or carriers that do so. Prior to the Act, such contracts had to be made public, potentially reducing the incentive for participants to enter into them. The annual report of the Commission in 2014 stated as follows: “Conference or price-fixing agreements have become largely irrelevant to United States liner shipping. No new carrier conference agreements have been filed with [the Commission] since fiscal year 2000. The remaining three conferences cover only government cargoes.” 26 All conduct that does not fulfil antitrust exemption requirements is subject to competition law and investigated by the Department of Justice if it involves cartel-like practices, including price fixing, bid rigging and market allocation.

#### That allows for the continuous acquisition of larger and larger megaships

O’Connor 14, Cozen O'Connor Law Firm, (A New Era For Vessel Sharing Agreements – FMC Allows P3 and G6 Alliances To Go into Effect https://www.jdsupra.com/legalnews/a-new-era-for-vessel-sharing-agreements-23682/)

Perhaps the first true vessel sharing agreement was called, appropriately enough, The Vessel Sharing Agreement (which led to use of the term “VSA” to describe such arrangements) among Sea-Land Service, Inc., Nedlloyd Lijnen, B.V., and P&O Containers, Ltd. This agreement was intended to maximize the utilization of the then very large and fuel efficient containerships (the so-called Econships) that Sea-Land had acquired from the estate of the bankrupt U.S. Lines. The P3 and G6 agreements have a similar purpose — maximizing utilization of large, efficient vessels as a means to reduce carrier costs. In other words, some of the basic reasons lines enter into VSAs have remained unchanged over the years. The use of space charter and vessel sharing agreements increased through the late 1980s and early 1990s, although the vast majority of these agreements were (like the original VSA) often focused on a single trade lane. During this period, relatively few lines were considered “global” carriers and those that were often offered service through a combination of stand-alone strings that did not involve partners, trade-specific vessel sharing agreements, and space charter arrangements. As world trade increased and the phenomenon of globalization emerged, carriers sought to meet the transportation needs of their increasingly global customer base. Hence, carriers moved to geographically broader cooperations that the FMC labeled “global alliances,” most notably The Grand Alliance, The New World Alliance, and the CKYH alliance. These agreements, although not truly global, were often broader in geographic scope and involved a more integrated, long-term cooperation than many of their predecessors. However, the objective was still the same: to provide a service superior to that which could be offered alone while reducing operational costs and capital risks. In many respects, the P3 and G6 agreements represent the next logical step in the evolution of carrier agreements: geographically broader, more operationally integrated, long-term vessel sharing arrangements that come closer to being truly global. As in the past, these arrangements help carriers hedge against the risk of the investment required to build the large, fuel-efficient ships necessary to provide service at a competitive cost. They also allow improved utilization, a key to achieving cost savings. The difference between these agreements and past VSAs is primarily one of degree rather than kind — the cost advantage offered by new tonnage is necessary to remain competitive, but the size and cost of new ships has reached the point where it may no longer be feasible for carriers to operate outside an alliance that helps reduce the risk of such an investment to the point that it is acceptable. Indeed, some are questioning whether it is possible for a line to remain competitive on a global scale following a 1990s model of offering a patchwork of stand-alone and cooperative services rather than being a member of a global alliance.

#### The size of those megaships are about to explode, drastically shaking up the entire industry

Fickling 21, Reporter for The Print. (David, March 30, 2021, Get ready for future, giant next-gen cargo vessels will make ‘Ever Given’ look like bath toy, <https://theprint.in/opinion/get-ready-for-future-giant-next-gen-cargo-vessels-will-make-ever-given-look-like-bath-toy/630839/>)

If you think the ultimate reason the Suez Canal got blocked last week is because container ships are getting too big, get ready for the future. The next few generations of cargo vessels are going to make the Ever Given look like a bath toy. Big enough to carry 20,124 twenty-foot equivalent units, or TEUs — the standard measure for cargo, representing a single shipping container — the Ever Given was one of the world’s largest such vessels when it was launched in 2018. The first container ship to break the 20,000 TEU mark had been at sea for less than a year. One famed 1999 study, written at a time when the largest boats carried less than 8,000 TEUs, argued it would prove impossible to build craft bigger than 18,000 TEUs. The Ever Given, finally floating on its way again, is now distinctly in the second class of mega freighters. There are nearly 100 ships carrying more than 20,000 TEUs on the seas or under construction, and the bigger vessels being assembled in Chinese and South Korean shipyards are mostly around the 24,000 TEU mark. A quarter of the capacity moved by the world’s largest container line, AP Moller-Maersk A/S, is on boats above the 17,500 TEU mark. That’s unlikely to be the end of it. Chinese shipyard Hudong-Zhonghua Shipbuilding Group Co. has already registered designs for a 25,000 TEU vessel, and it has become relatively commonplace to predict that 30,000 TEU monsters will be plowing the oceans before the decade is out. Such enormous hulls may cause problems that will put the Ever Given’s mishap into the shade. At Rotterdam, the largest ships already have to arrive at high tide to ensure there’s enough clearance for them to get through the channel, according to a 2019 study by Nam Kyu Park of South Korea’s Tongmyong University. Larger vessels will soon be unable to berth at Shanghai, Busan and Hong Kong even at high tide, unless channels are dredged out further, Park wrote. There are similar problems with infrastructure on dry land. Modern ports are astonishingly efficient at unloading, and can turn around a fully laden 20,000 TEU vessel in a couple of days. But the time spent waiting for a berth can cut deep into the wafer-thin economics of a container line. Longer quays may have to be built to accommodate the larger ships, as well as cranes that can reach across wider decks, larger loading yards for tens of thousands of containers, and faster rail and road terminals to take cargo to its next destination. Current vessels are already at the limits of what can fit along major shipping lanes. The Ever Given is too bulky to squeeze through the Panama Canal, where boats must be lifted over its mountainous spine with massive lock gates. At 24 meters (79 feet) deep, the Suez Canal has more capacity — but it’s roughly as deep as the Straits of Malacca and Singapore, so dredging it further to accommodate bigger ships won’t help much. The binding constraint on East-West trade at this point isn’t engineering, but geology. Extending 15.7 meters below the water line, the Ever Given shouldn’t, on paper, have trouble making it through any of those channels, which typically require 3.5 meters of clearance from the bottom. Next-generation ships with a 20-meter draught, on the other hand, would be at constant risk of grounding. How have container ships managed to defy expectations that their size would hit fundamental limits? A large part of it is because the economies of scale are so compelling. Bigger vessels use more fuel, but relative to the number of boxes stacked on their decks they’re far more efficient. They can also turn around a larger number of containers at a time and serve a wider array of feeder ports, ensuring they can defray their massive capital costs quicker. There’s little sign that this is about to change. New International Maritime Organization regulations against the burning of sulfur-intensive fuel oil introduced last year mean current ships are using costlier diesel, putting more pressure on naval architects to come up with yet more efficient designs. Beyond that, the IMO now has plans to reduce carbon dioxide emissions by 40% in 2030 compared with 2008, and by 70% by 2050. Even with a switch to cheaper, less polluting liquefied natural gas as the main fuel, that’s going to mean further drastic improvements in efficiency, not to mention propulsion technologies that don’t exist yet. To date, the best way to chip away at fuel consumption and emissions is by increasing size. It’s hard to know how the industry is going to cope with this. Perhaps Suez, Malacca and Singapore can be dredged to accommodate even bigger vessels. Perhaps shipyards will find ways to squeeze a few more inches out of existing channels. If not, alternative routes around the Cape of Good Hope and through the deeper Straits of Sunda and Lombok between Indonesia’s islands may prove the only viable way to accommodate such massive boats. Should that happen, those economies of scale will have to be drastically larger to make up for the longer sailing time. We’ve seen container ships leap from 10,000 TEUs to 24,000 TEUs. Don’t be shocked to see 50,000 TEU vessels plying the sea in your lifetime.

#### There are three scenarios —

#### The first scenario is Accidents —

#### Megaships drastically increase harms to the Arctic

Baker & Harris 16, Chairman of Marsh Marine Practice, and, Senior Vice. (Marcus & Stephen, Marsh Report: "PLUMBING THE DEPTHS" OF MEGASHIP SUPER-SIZED RISK, In Navigating a Shifting Risk Landscape Expert Perspectives on the Marine Industry, file:///C:/Users/sharris/Downloads/Navigating%20a%20Shifting%20Risk%20Landscape%20Expert%20Perspectives%20on%20the%20Marine%20Industry.pdf)

Navigation routes, such as those leading to or from the Panama Canal, have been the same for many years, with commercial cargo vessels following tried-and-tested pathways through the sea; however, the known safe depth for the navigation of many is only as much as the draught of the largest, deepest vessel ever to have used it. An extra four meters of depth that the newest megaships can draw could be the vital difference between uneventful navigation and a serious grounding or stranding, with all the perils of ship damage, crew endangerment, cargo loss and marine pollution that could result. As container ships are the largest users of both the Suez and Panama Canal systems, these are the vessels that, having the ability and commercial reasons to navigate new parts of the world’s oceans, are of most concern. Governments seeking to have large vessels use their ports and terminals will often be the first to blame the shipping industry when a serious grounding or stranding accident occurs in their waters. But how much of that blame should actually lay at a government’s own doorstep, when it comes to ensuring hydrographic surveys meet modern standards (and, where necessary, the funding to do so), especially when it is known that increasingly larger vessels will be using their waters? Let us not forget that the attempted—and ultimately unsuccessful—salvage of the MV Rena after it grounded on Astrolabe Reef in New Zealand in October 2011 resulted in one of the largest-ever protection and indemnity losses to the market. And the MV Rena was a very small container ship in comparison to the modern generation. Many vessel operators have been viewing, with great interest, the increasingly viable Arctic routes between Asia and Europe as an alternative to the much longer (both in time and distance) routes via Singapore and the Suez Canal; however, the vessels that have, to date, successfully transited the Northern Sea Route (NSR) around northern Russia have been relatively small in size. Marsh has already voiced concerns about the potential risks of larger vessels using this route with greater frequency, but the knowledge that so few of the waters have been adequately surveyed for depth to modern standards adds to those concerns. In addition, there is increasing talk of commercial use of the Northwest Passage (NWP) around northern Alaska and through the many islands of northern Canada, which still poses considerable risk, as some of the waters are even less bathymetrically assured than parts of the NSR. Only a handful of commercial vessels have ever successfully transited the NWP, yet some operators are already heralding those few successes to prove the NWP to be a major route for the future. The lack of hydrographic data for that whole region should remain a major concern for any sensible operator, echoed by similar warnings in the new Polar Code.

#### They make accidents inevitable

Waterson 19, Senior Vice President - Marine Hull and Liability for Lockton Companies LLP World’s Largest Insurance Broker. (Robert, Re-evaluating the risk of mega ships, https://www.locktoninternational.com/gb/articles/re-evaluating-risk-mega-ships)

“A consolidation process in the shipping transport market has contributed to a trend towards fewer but bigger ships,” says Robert Waterson, Senior Vice President - Marine Hull and Liability at Lockton. “Fleet operators have ordered larger ships and because they are newer this tends to have a positive effect on all costs including insurance premium levels. However, this does not necessarily mean claims volumes will be lower,” Waterson notes. With larger and more sophisticated vessels entering the sector – and more hazardous areas such as polar waters being explored – this is aggravating the risk of ever larger single losses, insurer AGCS warned in its “Marine claims trends 2018” report. “A major incident involving a fully loaded ultra-large container ship will easily result in a $1bn to $2bn insurance claim including damage to cargo, hull, salvage and wreck removal costs,” the report added. A number of container ship casualties recently fuelled a discussion about the growing risks associated with fires on mega-containerships. Ship fires are one of the major loss drivers in the shipping industry: In March 2018 a fatal fire on the new 15,252 TEU Maersk Honam. The incident is believed to have been triggered by mis-declared chemical cargoes causing a blast and fire which resulted in 130 people being taken to hospital. “The cargo description is often not clear and containers may contain chemicals and hazardous goods that were not supposed to be there or that were incorrectly described and thus loaded in the wrong part of the vessel,” says Waterson. Insurers’ apprehension focuses not only on large container ships but also on large passenger vessels, especially after Costa Concordia off the Tuscan holiday island of Giglio in Italy set off a chaotic evacuation of 4,229 passengers and crew, and 32 people died, according to the May 7, 2019 presentation “Megaship Challenges: The P&I Perspective” by Joe Hughes from the The American Club. Large vessels are more difficult to navigate, and grounding and/or collisions are harder to deal with as there is more cargo and fuel to salvage. Where salvage/wreck removal is required, the costs are vastly influenced by the type of cargo that has to be removed and how hazardous this cargo is. Very often this has to be accomplished in remote and difficult environmental conditions, and always within the requirements of both the local and international law. As environmental regulations tighten globally, these costs will only rise further and more cover will be required. A discussion in the insurance industry about whether large container ships might require a specific insurance rating, previously under consideration but not implemented, may now re-open as more data is available. As some underwriters withdraw from underwriting large container fleets this may affect renewals pricing and available capacity in the short term. “In hull and cargo, the specific risks attached to large ships are not being addressed. Ratings do not take this into account,” Waterson says. “Mega-ships carry higher risks and are not necessarily safer. While the claims frequency may fall, the size of a loss is likely to be much higher,” he notes.

#### They independently increase drastic amounts of pollution in the Arctic AND risk massive oil spills

Shavley 21, Reporter for Business Insider. (Kevin, May 1, 2021, The Ever Given crisis put mega ships under the spotlight. As vessels get bigger and more automated, a long-serving captain and other experts are weighing up the risks., <https://www.businessinsider.com/ever-given-suez-canal-blockage-mega-ships-sea-captain-2021-4>)

Shipping vessels have grown larger by multiples in just a few years, adding to worries among some industry insiders that a single mistake made by a massive ship could cause a global supply chain disruption, as the world saw with the Ever Given. That ship, which was stuck in the Suez Canal for about a week in March, slowed or stalled shipping traffic around the world. It was estimated to cost the global economy about $400 million per hour, and its effects have still been rippling through the economy in recent weeks. As ships like the Ever Given have grown over the last few decades, their crews have been shrinking because they're using more automated processes, said Captain Rahul Khanna, global head of marine risk consulting at Allianz Global Corporate & Specialty, whose team publishes an annual safety review. "Decades ago, the ships with 3,000 TEU — that's the number of twenty-foot containers that can fit onboard — were considered the big ones," said Khanna. Now, ships like the Ever Given carry maximum loads of more than 20,000 containers. Boat-building technology could in the years and decades ahead produce ever-larger ships, perhaps growing to 50,000 containers or more. If there's demand for such ships, modern technology could allow for such builds, Khanna said. Between 2006 and 2020, the largest shipping vessels in the world grew by 155%, according to a January report from the United Nations Conference on Trade and Development. The biggest ships are loading or unloading 125% more at each port they visit. With bigger boats, there could be more impactful accidents. "While seemingly efficient, they are too large to fit in some ports, increase dangers in storms, and highly piled containers are falling, causing product and the corresponding financial losses," said Cheryl Druehl, associate professor of operations management at George Mason University. Even the Ever Given debacle, which grabbed hold of the worldwide news cycle, could have been worse. If that ship's hull had broken, say, it would have taken even longer to fix the issue, Khanna said. It's likely that a crane would have had to have been constructed nearby to remove some or all of its load. Refloating it would have been a more complex task, likely stretching into months. As the shipping industry gets back to its normal routine, Khanna and other shipping industry insiders walked Insider through their concerns about the next big disaster. The most obvious answer was that another ship could get stuck in the Suez or Panama canals. The risk of a situation similar to the Ever Given's crash in one of those waterways was "unlikely but high impact," said Ambrose Conroy, founder and CEO of Seraph, a consulting and turnaround firm. The risk was lower at other heavily travelled shipping lanes, including the Singapore Strait, and the Strait of Hormuz, although it has geopolitical risks of its own, said Khanna. Ports in the future may also have trouble handling larger ships, but that's an issue that can be fixed with proper planning, Conroy said. Instead, it's the "black swan events" like the Ever Given that the industry needs to look out for. One concern is a shipping route that's becoming more popular. In decades past, a lane through the Arctic would open in summer months, giving ships a more direct path between Europe and Russia. As the climate crisis has reduced the amount of ice in those northern regions, that passageway is now increasingly being used in the winter. It's become so popular that the International Maritime Organization issued a revised Polar Code. As the Ever Given stalled global shipping in March, Moscow officials pointed to the Northern Sea Route through the Arctic as an alternative. But Arctic travel comes with its own risks. While it's unlikely that modern ships, with all their technology, would hit an iceberg, smaller ice floats can still damage hulls, Khanna said. An oil spill in the Arctic would also be devastating to marine life. And rescue crews might have difficulty reaching a stranded ship in such inhospitable waters.

#### That risks global species and ecosystem destruction

Tewari 17, IIASA Science Communication Fellow. (Parul Aug 16, 2017, What would an oil spill mean for the Arctic?, https://blog.iiasa.ac.at/2017/08/16/what-would-an-oil-spill-mean-for-the-arctic/)

While it can never be good news, an oil spill in the Arctic could be particularly dangerous because of its sensitive ecosystem and harsh climatic conditions, which make a cleanup next to impossible. With an increase in maritime traffic and an interest in the untapped petroleum reserves of the Arctic, the likelihood of an oil spill increases significantly. Maisa Nevalainen, as part of the 2017 Young Scientists Summer Program (YSSP), is working to assess the extent of the risk posed by oil spills in the Arctic marine areas. “That the Arctic is perhaps the last place on the planet which hasn’t yet been destroyed or changed drastically due to human activity, should be reason enough to tread with utmost caution,” says Nevalainen Although the controversial 1989 Exxon Valdez spill in Prince William Sound was quite close to the Arctic Circle, so far no major spills have occurred in the region. However, that also means that there is no data and little to no understanding of the uncertainties related to such accidents in the region. For instance, one of the significant impacts of an oil spill would be on the varied marine species living in the region, likely with consequences carrying far in to the future. Because of the cold and ice, oil decomposes very slowly in the region, so an accident involving oil spill would mean that the oil could remain in the ice for decades to come. Yet, researchers don’t know how vulnerable Arctic species would be to a spill, and which species would be affected more than others. Nevalainen, as part of her study at IIASA will come up with an index-based approach for estimating the vulnerability (an animal’s probability of coming into contact with oil) and sensitivity (probability of dying because of oiling) of key Arctic functional groups of similar species in the face of an oil spill. “The way a species uses ice will affect what will happen to them if an oil spill were to happen,” says Nevalainen. Moreover, oil tends to concentrate in the openings in ice and this is where many species like to live, she adds. During the summer season, some islands in the region become breeding grounds for birds and other marine species both from within the Arctic and those that travel thousands of miles from other parts of the world. If these species or their young are exposed to an oil spill, then it could not only result in large-scale deaths but also affect the reproductive capabilities of those that survive. This could translate in to a sizeable impact on the world population of the affected species. Polar bears, for example, have, on an average two cubs every three years. This is a very low fertility rate – so, even if one polar bear is killed, the loss can be significant for the total population. Fish on the other hand are very efficient and lay eggs year round. Even if all their eggs at a particular time were destroyed, it would most likely not affect their overall population. However, if their breeding ground is destroyed then it can have a major impact on the total population depending on their ability and willingness to relocate to a new area to lay eggs, explains Nevalainen. Due to lack of sufficient data on the number of species in the region as well as that on migratory population, it is difficult to predict future scenarios in case of an accident, she adds. “Depending on the extent of the spill and the ecosystem in the nearing areas, a spill can lead to anything from an unfortunate incident to a terrible disaster,” says Nevalainen. It might even affect the food chain, at a local or global level. “If oil sinks to the seafloor, some species run the risk of dying or migrating due to destroyed habitat – an example being walruses as they merely dive to get food from the sea floor,” adds Nevalainen. As the walrus is a key species in the food web, this has a high probability of upsetting the food chain. When the final results of her study come through, Nevalainen aims to compare different regions of the Arctic and the probability of damage in these areas, as well as potential solutions to protect the ecosystem. This would include several factors. One of them could be breeding patterns – spring, for instance, is when certain areas need to be cordoned off for shipping activities, as most animals breed during this time. “At the moment there are no mechanisms to deal with an oil spill in the Arctics. I hope that it never happens. The Arctic ecosystem is very delicate and it won’t take too much to disturb it, and the consequences can be huge, globally,” warns Nevalainen.

#### Extinction

Petersen et al 4, Director @ Icelandic Institute of Natural History (Aevar, “Circumpolar Biodiversity Monitoring Program,” CAFF, http://library.arcticportal.org/309/1/CircumpolarBiodiversityFramework.pdf )

The circumpolar Arctic region, as defined for the purpose of CAFF at its inaugural meeting (see Figure 1 - CAFF map of the Arctic), covers some 14.8 million km of land and 13 million km of ocean. It plays a key role in the physical, chemical and biological balance of the globe. The Arctic region encompasses relatively pristine environments, compared to the rest of the globe. Vast wilderness areas are crucial for the preservation of the Arctic’s unique biological diversity, and the Arctic is additionally of much cultural, economic, and recreational value. The CAFF overview report (2001) highlighted such diverse actual and potential importance of Arctic biodiversity as for fuel, food (e.g. fisheries), fodder, nature tourism, ecosystem functioning, feedbacks f rom ecos y s tems to the global atmosphere, future genetic recombinations and adaptations, fiber pharmaceuticals, anti-microbial drugs and industrial enzymes (from extremophiles). The Arctic is unique in biological, physical, and chemical properties. Life in the Arctic has adapted to extreme conditions of darkness, cold and a brief summer season where food becomes plentiful. Arctic ecology is shaped by the severity of the climate and its variability in space and time. Arctic species must survive long periods when food is limited or unavailable, or otherwise migrate to more southerly latitudes, as many do to all corners of the globe. Arctic species must be adapted to respond quickly when conditions improve. The growing season is brief and intense. When sunlight reaches the oceans in the spring, plankton bloom. On land, the growth of plants begins the summer feast for the terrestrial species, allowing the breeding, raising of young, and storage for the upcoming winter. At the foundation of the intricate marine food webs are highly specialized species of phytoplankton and sea ice algae, especially adapted to the extreme conditions of darkness and cold, and the freshwater-brine conditions of the sea iceocean interface. Terrestrial and freshwater food webs are usually simpler than those in the marine environment, but are closely linked to the marine ecosystem, e.g. through run-off and many creatures which move between the different ecosystems. The complexity of Arctic biodiversity stems in part from the interplay between the terrestrial species, habitats and ecosystems, with those in the marine environment. In the overlapping structure of ecosystems, all species in a system depend to some degree on the ecological functions of other species such as good production, competition, and predation; and species behavior such as reproduction and migration are closely linked with these functions. With an integrated, ecosystem-based approach to monitoring, the impacts of stressors to these ecological functions are better identified and understood, as this type of monitoring bridges ecosystems, habitats and species. For example: seabirds nest on land but may feed in the ocean or in lakes and rivers on fish and invertebrates. Salmon, Arctic Char and certain other fish species are anadromous – crossing from the marine ecosystem to the freshwater ecosystem to breed. Polar bears den on land in snow banks, but hunt almost exclusively out on the edge of the sea ice. Seals make their homes in and on the sea ice and hunt in the ocean. Indigenous Peoples hunt across all ecosystems and habitats in the Arctic, marine, terrestrial and freshwater. Monitoring of the natural and anthropogenic impacts to the food webs and the ecological func t ions of the Arc t i c env i ronment and ecosystems provides critical information about the status and trends of Arctic species and the integrity of the food webs on which they depend for their survival. For humans, this directly relates to the socio-economic stability of their societies. The Arctic has high genetic diversity among its species. Many migratory species breed in the Arctic but spend the non-breeding season at more southerly latitudes. As a polar region, greater and faster impacts are being seen in the Arctic from climate change. Consequently Arctic biodiversity is experiencing both greater and earlier impacts than many other parts of the globe. These issues, vulnerabilities and impacts are more fully documented in Arctic Flora and Fauna: Status and Conservation (2001), and Impacts of a Warming Arctic: Arctic Climate Impact Assessment (2004). Of the approximately 450 species of birds, which breed or have bred in the Arctic region, 279 breed in significant numbers within the Arctic and spend the boreal (northern hemisphere) winter in significant numbers outside the CAFF member states. Migratory birds from the Arctic reach every part of the world except the interior of Antarctica. Thirty species reach southern Africa, 26 species reach Australia and New Zealand, 22 species reach southern South America and several pelagic species reach the southern oceans. Virtually all the world’s major ecosystems support some Arctic breeding birds during the boreal winter, with Arctic migrants occupying every major habi tat in ever y major region. The c o n s e r v a t i o n o f a l l A rc t i c b re e d i n g b i rd s throughout their migratory ranges is a global challenge, covering virtually all of the world’s major terrestrial and marine ecosystems, and requires a high level of international cooperation which can be achieved in part through the CBMP. In addition to the migrating birds, several species of land and marine mammals migrate to the Arctic in search of rich food resources. Migration routes link Arctic species to marine and terrestrial ecosystems throughout the world including the Antarctic. The Arctic’s nutrient-rich coldwater feeding grounds are crucial to the survival of many species of whales and are the foundation for the huge numbers of Arctic fish stocks. Northern waters, particularly the North Atlantic and the Bering Sea, are some of the world’s largest and most important marine fisheries. The link between the survival of humans and sustainability of the living environment is therefore obvious and of paramount importance.

#### Independently, megaships decimate phytoplankton populations

Xue et al 21, State Key Laboratory of Estuarine and Coastal Research, School of Marine Sciences, East China Normal University, (Chengfang, with Yang Yang, Peipei Zhao, Dongyun Wei, Jianhua Gao, Peng Sun, Zhiyang Huang and Jianjun Jia, Impact of Ship Traffic on the Characteristics of Shelf Sediments: An Anthropocene Prospective, https://www.frontiersin.org/articles/10.3389/fmars.2021.678845/full)

Marine vessels are undoubtedly one of the most prominent symbols of human activities in the ocean. Large ships cause significant disturbances in sediment dynamic processes mainly in three ways: (i) the jet flow generated by ships’ propellers causes resuspension of sediment on the bed of shipping lanes (Soon and Lam, 2014; Hong et al., 2016); (ii) the propagation of ship-induced waves may cause erosion of the channel slope and shoal (Rapaglia et al., 2011); and (iii) prolonged and frequent ship shuttle services enhance seabed sediment activity and increase the thickness of the active layer (Hong et al., 2013). Consequently, suspended sediment concentration increases significantly during ship navigation, and can be 30 times higher than the average background concentration (Rapaglia et al., 2011). More than that, turbid water affects the growth of phytoplankton, which in turn affects marine productivity (Huang et al., 1986; Pan and Shen, 2009). Compared to known ship-related hydrodynamics (e.g., propeller-jet, ship wave, ship wakes, etc.), little is known about the impact of ship traffic on marine sedimentation records (e.g., the characteristics of shelf sediments), largely due to the scarcity of studies dedicated to this field. Considering that maritime transport is responsible for 80% of the total volume of international trade (Notteboom et al., 2021), this rising anthropogenic-force induced sedimentary process deserves more attention, and research related to this will be important for marine biogeochemistry, sedimentary dynamics, and geomorphology. Over the past 70 years, China’s maritime transport has experienced explosive growth. Shanghai Port and Ningbo-Zhoushan Port have become the world’s leading ports in terms of container and cargo throughput. Due to these two ports, the coastal shipping lanes along Zhejiang Province are particularly busy. This area represents an ideal place to analyze the effects of seagoing traffic on the shelf sedimentary record. In this study, a shipping lane suitable for 5,000 ∼ 50,000 tons ships along the Zhejiang coast of the East China Sea was selected as the study site, and two short sediment cores were collected from the centerline and the periphery of the lane to analyze their ages and sediment characteristics. We use an improved 210Pb dating model to establish a more accurate depth-age framework in regions with frequent ship disturbance. In combination with development of China’s offshore shipping lanes, we explore the possible linkage between ship traffic and the changes in sedimentation. Study Area The booming development of China’s coastal and ocean-going shipping began in the late 20th century, with coastal transport accounting for 60% of the total domestic transport [China Port Yearbook (1999–2019)]. After decades of development, Shanghai Port and Ningbo-Zhoushan Port have become the world’s leading ports in terms of container and cargo throughput. The coastal shipping lanes along Zhejiang Province are particularly busy due to these two ports and the coastal shipping lanes intersect. The north–south lanes throughout the East China Sea include four main lanes: the Outer Shipping Lane, the Eastern Shipping Lane, the Middle Shipping Lane, and the Western Shipping Lane (Figure 1). The eastern and western shipping lanes intersect outside Aiwan Bay, where shipping is well-developed and traffic is frequent in the north–south direction. The lanes can allow ships of 5,000- to 50,000-ton to pass through, even up to 100,000 tons on some sections. This area is close to the Wenzhou Port, where many passenger ship lanes lead to the surrounding islands (He, 2008). Therefore, it is an ideal area to study about the disturbance caused by ships. The tides are regular semidiurnal tides with an average tidal range of 4 m, and the maximum can be 7 m. The wave height is approximately 1 m. During typhoons, the wave height is up to 5 m, and the maximum can reach 10 m (China Gulf Annals, 1993). The bottom sediment is clayey silt and silt (Jia et al., 2018). Materials and Methods We obtained two cores off the coast of Aiwan Bay, Zhejiang Province, China, to analyze grain size and geochemical elements. Combined with the dating framework, we analyzed the changes in sediment characteristics over time. A literature review was conducted to understand the history of the marine transport industry and the shipping lanes where the cores have been located over the past decades, with a view to quantify the sedimentation effects of ship disturbance. Coring Two cores were collected in May 2018 using a gravity coring tube. Core Z7 (28°3′0″N, 121°33′36″E), 1.5 m long with a water depth of 13.2 m, was collected at the intersection of two main shipping lanes used by vessels of 5,000- to 50,000-ton. Core Z8 (28°5′21″N, 121°32′36″E), 1.5 m long with a water depth of 12 m, was collected outside the shipping lane at a distance of 4.7 km from core Z7 in the northwestern direction. The natural sedimentary environments in the region of two cores are nearly identical because of the short distance between the two cores, which will better ensure an accurate representation of the effects of disturbance on the sediment due to maritime traffic through contrast analysis. XRF Core Scan The cores were each split into two parts using a GeoTek Core Splitter. One half of the core was covered with a 4 μm thick Ultralene film to avoid the contamination of the X-ray fluorescence (XRF) core scanner (Avaatech 3RD, Netherlands) measurement unit and the desiccation of the sediment (Richter et al., 2006). Instrument settings were optimized to minimize the mean square error (MSE) values, and the step size was 0.5 cm. Count times for XRF analysis ranged from 10 to 30 s (Table 1). Reliable data were obtained for 29 elements. Four powdered standards were analyzed every day before and after the analysis of the sediment cores to monitor signal drift and indicated that the signal remained stable during the analytical runs. The experiment was completed at the State Key Laboratory of Marine Environmental Science, Xiamen University, Xiamen. Grain Size Analysis Grain size analysis of 1 cm sub-samples was conducted using a laser particle analyzer (Mastersizer-2000, United Kingdom), which has a measurement range of 0.02–2000 μm with a relative error of <3% for repeated measurements. The experiment was completed at the Key Laboratory of Coastal and Island Development, Nanjing University, Nanjing. The matrix formula of McManus (1988) was used to calculate the sample statistics of the grain size distribution, that is, mean grain size (Mz), sorting (S), skewness (Sk), and kurtosis (K). The above four parameters refer to: the average size, the spread of the sizes around the average, the symmetry or preferential spread to one side of the average, and the degree of concentration of the grains relative to the average, respectively (Blott and Pye, 2001). The grain size standard deviation at 10 cm intervals was calculated to extract the sensitive grain size fraction (Sun et al., 2003). The changes in the sensitive grain size fraction over time can reflect the evolution of sedimentary dynamic processes and depositional environments. Age Models Age models are of critical importance in interpreting sedimentary records. One of the most important means for dating recent sediments (0–150 years) is by 210Pb (half-life 22.3 years), a natural radioactive isotope of lead (Appleby, 2001). The dried sample was homogeneously pulverized, weighed, and then sealed in a plastic box (70 × 70 mm) for 3 weeks. The activities of 210Pbex and 137Cs in the sediment samples were measured following the method described by Du et al. (2010). The radioactivities of the above nuclides were measured using an HPGe γ-ray detector (Canberra Be3830, United States) with a relative counting efficiency of 35% and an energy resolution of 1.8 keV (at 1332 keV). The detector has multilayer shielding (ultralow cryostat and no peak background in the isotopes of interest). The activity of 210Pbex was calculated from the activity of total 210Pb (46.5 keV, 4.25%) minus the activity of 226Ra, determined using the γ lines at 351.9 keV (37.6%) for 214Pb and 609.3 keV (46.1%) for 214Bi. The efficiency calibration of the detector systems was conducted using LabSOCS (Baronson, 2003). The experiments were performed at the State Key Laboratory of Estuarine and Coastal Research, East China Normal University, Shanghai. The commonly used 210Pb data processing and computation mainly include the CIC dating mode and the CRS dating model (Appleby, 2001). Given the strengths and weaknesses of the two computational models, the 210Pb chronology of this study was determined using both models. Historical Documents To study the response of sediment characteristics to the disturbance effects of ships, it is necessary to be familiar with the shipping lanes near the study area and the frequency of ship navigation. Compared to bulk cargo ships, container ships have the characteristics of large loading capacity, fast speed, and fixed throughput, which are more representative indicators to better reflect the impacts of ship disturbance on sedimentation. The China Port Yearbook comprehensively and accurately recorded the development of China’s port navigation and shipping industry, and recorded the container throughput of China’s coastal ports from 1979 to date, which could reflect the intensity of disturbance by ship movement on the shipping lanes. Therefore, the container throughput of the whole country and three ports, namely Qingdao Port, Shanghai Port, and Guangzhou Port, were calculated for the period 1979–2018. These three ports are important coastal ports in the Yellow Sea, East China Sea, and South China Sea, respectively. Results Depth-Age Framework The excess 210Pb of Z7 and Z8 remained in the law of radioactive decay. The linear fitting result of the excess 210Pb of Z7 was good, with a correlation coefficient of 0.66 by the CIC model and a sedimentation rate of 1.09 cm/yr. The Z8 was better, with a correlation coefficient of 0.91 and a sedimentation rate of 1.54 cm/yr (Figure 2). Considering that the locations of the two cores were not far from each other, approximately 4 km—expecting a great difference in sedimentation rate would be unreasonable. According to sedimentation rate data of the mud area along the coast of Zhejiang and Fujian (Jia et al., 2018), the average sedimentation rate here is approximately 1.5 cm/yr. The entire 150 cm long sedimentation sequence was recorded from approximately 100 years ago, which was before the emergence of container ships navigation along the coast of China in the late 1970s. Thus, it would be inaccurate to use uniform sedimentation rates to infer the age of sediment before and after the emergence of shipping lanes. In theory, the CIC model of 210Pb dating is suitable for a stable sedimentary environment, but for a less stable sedimentary environment, the CRS model may provide more accurate dating results (Zhang et al., 2008). It was found that above 70 cm depth both models gave similar curves for Z8 (Figure 3D), whereas for Z7, the difference was extremely large, with some layers up to 24 years (Figure 3A). The CRS dating results of the two cores above a depth of 70 cm were almost identical, and the sedimentation records were from 1977 to 2018; below a depth of 70 cm, the CRS model algorithm led to older dating results, and increasing depth (Zhang et al., 2008), with a small sedimentation rate. Therefore, in this study, the CRS dating model was used at depths above 70 cm and the CIC dating model at depths below 70 cm. The sedimentation rate was assumed to be uniform below 70 cm, and the sedimentation rate at 70 cm was used as the sedimentation rate for the 70–150 cm section. On this basis, the dating framework was established for the two cores, and the age of sediment for each layer at the same depth were almost identical, with a mean time difference of 0.4 year. The two cores showed the sedimentation records of 1873–2018 (Figures 3B,E). The sedimentation rates of Z7 and Z8 were in the ranges of 0.77–2.76 cm/yr and 0.77–2.53 cm/yr (Figures 3C,F), respectively. Grain Characteristics of Sediments The grain size components of Z7 and Z8 were dominated by silt, followed by clay, with the least amount of sand (Figure 4). Overall, the content of the grain size component did not fluctuate significantly with time. The sediment type was mainly clayey silt, with an occasional silt layer. Through comparative analysis of the two cores, it was found that the grain size parameters were quite different below and above 70 cm. The sensitive grain size fraction was calculated at 10 cm intervals. Both Z7 and Z8 had two sensitive grain size fractions—the first between 4 and 6 Φ, and the second between 6 and 9 Φ. The peak heights (standard deviation values) of the two sensitive grain size fractions below and above 70–60 cm were very different for the two cores, with the 70 cm value corresponding to the year 1977 (Figure 3). Generally, before 1977, the standard deviation of Z7 was smaller than that of Z8, whereas after 1977, the standard deviation of Z7 was larger than that of Z8. To better illustrate the variation in the sensitive grain size fraction over time, the layer at 70–60 cm was selected and two layers below and above 70–60 cm were shown, such as 150–140 cm, 120–110 cm, 30–20 cm, and 10–0 cm (Figure 5). Here we can see the difference below and above 70–60 cm for the two cores (Table 2), which indicated that the sedimentary dynamics of the environment had changed considerably since 1977. Before 1977, the standard deviation of Z7 was smaller than that of Z8, which meant that the sedimentary dynamics of Z7 were more stable than those of Z8. However, after 1977, the standard deviation of Z7 was larger than that of Z8, which meant that the sedimentary dynamics of Z7 were more turbulent than those of Z8. Moreover, after 1977, both the first and second sensitive grain sizes of Z7 were finer than those of Z8, which assumed that the finer particles were more affected by ship disturbance (Table 2). The first sensitive grain size fraction of Z7 (4.50–5.75 Φ) did not change significantly in the 150–110 cm section, with a moderate increase in the 110–70 cm section, a sudden increase in the 70–60 cm section, and a moderate increase above 60 cm (Figure 6). The second sensitive grain size fraction of Z7 (6.75–8.25 Φ) did not change significantly in the 150–110 cm section, with a moderate decrease in the 110–70 cm section, a sudden decrease in the 70–60 cm section, and a moderate decrease above 60 cm. The first grain size fraction of Z8 (4.25–5.50 Φ) showed a significant change in the 150–70 cm section, a moderate increase and then a decrease, and it changed very little above 70 cm, with a moderate decrease. The second grain size fraction of Z8 (6.50–8.00 Φ) varied significantly in the 150–70 cm section, with a moderate decrease and then an increase, and it changed very little above 70 cm, with a moderate increase. The measured grain size distribution curve (in the range of 2–12 Φ) was divided into 40 small cells in units of 0.25 Φ. The difference between two cores at the same time in these small cells was calculated separately. The content of Z8’s grain size component was subtracted from that of Z7 on the same layer, with the difference shown on a two-dimensional contour plot (Figure 7). Here we can see the quantity of coarser or finer particles difference between two cores at the same time. The results showed that the sediment can be divided into two groups—coarse and fine—using 6.25 Φ as the boundary, and the sediment varied considerably over time. In the section of 150–140 cm, the difference in relative content between the two cores was approximately zero. In the section of 140–80 cm, the coarser particles (<6.25 Φ) of Z7 were significantly less than those of Z8, whereas the finer particles (>6.25 Φ) were significantly more than those of Z8. In the section of 80–0 cm, the opposite occurred, especially above 70 cm, where the coarser particles of Z7 were significantly more than those of Z8. This indicates that the sediment on the shipping lane showed an increase in the coarse particulate fraction and a decrease in the fine particulate fraction from 1977. Elemental Characteristics of Sediment Elements with specific indicators, including S, Cl, Br, Si, Ti, and Ca, were selected for comparative analysis. These elements have steady repeat scanning results and reliable detection, and have often been used by previous researchers (Thomson et al., 2006; Marsh et al., 2007; Agnihotri et al., 2008; Croudace and Rothwell, 2015; Grygar and Popelka, 2016). The content of elements is a relative value, and the data quality is influenced by several factors, such as grain size and water content variations, core surface imperfections, and the presence of organic matter (Croudace and Rothwell, 2015). In order to attenuate above effects, element-to-element ratios were used, which can allow comparison between the cores. Ti is a typical reference element used for normalization (Grygar and Popelka, 2016). The element ratios Br/Cl, S/Ti, Si/Ti, and Ca/Ti, were selected for the study (Figure 8). The Br/Cl ratio for Z7 ranged from 0.06 to 0.17, with a mean value of 0.12, and the element ratio decreased slightly in the 0–40 cm section, with a mean value of 0.11. The S/Ti ratio ranged from 0.12 to 0.38, with a mean value of 0.20, and the element ratio increased significantly in the 0–40 cm section, with a mean value of 0.24. The Si/Ti ratio ranged from 2.77 to 6.79, with a mean value of 5.01, and the element ratio decreased significantly in the 0–40 cm section, with a mean value of 4.87. The Ca/Ti ratio ranged from 2.86 to 4.32, with a mean value of 3.54, and the element ratio decreased slightly in the 0–40 cm section, with a mean value of 3.48. The element ratios shifted at approximately 40 cm. According to the established dating framework (Figure 3B), the year was estimated to be approximately 1999. For Z8, the most significant shift was Si/Ti, which transformed at 77 cm, with a decrease in the 0–77 cm section. The Br/Cl ratio for Z8 ranged from 0.08 to 0.21, with a mean value of 0.14. The S/Ti ratio ranged from 0.14 to 0.34, with a mean value of 0.21. The Si/Ti ratio ranged from 3.92 to 7.20, with a mean value of 5.50, and the element ratio decreased significantly in the 0–70 cm section, with a mean value of 5.17. The Ca/Ti ratio ranged from 3.05 to 4.73, with a mean value of 3.63. Discussion Development of China’s Offshore Shipping Lanes Containerized maritime transport plays an important role in global trade, accounting for 80% of international cargo trade and growing at an average annual rate of 4% (Ducruet and Notteboom, 2012). A country’s container transshipment capability and accessibility directly reflect its maritime transport capacity, as well as its level of maritime transport development. China’s container industry began in 1979, with a container throughput of 32,900 twenty-foot equivalent unit (TEU). The late 20th century was in a period of rapid growth (Figure 9). According to statistics, the average annual container throughput in 1979–1999 was 2.95 million TEU, and in 1999–2018 it was 127.18 million TEU, a staggering 42-fold increase. The Port of Shanghai has held the top position for container throughput of the world’s largest ports since 2010. The external and internal feeders of foreign trade from the Port of Shanghai pass through the outside of Wenzhou Port, where our cores were collected. Combining the model with global economic development scenarios, it is suggested that global maritime traffic will increase by 240–1,209% by 2050 (Sardain et al., 2019). In addition, the shipping industry entered the so-called megaship era in 2007 when a leading container shipping company deployed a fleet of mega-containerships with a carrying capacity of more than 10,000 TEUs (Imai et al., 2013). The development of megaships requires deeper draft depths and the sea areas affected by ship disturbance is expanding into deeper water accordingly, thus the disturbance effect of megaships will have an increasing impact on relatively deep waters. China’s coastal shipping lanes are traversed in dense networks, with frequent passenger and cargo lanes. Vessels with a container load of more than 5,000 TEU, bulk cargo of more than 100,000 tons, and tankers of more than 100,000 tons meet our definition of a megaship. The southeast coast of China, the Bohai Bay, the Changjiang Estuary, the Taiwan Strait, and the eastern side of Taiwan Island are all areas affected by the disturbance of megaships (Figure 10). The study of modern sedimentary dynamics and its products in these areas should consider the influence of megaships on shipping lanes. Differential Performance of Grain Size and Elements The element content in the sediment is mainly controlled by its mineral composition. In addition, hydrodynamic conditions, adsorption and flocculation of fine particles, redox conditions, and human activities all have an influence on the variation of element content (Dong et al., 2009; Singh, 2009; Ye et al., 2013; Grygar and Popelka, 2016). The grain size of marine sediment is closely related to geochemical elements, both of which are in accordance with the “law of elements controlled by grain size” (Zhao and Yan, 1994). Fine-grained sediment can be readily enriched in some chemical elements, either because they are present in the clay minerals or because of the adsorption effect of the fine-grained particles. This is due to the correlation between particle size and elements, which are often used as a proxy for particle size (Zhou et al., 2019). However, as mentioned above, the particle size changed significantly approximately 1977, whereas the elemental ratios of S/Ti, Ba/Ca, Si/Ti, and Br/Cl did not change significantly until approximately 1999. The behavior of particle size and elements was not identical, and it was therefore worthwhile to investigate the underlying mechanism. Correlation analysis was conducted between the element ratios selected in this study and the sand, silt, and clay contents. Both were found to be poorly correlated, with the correlation coefficient almost always less than 0.3 (Table 3). There was therefore no significant correlation between the grain size and the elements. The factors influencing the change in the grain size of marine sediments can be summarized into two categories: the first is the change in sediment sources (sources or sediment flux), and the second is the change of sedimentary dynamics environment, which is closely related to the coastal circulation system and extreme climate events (Liu et al., 2010). The study area is located in the distal mud of the subaqueous Changjiang River delta, and the sediment mainly comes from the Changjiang River. Thus, the annual sediment flux of the Changjiang River Datong Station was counted during the period 1953–2018 (Figure 11). Before 2000, the annual sediment load was more than 300 Mt. After 2003, due to the influence of the Three Gorges Reservoir, the annual sediment load was less than 200 Mt. In this study, the grain size transition occurred early before the drastic change in sediment flux, so the grain size transition was not influenced by the change of sediment source. Some studies suggest that the load, grain size and sediment composition deposited over the coastal and shelf water adjacent to the estuary have changed in response to the Three Gorges Dam. However, this phenomenon occurs mostly downstream of the reservoirs and estuaries, and after long-distance transport, the signal of changing grain size in the study area has been difficult to detect (Gao et al., 2019). Even in the downstream of the reservoir, the median grain size variation is only about 5 μm (Gao et al., 2015), which is smaller than the variation caused by the navigation channel. Therefore, the transition of grain size was caused by changes in the sedimentary dynamics environment, mainly due to disturbance by ships. Marine sediments are mainly composed of terrestrial debris, biogenic materials, and marine authigenic substances, whose relative content determines the distribution of elements in the sediment. The elements, especially the biogenic elements related to the ecological environment, can reflect the evolution of the sedimentary environment. The time of element ratios shift lags behind the time of grain size shift, which was most likely a response of the ecological environment to the effects of ship disturbance. This occurred approximately 1999, when the frequency of navigation began to increase rapidly (Figure 9). At the beginning of ship navigation, the effects of ship disturbance did not cause significant changes in elements, until the rapid growth in the maritime transportation of China in 1999. There are complex mechanisms behind this response, involving processes such as the migration and transformation of marine biological production, biogeochemical cycling of marine substances and elements, especially redox-driven processes (Schubert et al., 1998; Duan et al., 2010). All of these processes were influenced by the environmental characteristics include suspended sediment concentration, salinity, total dissolved organic carbon, temperature, depth, pH, Eh, phytoplankton, and water circulation (Marcussen et al., 2008). Only after the disturbance frequency reached a certain level, would the elemental variation manifest. Therefore, grain size variations were expressed soon after the start of navigation, whereas the biogenic elements did not change significantly until 1999. Sedimentary–Ecological Response to Ship Disturbance Quantitative studies on the impact of human activities on ecology are of vital importance. In recent years, global reductions in riverine sediment fluxes have become widespread (Syvitski et al., 2005; Milliman and Farnsworth, 2011). Studies to investigate the impact of human activities, mainly in terms of changes in the fluxes and sediment properties of the sea (Dai et al., 2008; Gao et al., 2014; Yang et al., 2019), have made good progress in quantifying these impacts. For example, Dai et al. (2008) argued that, for the Changjiang River, the contribution of climate change to the reduction of sediment flux into the sea was only approximately 3%, with anthropogenic contributions accounting for 97%. Ship navigation is an important anthropogenic agent. During navigation, ships alter the local hydraulic regime, i.e., the generation of currents and ship-induced waves (Rapaglia et al., 2011; Fleit et al., 2016). The highest near-bed velocities resulting from ship generated waves range between 0.1 and 0.4 m/s in Danube River of Hungary, which was obtained by computational fluid dynamics (CFD) modeling (Fleit et al., 2016). The average flow velocity with no ship is 0.02 m/s, which means an increase of an order of magnitude due to ship (Fleit et al., 2016). In situ measurement shows that the water velocity increases to 2.1 m/s when the ship passes by, which is more than an order of magnitude higher than the typical tide and wind driven current speed in the channels of Venice (Coraci et al., 2007). The increased current speed can increase bottom shear stress, which will cause the resuspension of sediment in shallow water areas and the erosion of the channel slope and seabed (Rapaglia et al., 2011; Ji et al., 2014; Fleit et al., 2016). It is found that the ship-generated waves (including drawdown and surge waves) have much more effects on sediment resuspension than wind waves (Houser, 2014). Once the shear stress generated by the ship is larger than the critical shear stress which is further determined by sedimentary characteristics, the seabed sediment would move in suspension, saltation, and creep (Liou and Herbich, 1976; Liao et al., 2015). The bottom shear stress caused by propeller scour is an important mechanism contributing to sediment resuspension and subsequent erosion (Liao et al., 2015). In the same situation, the resuspension of coarser particles requires a greater incipient velocity (Liou and Herbich, 1976). Finer particles are easier to resuspend. Ship-generated waves are capable of resuspending significant quantities of bottom sediment and suspended sediment concentration increases with increment of turbulent kinetic energy of the ship wakes (Houser, 2014; Ji et al., 2014). In situ observation showed that suspended sediment concentration rose from 12 mg/L to 400 mg/L in Venice Lagoon, Italy, after the ship had sailed (Rapaglia et al., 2011). The intensity of sediment disturbance by a ship is related to the speed, propeller rotation speed, water depth, and draft of the ship (Liou and Herbich, 1976; Hong et al., 2013). Generally, the faster the speed of ships, the shallower the water depth, and the deeper the draft, the stronger the intensity of the disturbance. Sediment resuspension caused by ship disturbance has led to a series of changes in both the sedimentary environment and ecology. In this study, when establishing the dating framework, it was found that in a relatively stable sediment environment (such as the location of core Z8), the dating results obtained by the CIC and CRS dating models were consistent. However, in an unstable sediment environment (such as the location of core Z7), the results of the two dating models differed greatly, and the age difference of the same layer could be up to 24 years. Because of the inherent shortcomings of the CRS model, the bottom age is biased toward aging, whereas the CIC model homogenizes the sedimentation rate, which is obviously not applicable in an unstable sediment environment. A single dating model cannot establish a convincing and comparable dating framework. The best approach is to combine the two models, using the CRS model in the layer affected by ships and the CIC model in the lower part, to establish a CRS–CIC dual dating model. Figure 3 shows that the CRS–CIC dual dating model can be used with reliable results to address sedimentation rates in an overall sedimentary environment, but locally influenced by frequent ship motion. Since the development of coastal shipping in China in 1977, the fluctuations of grain size has changed largely. Before 1977, the fluctuation of grain size of Z8 is wider than that of Z7, which shows an opposite trend after 1977. Core Z8 is located near a small bedrock island called “Pishan,” which will cause more complicated hydrodynamics (tidal and wave) compared to core Z7 before 1977. In this case, the fluctuation of grain size at Z8 is wider than that of core Z7. However, the hydrodynamic condition is more complicated at core Z7 than that of core Z8 after 1977 due to the disturbance of ships, causing the fluctuation of grain size of Z7 is wider than that of Z8. In addition, the sensitive grain size at Z7 has been finer (Figure 5A). With 6.25 Φ as the boundary, the grain fraction finer than 6.25 Φ decreased (Figure 7). It was calculated that before 1977, core Z7 had a significantly higher fine grain fraction (>6.25 Φ) than core Z8, with a mean value of approximately 6%, but after 1977, core Z7 had a significantly lower fine grain fraction (>6.25 Φ), with a mean value of approximately 5%. This indicated an 11% reduction in the grain fraction finer than 6.25 Φ at the shipping lane and a significant coarsening of the sediment. Ship motion affected the local sedimentary dynamic environment. Although the total sedimentary flux was the same as the flux outside the shipping lane, it has a selective modifying effect on the sedimentary record: in the sediment on the shipping lane, which was dominated by silt, all grain fractions became more active under frequent ship disturbance. Due to differences in sedimentation mechanisms, it was relatively slow for fine grain to settle, and a significant proportion of the fine grain fraction may leave the shipping lane, causing a reduction in the fine grain fraction entering the seabed sediment. It has been shown that vessel-induced wakes can increase the concentration of suspended sediment by a factor of 30 above background values, but this surge only lasts for a few minutes, and then the high concentration persists for almost an hour before returning to background values (Rapaglia et al., 2011). The sustained high concentration is due to the slow settling velocity of fine particles. Ship disturbance also caused ecological changes. After 1999, the value of Br/Cl in the Z7 core decreased from 0.12 to approximately 0.11, the value of S/Ti increased significantly from 0.20 to 0.24, the value of Si/Ti decreased from 5.01 to 4.87, and the value of Ca/Ti decreased from 3.54 to 3.48. The decrease in Br/Cl could indicate, to some extent, the decline of primary productivity in the region (Thomson et al., 2006). High S-levels tend to indicate a low oxygen zone (Croudace and Rothwell, 2015). Si/Ti is an important indicator of siliceous phytoplankton productivity. The principle of reduced Ca/Ti is the same as that of Si/Ti, both of which belong to the response of biogenic elements to the marine environment (Marsh et al., 2007; Agnihotri et al., 2008). Specific to the above individual indicator, small changes in value may not be evidence of significant changes in the ecological environment. However, the changes in the four indicators pointed to consistency, which may be related to the disturbance of ships in the waterway. For example, frequent disturbance by ships made the shipping lane waters turbid, and light became the most important factor limiting marine productivity. The turbidity and high concentration of suspended solids was not conducive to the growth and reproduction of phytoplankton, and this reduced primary productivity (Jiang, 1993; Pan et al., 2011). In addition, the amount of phytoplankton directly affected the dissolved oxygen content in seawater. The reduction of phytoplankton decreased the dissolved oxygen content in seawater, leading to the dissolution of iron oxides and the formation of pyrite (FeS2), which increased the amount of elemental S in the sediment (Jiang, 1993; Croudace and Rothwell, 2015). Frequent disturbance was detrimental to diatom growth and reproduction, and decreased the biotransformation rate of silicates in seawater and the “silicon fixation” effect, thus decreasing the Si/Ti value in sediment (Huang et al., 1986; Pan and Shen, 2009). Calcareous phytoplankton such as coccolithophores are widely distributed and abundant in the ocean, are well preserved in the sediment and are important sources of biogenic Ca in the sediment (Poulton et al., 2007, 2013). Frequent disturbance was also detrimental to the growth of coccolithophores, and made it difficult for biogenic Ca to adhere to the particulate matter, which can reduce the Ca/Ti ratio in the sediment. Overall, the quality of habitat conditions along the shipping lane was significantly different from those outside the shipping lane. The content of each element in the sediment of the shipping lane was controlled by a combination of physical, chemical, and biological interactions. Suspension of fine particles caused by physical disturbance affected the marine ecosystem and ultimately changed the elements in the sediment.

#### Extinction

Poddar 21, Director SafEarth Clean Technologies Pvt Ltd. (Harshit, How The Loss Of Phytoplankton Could Lead To Our Demise, <https://medium.com/climate-conscious/how-the-loss-of-phytoplankton-could-lead-to-our-demise-8f9c91b937a8>)

The base of the entire aquatic food chain is the phytoplankton. Essentially what plants do on land, phytoplankton does in the ocean. It is the foundation on which the entire aquatic life is built. Any threat to this species would ultimately lead to a complete collapse of aquatic life. Unfortunately, the phytoplanktons are dying, and we are the ones killing them. These microscopic algae have been critical in making life on Earth possible for a number of key reasons. Oxygen Phytoplankton are responsible for over 50% of all the oxygen in our atmoshpere. These microscopic algae in our oceans are some of the most laborious workers in our ecosystem. Day and night, they absorb the carbon dioxide in the atmosphere and convert it into oxygen through photosynthesis. Food All the food in the ocean is ultimately produced by phytoplankton. Through photosynthesis, they produce carbohydrates which are in turn consumed by small fishes. These fishes are then consumed by larger fishes and so on. Kill the phytoplanktons and the oceans will be left with no food.

#### The second scenario is Indian Ocean Conflict —

#### The continued growth of megaships will cut India off from global trade

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According to the ITF, direct port calls by ships are considered important because they reduce risks, feeder vessel costs, and turnaround time in comparison to the option of trans-shipment feedering[2] via other ports.[23] Ports are considered competitive when they are chosen more regularly for direct calls than other ports.[24] Maritime landside infrastructure limitations dictate direct call options. A terminal’s integration with the wider set of requirements in the supply chain decides the choice of routes.[25] Even if a terminal is large enough to handle the berthing of a mega-ship, it needs several large cranes, better yard management capability, increased automation, larger storage facilities, more inland connectivity, and enhanced labour productivity. Mega vessels seek speedy unloading of the large volumes they carry.[26] Most countries in the Indian Ocean have to deal with reduced direct port calls due to their inability to serve mega-ship port calls.[27] With the size of ships predicted to grow beyond 21,000 TEU after 2020, more countries could be increasingly cut off from direct calls unless they undertake extensive modernisation. India’s largest port, the Adani CMA Mundra Terminal Private Limited on its west coast, can currently accommodate ships only up to 18,000 TEU. The majority of India’s container traffic is therefore shipped through ports outside the country, mainly from Colombo and Singapore. India is developing six deep-water sea mega-ports for receiving mega-ships under its ambitious Sagarmala Project, though the project is still in its nascent stages.[28] Unless India invests in maritime infrastructure, it will be unable to attract direct port calls to its shores, and will be vulnerable to geopolitical risks emerging from the Chinese investments in Colombo’s Hambantota mega-port and Pakistan’s Gwadar mega-port.[29] Cities unable to manage land acquisition for mega-port complexes are in danger of becoming completely cut out of direct calls. Long-term market projections suggest that by mid-century, international trade could require container ships of up to 50,000 TEU capacity which are likely to sail exclusively between trans-shipment terminals and mega-port complexes.[30] Mega-ship port calls could therefore mark the beginning of the end for the link between cities and ports.[31]

#### Indian fear of global isolation causes lash out and conflict with China

Mukherjee 20, Researcher on Asian Security with the Stimson Center. (Tuneer, Sino-Indian Maritime Competition: Shadow Fighting In The Indian Ocean, https://www.stimson.org/2020/sino-indian-maritime-competition-shadow-fighting-in-the-indian-ocean/)

Sino-Indian conflict has historically been restricted to the land domain. However, as both Beijing and New Delhi have opened their economies to global commerce, their dependency on sea-borne trade has exponentially increased. Both have come to realize the importance of naval power in enabling them to secure their sea lines of communication (SLOC), their primary concern being undisrupted energy access from the Middle East. To this end, both nations have outlined ambitious force modernization plans to develop a “blue-water navy” that can operate at longer distances from their homeland for sustained periods of time. As Beijing’s maritime security interests intersect with India’s, there has been a linear escalation in the interactions between the two naval forces, leading to benign competition between them in the Indian Ocean Region (IOR). The Malaccan Dilemma As early as 1985, Chinese naval planners began deploying squadrons for routine port calls in the Indian Ocean. 1 Over the years, this has evolved into Chinese naval taskforces engaged in security missions. In fact, in September 2019, India’s naval chief Admiral Karambir Singh asserted that at any given time on an average, about seven to eight Chinese ships operated in the area. This escalation of Chinese naval presence has been gradual and can be linked to China’s security dilemma over its access to SLOCs west of the Strait of Malacca. The “Malaccan Dilemma,” first touted by Chinese President Hu Jintao in 2003, was predicated around a crisis scenario in which China would be denied access to its trade and energy routes in the IOR. Since then, Beijing has stepped up its diplomatic, trade, and naval efforts to secure a foothold in the Indian Ocean. According to some estimates, around 40 percent of Chinese trade passes through the choke point every year. China’s Indian Ocean Outreach To address the “Malaccan Dilemma,” President Hu Jintao in 2004 initiated the policy of “new historic missions,” which entailed Chinese naval forces being deployed in the far seas for military operations other than war. The deployment of Chinese naval forces to the Gulf of Aden in 2008 for anti-piracy operations marked an inflection point in Sino-Indian maritime dynamics. It signaled Beijing’s intention of building a robust presence in the IOR to safeguard its interests. Since then, China has increased its footprint in the IOR by weaving together a patronage network in the Indian Ocean littoral countries. China has undertaken massive port development projects in countries such as Sri Lanka, Pakistan, and Bangladesh, under its 21st Century Maritime Silk Road initiative, accompanied by bountiful transfers of naval equipment and technology. All this has affected India’s strategic calculus, triggering fears of encirclement in what it considers its backyard. Shifting the Status Quo Notably, these Chinese endeavors resulted in three significant developments that have challenged the status quo in the Indian Ocean maritime theater. The first was the frequent deployment of Chinese submarines for “anti-piracy operations” in the region. This highly unusual move made Indian strategists wary of Beijing’s bona fide intentions in the IOR. The second was the inauguration of China’s first overseas naval base in Djibouti in 2017, which made concrete the prospect of a Chinese logistical support network in the region. The third is that, since 2015, Chinese research vessels have routinely plied the area collecting data and improving China’s knowledge of the hydrography, topography, and bathymetry of the waters. Such civilian missions help improve China’s operational knowledge of the IOR, while making it increasingly difficult for Indian forces to monitor Chinese activities in the region. India naval strategists fear these missions are aimed at augmenting Chinese subsurface maneuvers to counter India’s theatrical superiority. India’s Naval PostureIn the backdrop of their strategic competition and both countries’ efforts to arm themselves with the latest technology, Sino-Indian maritime rivalry raises concerns about an impending altercation between them in the high seas of the Indian Ocean.[…] In a likely scenario of a maritime confrontation between them in the region, their naval power will be well-matched. India’s biggest strategic advantage lies in its central position in the Indian Ocean, and its familiarity with the operating environment of the IOR. The Indian Navy has always maintained that its primary focus of operations is providing security for the Indian Ocean – protecting the homeland against external actors and maintaining sea control over the various SLOCs and chokepoints of the IOR. Thus, considering China’s increased presence, India has recalibrated its bearings and sought to improve its maritime domain awareness (MDA) in the IOR. It has adopted a more vigilant constabulary role using anti-submarine warfare equipment. Beginning in 2017, India initiated a new pattern of mission-based deployments in various areas of the IOR, conducting patrols around key SLOCs all year round. Taken together, these moves have amplified the Indian Navy’s operational awareness of the region. India has also initiated closer maritime cooperation with nations that are likewise cautious of China’s naval expansion. On the sidelines of the 2017 East Asia Summit in Manila, India, Japan, Australia, and the United States, took part in consultative discussions, reinvigorating the once abandoned Quadrilateral Security Dialogue. What came out of that summit and subsequent discussions, which have since been elevated to the ministerial level, was a loose framework for how to manage issues pertaining to the maritime commons and the concept of a free and open Indo-Pacific. The brainchild of Japanese Prime Minister Shinzo Abe, the Indo-Pacific essentially represents a realignment of the strategic backdrop against which the maritime security dynamics of Asia are set, reimagining the Indian and the Pacific Ocean as a unitary maritime theater. The United States has also supported this alignment by means of strategic and diplomatic outreach in the region via the Free and Open Indo-Pacific strategy. Washington and New Delhi have correspondingly cultivated a closer maritime security relationship, cementing strategic cooperation via a logistics exchange agreement in 2016 and an information sharing agreement in 2018. Comparing China and India’s Naval Capabilities In the backdrop of their strategic competition and both countries’ efforts to arm themselves with the latest technology, Sino-Indian maritime rivalry raises concerns about an impending altercation between them in the high seas of the Indian Ocean. China and India have progressively strengthened their naval capabilities over the years, investing in high value platforms such as nuclear-powered submarines, aircraft carriers, and autonomous unmanned vessels. Beijing and New Delhi have also made sustainable efforts to develop their C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) capabilities by launching their own navigation satellites. However, as Figure 1 & 2 below indicate, there is a growing gap between the blue-water naval capabilities of the two nations, with China clearly ahead. Yet, it is also important to note that China’s primary focus of naval strength has been in its near seas surrounding the first island chain. The Indian Ocean, while important, is a secondary focus for Beijing. Comparatively, India has not engaged China with a counter-theater presence in the Western Pacific and has focused its efforts instead on amplifying its naval defense of the IOR. The tri-services base at the Andaman & Nicobar Islands serves as an important component of this effort. In a likely scenario of a maritime confrontation between them in the region, their naval power will be well-matched. Anticipating Future Conflict In September 2019, a Chinese research vessel was forced to retreat by Indian forces for operating inside the exclusive economic zone of the Andaman & Nicobar Islands without prior permission. The incident reminded both sides of the delicate intricacies surrounding maritime engagement in the open seas. Specific confidence-building mechanisms and crisis management protocols are nearly non-existent between the two navies. Save for statutory procedures guiding interactions on the high seas, Sino-Indian maritime interactions remain unregulated. As both countries’ naval forces come in contact more frequently, tensions loom on the horizon. China and India have been engaged in a competitive embrace with one another for a while now. Both sides realize the importance of a cooperative bilateral relationship but are unwilling to cede any strategic ground. In the likelihood of a situation where Beijing gains an upper hand in the continental realm, strategists in New Delhi might be tempted to implement access-denial measures against Chinese naval assets in the region, to tilt the strategic balance back in India’s favor. While a confrontation along their international border could be isolated, a similar scenario in the maritime domain is likely to have multifaceted implications far beyond New Delhi and Beijing.

#### That goes nuclear

De Silva 21, Department of Strategic Studies, General Sir Johnkotelawala Defence University, Disarmament, Indian Ocean and Strategic Externalities: The Case of Sri Lanka, Journal for Peace and Nuclear Disarmament Volume 4, 2021 - Issue 2)

Frank Hoffmann’s “Pink Flamingo” concept is pertinently applicable to the South Asian region (Barner and Bensahel 2015) since it highlights a disaster that a state or an entity would have noticed emerging but ignored and that could cause catastrophic devastation. Hoffman is of the view that Pink Flamingo situations are patently evident but deliberately disregarded by policymakers for diverse reasons. South Asia is prone to dangerous nuclear trends and they are often ignored by the policymakers of non-nuclear states. This situation is worsened due to the tendency of avoiding adherence to the international disarmament mechanisms by the emerging nuclear powers in the region. Neither India nor Pakistan is a party to the Nuclear Non-Proliferation Treaty (NPT). It is understood that if an accident flares up in any of these states it could escalate into a worse pitch due to the public panic. In such an atmosphere nobody can guarantee that South Asia is suitably prepared to handle the transnational after effects of a nuclear catastrophe. Even though the threat is imminent, none of the non-nuclear states in South Asia has paid adequate attention to mitigate it. Apart from the direct danger of an accident or nuclear confrontation, the neighboring states of nuclear powers also face the threat of strategic manipulation of their assets by nuclear states. The worrisome factor is a blissful underestimation by non-nuclear states about the gravity of the emerging and persistent problem. The lack of awareness on how to face such situations could result in an abrupt collapse of the security well-being of non-nuclear states due to factors that operate beyond their control. This paper attempts to reveal the dangers of the existing “pink flamingo” situation in South Asia through the lens of a non-nuclear state.

#### The third scenario is Hacks —

#### Megaships are unique targets for cyber attacks

PTN 16, (3 Ways to Tackle Piracy and Terrorism, <https://www.porttechnology.org/news/how_shipping_lines_can_tackle_piracy_terrorism_and_cyber_threats/>)

However, as ships become larger, and the volume of containers increases, this puts ships at a much bigger threat of piracy and terrorism; however, the motivations behind each are fundamentally different, since they both have a different aim in mind. So what are the motivations behind attacks on mega containerships? Peter Cook, Director of the Security Association for the Maritime Industry, argues: “Whilst there is a clear difference between the motivation for piracy and terrorism (piracy being a criminal act is predicated purely on financial gain, whereas terrorism has an ideological aim and is therefore designed to terrorise those involved and affected), it does not necessarily mean that they should be treated exclusively. “Whilst a pirate is looking at what he can make out of attacking a ship from a business perspective (weighing up the risk v return ratio) a terrorist group will be looking at how they can further their cause by attacking a specific type of vessel, perhaps due to its flag, company of ownership or national/international standing. The terrorist attacks listed above clearly demonstrate that terrorists want a sensational attack and therefore the bigger the better.” Technical Paper: Port Security and the Effect of Piracy As well as piracy and terrorist threats, cyber security is also a massive issue within the maritime industry. It is such that cyber security has a fluctuating level of severity within the industry and requires increased focus to effectively deal with potential threats. It is therefore important for shipping lines not to underestimate their exposure to risk and implement the appropriate solutions. A recent survey from Moore Stephens found that although risk management strategies are satisfactory in the shipping industry, the companies that do not implement sound practices for preventing security threats are at risk or paying a much higher price, with cyber security being one of the most pertinent threats. Peter Cook elaborates on the main types of cyber security threats facing mega ships: “Cyber-attacks fall into three main categories: a criminal using cyber as the facilitator to commit another crime such as fraud; a targeted cyber-attack when the systems of a shipping company/ship are attacked to get specific data/IP or cause the company to lose business and or revenue or a “Hacktivist” who may target a company for personal gratification (CIA hackers for example).

#### Terrorists have the means, motive and opportunity to hack and weaponize megaships

Demchak & Thomas 21, Chair of Cyber Security and Senior Cyber Scholar, Cyber Innovation Policy Institute, U.S. Naval War College (Chris with ichael L. Thomas, Ph.D., is currently assigned to Maxwell Air Force Base as a professor of cyberwarfare studies at the U.S. Air Force Cyber College, CAN’T SAIL AWAY FROM CYBER ATTACKS: ‘SEA-HACKING’ FROM LAND, <https://warontherocks.com/2021/10/cant-sail-away-from-cyber-attacks-sea-hacking-from-land/>)

The vast bulk of the world’s critical economic and military traffic passes through a handful of narrow strategic waterways known as “maritime chokepoints.” While these waterways have always been prey to pirates, weather, and maritime accidents, these perils are now joined by maritime cyber attacks — whether conducted for ransom, malicious disruption, piracy, or as part of larger geopolitical conflicts. When a commercial vessel or warship is strategically delayed via sea-hacking, critical shipments are delayed by days or weeks. The massive size of modern container ships such as the Ever Given makes hacking their steering systems or forward speed a means of weaponizing the vessel. It is worth a bad actor’s effort to experiment with grounding a major new container ship remotely from land-based cells. The Suez Canal could be one of the more lucrative cyber disruption targets due to the amount and expected speed of traffic flow through its two-lane and one-lane sections. 30 percent of the world’s shipping container volume carrying 12 percent of global trade passes through the canal. Ships, including the very largest container vessels, can cut an average 12 days off a three-week trip from India to Italy by transiting the canal. The 205-meter-wide canal is known to be challenging even at modest speeds for ships the size of the Ever Given. Its 120-mile-long narrow transit offers the opportunity for cyber-induced disruption, particularly if one wanted to stall oil and gas deliveries to the Mediterranean and Europe. If the canal is blocked companies must take the alternative route — around the Cape of Good Hope, adding 10 to 12 days transit time, fuel costs, and security costs. Comparatively, according to a 2006 RAND study, the closing of the Malacca Strait would increase transit time by only an additional three days. With the grounding of the enormous container ship — the Ever Given — on March 23, 2021, the world was reintroduced to the issue of “maritime choke points”. The giant ship blocked the Suez Canal for six days. The Ever Given was not a cyber target this time but its grounding demonstrated the potential impact on global trade when a ship blocks a chokepoint. For example, the BBC reported that fears that the blockage would tie up shipments of crude oil resulted in crude prices rising by 4 percent on international markets. The Ever Given was launched in 2018, and is one of the largest ships in the world. It was built and is owned by a Japanese firm, leased and operated by a Taiwanese company, and sailing under a Panamanian flag. Similar-sized ships carry an increasing percentage of global trade, and the relatively recent 2015 addition of a second channel to the Suez Canal was undertaken in part to accommodate them. The canal is wide enough to accommodate such large vessels but physical clearance on either side of both channels is currently still limited. Mistakes in speed or understanding of wind effects on huge vessels can (and did in this case) come from human error. But they can also be stimulated by difficult-to-detect cyber intrusions into the navigation and steering systems of these ships, especially in newer vessels. The internet protocol networks used for steering and navigation are often not segregated effectively for cyber security. They are connected to the serial bus networks that make up the supervisory control and data acquisition systems critical to ship operations. The blockage caused by the grounding of the Ever Given demonstrates to cyber-competent terrorists or adversaries the potential for disruption if they are able to manipulate or disrupt transit mechanisms from the ships themselves, their containers’ content, and pilotage management systems. Even basic electricity supplies for locks such as those in the Panama Canal offer disruption options to a world of bad actors who have already demonstrated a willingness to attack critical infrastructure. The 900-kilometer-long Malacca Strait carries 40 percent of the world’s maritime trade, including a quarter of the globe’s seaborne oil supplies and 80 percent of the Middle East’s oil and gas supplies to China. Traffic congestion is its major challenge, particularly where the strait narrows to just 2.7 kilometers wide near Singapore. In addition to posing a lucrative target, these chokepoints also afford the opportunity, both from shore and through remote means, for potential bad actors to track particular ships, owners’ fleets, crew, content, origin, destination nationalities, or missions in order to select targets. These risks are aggravated as ships and systems rely increasingly on automation. Fully autonomous ships are a stated goal of the industry and the U.S. Navy. Such systems should include proper cyber security. Ships and Cyber Security Still Strangers In 2018, security researchers at Pen Test Partners found vulnerabilities in electronic chart display and information systems commonly used on cargo and container ships. These chart systems are often linked to GPS-guided autopilots, which when exploited give hackers the ability to access the operational technology of the ship: If networks are not segregated, hackers can remotely manipulate the ship’s steering, ballast pumps, and navigation. The electronic charting system is often slaved directly to the autopilot on many ships, causing the ship to automatically follow the charted course. Hackers can redirect the ship’s course by planting false information messages via satellite communications in order to mislead navigational decisions. Many satellite communications terminals on ships are available on the public internet with default credentials and can be hacked remotely. Numerous other paths can also prove useful vectors in the cyber attack of a vessel. For example, the 2018 research also showed that the electronic charting systems on some ships were still using relic operating systems with many known major vulnerabilities, such as Windows NT, often because these are expensive to upgrade. Even when malicious control is discovered, as the cliché goes, it can be very difficult to regain control in a timely manner. Commercial ship networks tend to have flat network architectures that are originally unsegmented networks without firewalls or other cyber security measures as part of their architecture. Once inside such networks, it is not difficult to travel around across the systems of the entire ship. Internal systems often use manufacturer default passwords, not just on firewalls but also on the critical programmable logic controllers running systems, as well as satellite communication equipment. Researchers have identified other vulnerabilities in computer-security forums, such as using the ship’s satellite terminal as a point of penetration. The terminal opens the system itself to attackers replacing the poorly secured firmware or simply reverting to an even less secure previous version, and then altering the applications running the terminal. Similar research results have produced similar concerns. Access in — whether through the electronic charting system, the satellite communications terminal, or any other outward-facing communications — means the ability to control critical ship systems covertly and use the massive bulk for any reason the attacker desires. At the outset some experts suggested that the Ever Given grounding was a cyber incident. When the voyage data recorder was examined, this speculation was shown to be wrong in this case. However, as long-time cyber control systems expert Joe Weiss noted, the potential for cyber disruption still exists. Despite the ship’s relative youth, the latest marine electronics likely installed for control and navigations do not resolve the vulnerabilities discussed earlier. The recent DefCon exercise is not a one-off example of success in simulated seahacking. Concurrent with the actual grounding of the Ever Given, a team of doctoral students competed in a NavalX “Hack the Machine” exercise — using the same “Grace” maritime system as DefCon — in order to determine if “hackers” could successfully attack maritime systems remotely through a cloud network. The team succeeded, “hacking and crashing the [fictional ship’s] cyber security monitoring system.” These oversights are major safety and security issues currently left unaddressed. One reason is a gap in crew skills and the costs of maintaining cyber secure systems while underway. Leaving poor default administrative passwords on essential systems means that attackers can take control of those systems. Shipping as a Cyber Campaign Weapon Attackers will not ignore the opportunities presented by poor maritime cyber security. A cyber campaign can provide a good enough return on investment in either economic or political benefits to make it attractive, and possibly even lucrative. American adversaries such as China, Russia, and Iran learn from these exploits and integrate them in larger cyber-enabled campaigns. Russia, for example, has spoofed a ship’s GPS at least 7,910 times between 2016 and 2019, affecting about 1300 commercial ships. In 2017, North Korean navigation jamming was said to be behind the forced return of hundreds of South Korean fishing vessels, and its cyber attacks led to the devastating NotPetya attacks that crippled the large Maersk shipping line the same year. In July 2021, Sky News reported the acquisition of documents said to originate from an Iranian offensive cyber unit called Shahid Kaveh, which is part of the Islamic Revolutionary Guard Corps cyber command. They present research on how to sink a cargo ship using cyber techniques and include details on the satellite communications systems used in the global shipping industry. The routine hacking of ships from space is coming. Currently the Global Navigation Satellite System constellation includes the American-run GPS, the Russian GLONASS, the European Union’s GALILEO, Japan’s QZSS, China’s BeiDou, and the Indian system known as NAVIC. Each nation’s ships tend to use their own national system. No nation’s commercial ships are as secure as necessary today, and they lag in securing the shipboard systems in the near and medium term. There is some talk of using older but functional radio wave technology as a more secure alternative to satellite-based systems, but the discussions are only just beginning. It is questionable how rapidly or widely alternatives such as eLORAN will spread. It will take investment and a sense of urgency on cyber security from major shipbuilding firms and shipping lines to accomplish this. As one researcher states, “[Electronic charting] systems pretty much never have anti-virus.” The anti-virus industry that protects land-based personal computers in the United States and Europe started over 30 years ago, but a multitude of huge ships launched during that time with complex computer architectures contain only basic cyber protection. U.S. and allied warships — as well as most of the world’s exporting economies — plan on free transit through the Suez Canal and other chokepoints. Iranian intelligence services have collected maps, means, and incentive to use maritime cyber weaknesses for Iranian campaigns. In the mid-1990s, Osama bin Laden’s al-Qaeda group experimented with a variety of attempted attacks using public transit, notably in Paris. Six years later al-Qaeda used commercial airliners against the Twin Towers in New York City on Sept. 11. The maritime cyber environment is abysmally insecure. The technical means to exploit these ships is well distributed across land-based hackers with no prior maritime systems experience. It doesn’t take much to mess with a passing ship. The opportunities are well-known, from the chokepoints and the ship dependence on external networks, clouds, and satellite navigation communications. The motivation is as varied as the adversary, ranging from the ransomware criminal, to the “just because they can” opportunist, to the state adversary and its proxies.

#### Ukraine means that attacks on megaships ensure escalation between the US and Russia

Borger 2/13/22, Reporter forn the Guardian. (Julian, Ukraine crisis: miscalculation could trigger unintended wider conflict, https://www.theguardian.com/world/2022/feb/13/ukraine-crisis-miscalculation-could-trigger-unintended-wider-conflict)

The unprecedented Russian military encirclement of Ukraine has not only brought closer the prospect of a devastating war in that country, it has also raised the risks of triggering an unintended wider conflict. The US and Nato have been adamant that their troops will not enter Ukraine no matter what happens, and the Pentagon has pulled out the 160 national guard soldiers who were acting as military advisers. This image provided by The White House via Twitter shows President Joe Biden at Camp David, Md., Saturday, Feb. 12, 2022. Biden on Saturday again called on President Vladimir Putin to pull back more than 100,000 Russian troops massed near Ukraine’s borders and warned that the U.S. and its allies would “respond decisively and impose swift and severe costs” if Russia invades, according to the White House. (The White House via AP) Biden warns Putin: you’ll pay a heavy cost if you attack Ukraine Even during the cold war, Washington and Russia made sure their forces did not clash, and Joe Biden has made clear he would seek to keep it that way. “That’s a world war when Americans and Russia start shooting at one another,” Biden said. However, the massing of Russian troops in Belarus and the deployment of a substantial Russian naval force in the Black Sea, matched on a smaller scale by Nato land, sea and air reinforcements on the alliance’s eastern flank, means there is far more military hardware in close proximity than is normal. And with proximity comes the increased danger of accidents and unintended consequences. “The risk of something going down like a mid-air collision, or a trigger-happy Russian or American, can really escalate things quickly,” said Danny Sjursen, a former army major and director of the Eisenhower Media Network. “You’re setting yourself up for accidents and miscalculation, and that’s when you can get out of control real quick, because there are domestic considerations both in Russia and in the United States. An American pilot dies – now what? I’m not saying that necessarily means we go to cataclysmic nuclear war but it escalates things.” The US national security adviser, Jake Sullivan, told CBS News on Sunday that the US had sought to be transparent about its troop deployments in eastern Europe in order “to avoid mistake, miscalculation or escalation and also to send a very clear message to Russia we will defend every inch of Nato territory”. There is a long history of close encounters over the Baltic and Black Seas. Earlier this month US jet fighters scrambled to intercept Russian warplanes operating close to Nato airspace while British and Norwegian planes took off to monitor Russian aircraft flying into the North Sea. While Russia has shut off large parts of the Black Sea to conduct its manoeuvres, Nato navies have stayed out of the immediate vicinity for now, while building up their presence in the Mediterranean. If they do decide to go through the Bosphorus in a show of strength, or to safeguard commercial shipping, the risk will rise again. Elisabeth Braw, a senior fellow at the American Enterprise Institute, said the danger was further heightened by Russia’s suspected use of “GPS spoofing”, interference with the navigational equipment of other vessels. On several occasions recently, civilian ships traveling in the Black Sea have encountered mysterious GPS troubles that showed the vessels being in a different part of the Black Sea or even on land. It was widely though the incidents were caused by Russia testing its technology. “It raises the risk for naval vessels that are in the Black Sea, which we should remember is not that big, and it’s crowded,” Braw said. “There’s enormous shipping activity in the Black Sea, and so all those crews face the risk of having no GPS.” The transfer of combat troops from Russia’s far east to Belarus has not only significantly increased the imminent threat to Ukraine, but also made eastern European Nato members increasingly nervous. “The closest training ranges in Belarus are 150 to 200km from Vilnius or Warsaw,” said Kristjan Mäe, the head of the Nato and EU department at Estonia’s ministry of defence. “This is a Russian force posture that hasn’t been there previously.” A refugee crisis at the Polish-Belarus border last year led to a close encounter between the troops facing each other, with Warsaw complaining that Belarus forces opened fire in the direction of their soldiers. “We have to remember that the people who are actually out on the frontline are very young men and women and they face enormous responsibility,” Braw said. “Yes there is a chain of command but if there is some sort of provocation or aggression, intentional or unintentional, that is directed against them, then they have to respond.” The close encounters so far have occurred in peacetime. In the event of war, nerves will be far more on edge, communications could be hampered or flooded with disinformation. “We cannot be entirely confident that in the lead-up to or during a conflict that Nato and Russia will be able to communicate, especially as current civil and military communication systems between them are not as robust or technically resilient as they should be,” Sahil Shah, a policy fellow at the European Leadership Network, said. “The world’s two largest nuclear-armed states have returned to the brink of conflict exactly 60 years after the Cuban missile crisis. If diplomacy is not pursued to the fullest extent, the risks of miscalculation and miscommunication could potentially pull in wider Europe into a devastating war. Without dialogue on how to manage de-escalation, it will be as if our leaders are running into a monsoon with newspapers over their heads.”

#### US-Russia escalation over Ukraine causes extinction

Helfand 2-8-2022, MD, is Immediate Past President of the International Physicians for the Prevention of Nuclear War, recipient of the 1985 Nobel Peace Prize, and cofounder and past president of Physicians for Social Responsibility, IPPNW’s US affiliate. He has published studies on the medical consequences of nuclear war in the New England Journal of Medicine, the British Medical Journal, and the World Medical Journal. (Ira, “Ukraine and the Threat of Nuclear War,” *The Nation*, <https://www.thenation.com/article/world/ukraine-russia-nuclear-threat/>)

As the crisis in Ukraine deepens, it is appropriate to consider what the actual consequences of war there might be. An armed conventional conflict in Ukraine would be a terrible humanitarian disaster. Last week, US government officials estimated that the fighting could kill 25,000 to 50,000 civilians, 5,000 to 25,000 Ukrainian military personnel, and 3,000 to 10,000 Russian soldiers. It could also generate 1-to-5 million refugees. These figures are based on the assumption that only conventional weapons are used. However, if the conflict spread beyond Ukraine’s borders and NATO became involved in the fighting, this would become a major war between nuclear-armed forces with the very real danger that nuclear weapons would be used—and the public debate about this crisis is utterly lacking in discussion of this terrible threat. Both sides in such a conflict would, of course, begin fighting with non-nuclear conventional weapons. But as a result of advances in technology and firepower over recent decades, these weapons possess much greater range and destructiveness than earlier models, enabling them to strike high-value targets—airbases, radar stations, command centers, logistical hubs, and so on—far behind the front lines. As the losses mounted up on both sides—and if one or the other faced imminent defeat—its leaders could feel driven to employ their tactical nuclear weapons to avert such an outcome. Both US and Russian military doctrines allow for the use of tactical nuclear weapons under such circumstances. Despite reductions in nuclear forces over the last several decades, Russia still has 1,900 tactical nuclear weapons and 1,600 deployed strategic nuclear weapons. On the NATO side, France has 280 deployed nuclear weapons and the UK, 120. In addition, the United States has 100 B-61 tactical bombs deployed at NATO bases in Belgium, Germany, Italy, the Netherlands, and Turkey, and an additional 1,650 deployed strategic warheads. If even a single 100-kiloton nuclear weapon exploded over the Kremlin, it could kill a quarter of a million people and injure a million more, completely overwhelming the disaster-response capability of the Russian capital. A single 100-kiloton bomb detonated over the US Capitol would kill over 170,000 people and injure nearly 400,000. But it is unlikely that an escalating nuclear conflict between the United States and Russia would involve single warheads over their respective capitals. Rather, it is more likely that there would be many weapons directed against many cities and that many of these weapons would be substantially larger than 100 kiloton. For example, Russia’s 460 SS-18 M6 Satan warheads have a yield of 500 to 800 kilotons. The W88 warhead deployed on US Trident submarines has a yield of 455 kilotons. A 2002 report showed that if just 300 of Russia’s 1,600 deployed strategic warheads were detonated over US urban centers, 78 million people would die in the first half hour. In addition, the nation’s entire economic infrastructure would be destroyed—the electric grid, Internet, food distribution system, transportation network, and the public health system. All of the things necessary to sustain life would be gone, and in the months following this attack the vast majority of the US population would succumb to starvation, radiation sickness, exposure, and epidemic disease. A US attack on Russia would produce comparable devastation there. And if NATO were involved, most of Canada and Europe would suffer a similar fate. Still, these are just the direct effects of the widespread use of nuclear weapons between NATO and Russia. The global climate effects would be even more catastrophic. Recent studies have confirmed the predictions, first advanced in the 1980s, that large-scale use of nuclear weapons would cause abrupt, catastrophic global cooling. A war involving the full deployed arsenals of the US and Russia could loft up to 150 teragrams (150 million metric tons) of soot into the upper atmosphere, dropping average temperatures around the world as much as 18 degrees Fahrenheit. In the interior regions of North America and Eurasia temperatures would drop 45 to 50 degrees, to levels not seen since the last ice age, producing a disastrous decline in food production and a global famine that might kill the majority of humanity. Even a more limited war involving just 250 warheads in the 100 kiloton range could drop average global temperatures by 10 degrees, enough to trigger a famine unprecedented in human history, which would almost certainly bring the end of modern civilization. The enormity of the risk inherent in the current game of nuclear chicken between the US and Russia demands a fundamental change in their relation to each other, and in the equally fraught relation between the US and China. The great powers can no longer pursue a zero-sum game to see who will come out on top. It is possible that one of them will emerge on top of the heap—but the heap may well be a global ash pile. Nuclear weapons are a discrete manmade threat to the survival of our species. Their elimination could be achieved within a decade if the leaders of the nuclear-armed states were committed to doing so. And the process of negotiating a verifiable, enforceable timetable for dismantling these weapons would establish a new cooperative paradigm in international relations that would enable them to address the other, more complex existential threat posed by the climate crisis. The elimination of nuclear weapons is not some pie-in-the-sky fantasy. It is an absolute necessity for our continued survival. We have not survived this far into the nuclear era because of wise leadership, or sound military doctrine, or infallible technology. As Robert McNamara famously observed, “We lucked out. It was luck that prevented nuclear war.” A hope for continued good luck is an insane security policy. A determination to eliminate these weapons is a policy grounded in reality, and it offers us the only acceptable path forward.

### 1AC — Plan

#### The United States federal government should substantially increase its prohibitions of anticompetitive vessel sharing agreements involving the acquisition, use, and sharing of mega-ships above 10,000 TEU capacity in container shipping.

### 1AC — Solvency

#### Solvency —

#### Prohibiting agreements forces a shift away from megaships

Haralambides 19, Professor of Maritime Economics and Logistics at Erasmus University Rotterdam. (Hercules, 2019, Gigantism in container shipping, ports and global logistics: a time-lapse into the future Maritime Economics & Logistics volume 21, pages1–60, https://link.springer.com/article/10.1057/s41278-018-00116-0)

Such consolidation in an industry that is already highly concentrated is bound to take place under the increasing scrutiny of the regulator who, with the final consumer in mind, is likely to encourage more competition rather than further consolidation. If the liner shipping market thus becomes more open and competitive in the future, i.e. if alliance agreements regarding vessel sharing, investment planning, etc. are scrutinized more closely for their compatibility with competition law, as I expect, the joint filling of the ship will become more difficult and ship sizes shall by necessity decrease, together with an increase in the number of ports of call. Low prices would then be achieved through higher competition rather than big ship sizes. In such a scenario, shipping companies will be forced to provide the services their customers want, rather than the ones they find it convenient to offer. Shippers do not like too much transshipment and, if they could help it, they would like their container as close to them as possible. Reduction in ship size and more direct calls could thus follow the example of the air-transport industry. The most common jet flying across the Atlantic is not the 420-seat 747 jumbo but the 200 plus-seat Boeing 767. Eight out of 10 transatlantic planes are twin-engine craft such as the 767, its bigger brother the 777, or the various airbuses. This taste for smaller international jets reflects the fact that travellers now like to shun big international hubs such as London and New York and fly directly to their destinations. This is changing the international market into a web of direct intercontinental flights rather than one big air-bridge between London and New York.

#### A reduction in ship-size leads to a more competitive industry

Haralambides 19, Professor of Maritime Economics and Logistics at Erasmus University Rotterdam. (Hercules, 2019, Gigantism in container shipping, ports and global logistics: a time-lapse into the future Maritime Economics & Logistics volume 21, pages1–60, https://link.springer.com/article/10.1057/s41278-018-00116-0)

The impact of alliances on container shipping and ports I just stated that the gigantism in shipping has been induced by both port competition and shipping alliances. Indeed, without the ability to use each other’s ships, no carrier alone would be able to achieve a capacity utilization high enough to justify the use of present day mega-ships, while at the same time offering the frequency that shippers demand. But carriers have gone a step too far: At the time of writing, three alliances carry 80% of global trade. Such consolidation, in an industry that is already highly concentrated, is bound to take place under the increasing scrutiny of the regulator who, with the final consumer in mind, is likely to encourage more competition rather than further consolidation. If this happens, i.e., if container shipping becomes more open and competitive in the future, and alliance agreements regarding vessel sharing, investment planning, etc. are scrutinized more closely for their compatibility with competition law, as I expect, the joint filling of the ship will become more difficult and ship sizes shall by necessity decrease, together with an increase in the number of ports of call. Low prices would then be achieved through more competition rather than big ship sizes. This is more so when it is doubtful if the economies of scale in shipping are passed on to the final consumer, as required by the consortia block exception from the provisions of competition law in Europe.Footnote51

#### Enforcement in shipping is effective and ensures compliance

Consadine 21, Attorney with Seward & Kissell LLP. (Michael, Shipping Companies Beware: Antitrust Challenges Ahead as DOJ Focuses On Industry, <https://www.sewkis.com/publications/shipping-companies-beware-antitrust-challenges-ahead-as-doj-focuses-on-industry/>)

In response to U.S. President Joseph Biden’s July 9, 2021 Executive Order to enhance competition and antitrust enforcement, the U.S. Federal Maritime Commission (“FMC”) entered into a Memorandum of Understanding (“MOU”) with the Antitrust Division of the U.S. Department of Justice (“DOJ”) to facilitate criminal investigations of violations of U.S. laws. Given that shipping companies and their employees may be separately charged by DOJ regardless of their physical location and face draconian penalties upon conviction, it is incumbent for all shipping companies – foreign and domestic – to monitor these recent developments and take steps to minimize the likelihood of harmful consequences, including by establishing or enhancing existing compliance programs.

#### Private antitrust action is necessary to deter international collusion

Lande 16, Professor of Law at the University of Baltimore School of Law, Director of the American Antitrust Institute. {Robert; Spring 2016; Antitrust, “Class Warfare: Why Antitrust Class Actions Are Essential for Compensation and Deterrence,” <https://scholarworks.law.ubalt.edu/cgi/viewcontent.cgi?article=2019&context=all_fac>)

OUR RECENT EMPIRICAL STUDIES demonstrate five reasons why antitrust class action cases are essential: (1) class actions are virtually the only way for most victims of antitrust violations to receive compensation; (2) most successful class actions involve collusion that was anticompetitive; (3) class victims’ compensation has been modest, generally less than their damages; (4) class actions deter significant amounts of collusion and other anticompetitive behavior; and (5) anticompetitive collusion is underdeterred, a problem that would be exacerbated without class actions. Recent court decisions undermine class action cases, thus preventing much effective and important antitrust enforcement.1 Class Actions Are Virtually the Only Way for Most Victims of Federal Antitrust Violations to Receive Compensation The antitrust statutes provide that violations result in automatic treble damages for the victims.2 The legislative history 3 and case law indicate that compensation of victims is a goal, perhaps the dominant goal, of antitrust law’s damages remedy.4 Class actions play an essential role in ensuring that the treble damages remedy serves its intended function of “protecting consumers from overcharges resulting from price fixing.”5 As the Supreme Court noted, “[C]lass actions . . . may enhance the efficacy of private [antitrust] actions by permitting citizens to combine their limited resources to achieve a more powerful litigation posture.”6 Accordingly, “courts have repeatedly found antitrust claims to be particularly well suited for class actions . . . .”7 Without class actions, cartels and other antitrust violators that inflict widespread economic harm would have little to fear from the treble damages remedy. This is because, as a practical matter, class action cases are virtually the only way for most victims of anticompetitive behavior to receive compensation.8 A 2013 study that Professor Joshua Davis and I conducted documents the benefits of private enforcement by analyzing 60 of the largest recent successful private U.S. antitrust cases (defined as suits resolved since 1990 that recovered at least $50 million in cash for the victims9 ). These actions returned a total of $33.8–$35.8 billion in cash to victims of anticompetitive behavior.10 These figures do not include products, discounts, coupons, or the value of injunctive relief or precedent—only cash.11 Consequently, these totals significantly understate the actual benefits of this litigation to the victims involved. And, of course, this study covered only 60 suits (albeit 60 of the largest private recoveries) out of the many hundreds of private cases filed in the United States during this period. Of these 60 large private cases, 49 were class action suits.12 These cases recovered a total of $19.4–$21.0 billion—the majority of the amount analyzed in our study.13 Since these were among the largest private actions ever filed, specific conclusions based upon these results may not generalize perfectly to all class action cases. They do suggest, however, that without class action cases, effective and significant victim compensation would be reduced dramatically. Most Successful Class Actions Involve Collusion that Was Anticompetitive Almost every private antitrust case that results in a remedy does so through a settlement,14 so the underlying merits of the plaintiffs’ claims usually have not been definitively assessed by a court or jury. Critics sometimes use this fact to support assertions that class actions usually are meritless, that plaintiffs often receive huge sums from cases not involving anticompetitive conduct, and that private antitrust actions often amount to legalized blackmail or extortion.15 Antitrust class actions arise in widely varied market and factual settings, and views about the merits of specific cases and the litigation risks involved vary as well. This makes it extremely difficult to draw objective conclusions about the merits of settlements. Nevertheless, there are good reasons to believe that the vast majority of class action cases in the Davis/Lande study involved legitimate claims. Forty-one of the 49 class actions involved allegations of collusion,16 and the same conduct supporting the settlements gave rise to criminal penalties in 20 cases; to civil relief by the FTC or DOJ in 8 cases; to civil relief by a state or other governmental unit in 9 cases; to a trial that the defendants lost and that was not overturned on appeal in 7 cases; to a class being certified in 22 cases; and to plaintiffs surviving or prevailing at summary judgment in 12 cases.17 Overall, 44 of the 49 class action suits (90 percent) exhibited at least one of these forms of legal validation as to their merits. (The 5 actions that did not have at least one of these indicia settled too early for a substantive evaluation of their merits).18 These results are broadly consistent with a finding that Professor John Connor derived from an analysis of 130 private recoveries worldwide in international cartel cases for which he could obtain the necessary data.19 He found that of the 50 largest worldwide settlements, measured by their monetary recoveries in constant dollars, 49 had been filed against international cartels.20 Of these, 51 percent were follow-ups to successful DOJ prosecutions, and another 8 percent were filed after fines by the EC or other non-U.S. antitrust authorities.21 Using a different data set, Connor and I found that 36 of 71 (also 51 percent) successful U.S. class action recoveries followed successful DOJ criminal cases.22 This data does not prove that these or any other specific class action cases involved anticompetitive conduct. But critics who assert that most antitrust class actions are little more than legalized blackmail rely only on anecdotes, hypotheticals, and opinions (often of defendants in the cases), without support from studies, and with no reliable empirical evidence that the actions lack merit or that settlement amounts are excessive compared to the anticompetitive harm.23 To be fair, one should compare the above indicia of validity to the absence of any systematic evidence underpinning the critics’ charges. Critics also sometimes assert that remedies typically secured in class action settlements are at best dubious and often are completely worthless, consisting of useless coupons, meaningless discounts, and obsolete products. They argue with regard to cash payments (without providing even a single anecdote) that “issuing [class members] a check is often so expensive that administrative costs swallow the entire recovery.”24 According to many critics the only ones to benefit from private enforcement are the attorneys involved.25 The critics who make these charges, however, never offer evidence beyond opinions, hypotheticals, and occasional anecdotes. Indeed, for the 49 antitrust class action cases that Davis and I studied, the data show that, overall, only a total of approximately 20 percent of the recoveries went for attorney fees (14.3 percent) or claims administration expenses (4.1 percent).26 The rest was returned to the victims. This result is consistent with older estimates of legal fees in antitrust class action cases in the 6.5 to 21 percent range.27 Critics also sometimes examine what happened in other areas of law and assert that these outcomes occur in contemporary antitrust class action suits as well. But they never offer systematic evidence from antitrust cases to support their opinions.28 Interestingly, only one of the lawsuits in the Davis/Lande study involved a coupon remedy—the Auction Houses cases. However, those coupons were fully redeemable for cash if they were not used for five years.29 The actions Davis and I studied were among the largest antitrust class actions ever brought and therefore might not be representative of class action cases in general. Abuses surely occur from time to time in class action cases, as they do almost everywhere in the legal system. But a majority of the critics’ most egregious examples are from other areas of law or are quite old.30 No one has ever presented reliable evidence showing that such examples occur frequently or are typical of contemporary antitrust class action cases.31 Class Victims’ Compensation Has Been Modest, Generally Less than Their Damages Even though the $19.4–$21.0 billion that Davis and I showed had been returned to victims in 49 class action cases is a significant figure when viewed in absolute terms, it probably was not nearly enough to fully compensate all of the victims involved. To ascertain “Recovery Ratios” (the percentage of the illegal overcharges that was obtained in the form of monetary payments to victims in private actions), Professor Connor and I assembled a sample consisting of every completed private case against cartels discovered from 1990 to mid-2014 for which we could find the necessary information. For each of these 71 cases we assembled neutral scholarly estimates of affected commerce and overcharges and compared these estimates to the damages secured in the private actions filed against these cartels.32 The victims of only 14 of the 71 cartels (20 percent) recovered their damages (or more) in settlement. Only seven (10 percent) received more than double damages. The rest— the victims in 57 cases—received less than their damages. In four cases, the victims received less than 1 percent of damages, and in 12 cases they received less than 10 percent of damages. Overall, the median average settlement was 37 percent of single damages. The unweighted mean settlement (a figure that gives equal weights to the cartels that operated in large and small markets) was 66 percent. The mean and median average Recovery Ratios are higher (81 percent and 52 percent, respectively), for the 36 cases that were follow-ups to DOJ prosecutions that imposed criminal sanctions.33 Because these Recovery Ratios do not include any valuations of products, discounts, coupons, or the value of injunctive relief or precedent, the actual worth of these remedies to the victims is greater than the figures reported above. Nevertheless, it fairly can be concluded that antitrust class action cases often return important recoveries to victims that are significant in absolute terms, but usually are modest when measured against the sizes of the overcharges involved. Class Actions Deter Significant Amounts of Collusion and Other Anticompetitive Behavior Private class action cases serve to deter a substantial amount of anticompetitive activity, perhaps even more than the highly acclaimed anti-cartel program of the U.S. Department of Justice, which often results in prison sentences for cartel participants.34 Virtually every contemporary analysis of antitrust enforcement assumes that deterrence is an important purpose of the private treble damages remedy provision.35 The Supreme Court has underscored this point. For example, in Reiter v. Sonotone Corp., the Court explained: Congress created the treble-damages remedy of § 4 precisely for the purpose of encouraging private challenges to antitrust violations. These private suits provide a significant supplement to the limited resources available to the Department of Justice for enforcing the antitrust laws and deterring violations.36 The government, however, cannot be expected to do all of the necessary enforcement for a number of reasons, including budgetary constraints, “undue fear of losing cases; lack of awareness of industry conditions; overly suspicious views about complaints by ‘losers’ that they were in fact victims of anticompetitive behavior; higher turnover among government attorneys; and the unfortunate, but undeniable, reality that government enforcement (or non-enforcement) decisions are, at times, politically motivated.”37 A recent study highlights the deterrence benefits of private enforcement by comparing the likely deterrent effects of private antitrust enforcement to that of criminal anti-cartel enforcement by the Antitrust Division.38The surprising result is that private enforcement—and even just antitrust class action cases considered separately—probably deters more anticompetitive behavior. From 1990 through 2011 the total of DOJ corporate antitrust fines, individual fines, and restitution payments totaled $8.2 billion. (Dis)valuing a year of prison or house arrest at $6 million39 adds another $3.6 billion in total deterrence from the DOJ’s anti-cartel cases, yielding a total of approximately $11.8 billion. This is a substantial figure, and the possibility of incurring such sanctions surely has deterred a significant number of would-be antitrust violators.40 Nevertheless, these penalties amount to approximately 50 percent of the $19.4–$21.0 billion in cash alone (not including products, etc.) secured by just the 49 studied class cases that were completed during the same period.41 These private cases were only a portion of the hundreds of successful class action cases completed during this period (albeit they were many of the largest).42 The total amount of payouts in class action cases is so high that it probably deters more anticompetitive conduct than even the DOJ’s anti-cartel enforcement efforts.

#### Empirics prove antitrust enforcement deters cartelization

Bos et al 15, Professor of Economics Department of Organisation and Strategy Maastricht University. (Iwan, with Stephen Davies Centre for Competition Policy & School of Economics University of East Anglia and Peter L. Ormosi Centre for Competition Policy & Norwich Business School University of East Anglia, , The deterrent effect of anti-cartel enforcement: A tale of two tails <https://ueaeco.github.io/working-papers/papers/ccp/CCP-14-06v2.pdf>)

The empirical contribution of this paper derives from a novel comparison of the distributions of overcharge observed for cartels between jurisdictions which did and did not prohibit cartels. It shows that the distribution for legal cartels has significantly more mass in its tails than does the distribution for illegal cartels. This finding is robust to controlling for the time period in which the cartels occurred and the perceived quality of the sources of the data. We suggest it has two potential explanations, not necessarily mutually exclusive. It may be that anti-cartel law is most effective in deterring very low or very high overcharge cartels, or it may be that such cartels are least likely to be detected in a world where cartels are illegal. The remainder of the paper is designed to distinguish which of these potential explanations is more likely. To do this, we present a fairly general theoretical model which is representative of the previous literature on cartel formation. This establishes the conditions under which we can deduce that its is deterrence which drives the empirical result. We argue that only relatively weak assumptions are required: in essence, low-overcharge cases are deterred by fines which have (at least partly) a fixed element, while high-overcharge cases, in the face of a higher probability of detection, either moderate their overcharge to lessen the likelihood of detection and lower the expected penalty (composition deterrence), or entirely abandon the cartel (frequency deterrence) because incentives become incompatible. This has some potentially important implications. In the previous literature, evidence on the nature of detected cartels has been widely used as a key source of information about the nature of collusion in the real world. But it now needs to be underlined that this evidence emanates only from cases which are not deterred, and are detected, by active anti-cartel enforcement policy. In that this ignores cases 21 which are deterred, it may seriously underestimate the welfare-enhancing impact of policy, especially insofar as it is the most harmful cases which are most likely to be deterred.18 This also raises doubts about conventional empirical wisdoms on the structural factors which are conducive to collusion. The evidence of this paper is confined to overcharge, but it is not unlikely that overcharge will be related to the structure of the cartel (number and asymmetries of members, duration, etc). If so evidence from previous studies on the structure and stability of cartels may require revisiting.

#### Shipping antitrust enforcement effectively deters

Smith 22, Attorney Reed Smith LLC. (Reed Smith, Antitrust insights in shipping – recapping 2021 and preparing for 2022, https://www.reedsmith.com/en/perspectives/2022/01/antitrust-insights-in-shipping-recapping-2021-and-preparing-for-2022)

In the same month that EO 14036 was issued, the FMC and the Antitrust Division of the Department of Justice (DOJ) entered into a memorandum of understanding relative to “Cooperation with Respect to Promoting Competitive Conditions in the U.S.-International Ocean Liner Shipping Industry.” The agencies agreed to share information “for the purpose of improving each agency’s effectiveness in carrying out its respective legal responsibilities.” They also agreed to confer, at least annually, to address law enforcement, regulatory, and other matters related to competitive conditions in the international ocean liner shipping industry. This is the first-ever agreement of this nature between the two agencies. Importantly, unlike the FMC, the DOJ has criminal enforcement capabilities. Specifically, the DOJ has jurisdiction to enforce U.S. antitrust laws not only against domestic business activities but also against foreign business activities that have a substantial and intended effect in the United States, up to and including criminal prosecution. In recent years, the DOJ has indicted a foreign ocean liner shipping company and its executives in relation to a conspiracy regarding allocation of customers and routes, bid rigging, price fixing, and other anticompetitive conduct in the international roll-on, roll-off ocean shipping industry, resulting in guilty pleas, hefty fines, and prison time for individuals, not just for the company and its executives, but also for four other competitors that were found to have participated in the conspiracy. The DOJ’s prosecutions followed a European Union antitrust probe into the container line shipping industry, which was resolved in 2016 when 14 companies entered into legally binding commitments to increase price transparency for customers and reduce the likelihood of coordinating prices. The FMC, on the other hand, has jurisdiction to investigate and sanction ocean carriers that implement unfair and unreasonable practices in violation of the U.S. Shipping Act. Specifically, the FMC brings enforcement actions and issues civil penalties against ocean carriers; the FMC also adjudicates private party actions brought by cargo owners and awards reparations. The FMC has intensified its efforts to use these tools against ocean carriers, in particular in relation to their demurrage and detention practices during the COVID-related port congestion crisis. The most recent illustrations are three policy statements issued by the FMC last month to encourage shippers to file private party complaints against ocean carriers, either individually or collectively, and to protect them from retaliation and attorney fees awards when such actions were brought in good faith. In one of these statements, the FMC recognized that private actions are important to alert the agency of potential violations and to deter unfair and unreasonable conduct by carriers.

# 2AC

## Advantage

## Solvency

## T — Per Se

#### The rule of reason is simply a test that decides whether certain conduct actually violates said prohibition.

Fishman 19, \*Todd Fishman, [Allen & Overy LLP](https://www.jdsupra.com/profile/Allen_Overy_docs/); (January 31st, 2019, “The Rule of Reason as a Bar to Criminal Antitrust Enforcement”, https://www.jdsupra.com/legalnews/the-rule-of-reason-as-a-bar-to-criminal-87406/)

Antitrust law’s rule of reason was born of technical necessity. By its terms, §1 of the Sherman Act prohibits “[e] very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade.” 15 U.S.C. §1. Despite the expansive language of the statutory prohibition, the Supreme Court has held that §1 prohibits only agreements that unreasonably restrain trade. *Board of Trade of Chicago v. United States*, 246 U.S. 231, 238 (1918); *Standard Oil Co. of N.J. v. United States*, 221 U.S. 1, 58-60 (1911). With the rule of reason, antitrust courts assumed a prudential role in administering the scope of antitrust violations, applying a factual inquiry weighing legitimate justifications for a restraint against any anticompetitive effects. Under the rule of reason, “the factfinder weighs all of the circumstances of a case in deciding whether a restrictive practice should be prohibited as imposing an unreasonable restraint on competition.” *Continental T.V. v. GTE Sylvania,* 433 U.S. 36, 49 (1977).

#### Counter-interpretation---rule of reason is a prohibition.

Light 19, Sarah E. Light Assistant Professor of Legal Studies and Business Ethics, The Wharton School, University of Pennsylvania., The Law of the Corporation as Environmental Law, 71 Stan. L. Rev. 137, 2019, Lexis/Nexis

While antitrust law can serve as an environmental mandate by prohibiting collusive behavior that keeps environmentally preferable goods from the market, there is also conflict between antitrust law's goals of promoting competition and environmental law's goals of promoting [\*177] conservation. 192 Because antitrust law's per se rule and rule of reason operate on a somewhat fluid continuum, 193 this Subpart discusses the two doctrines together. The per se rule operates as a prohibition, whereas the rule of reason operates as both a prohibition and a disincentive. As noted above, antitrust law generally prohibits certain types of market activity - price fixing, horizontal boycotts, and output limitations - as illegal per se, and harm to competition is presumed. 194 For example, if an industry association declines to award a seal of approval necessary for a product's sale without any good faith attempt to test the product's performance, but rather simply because that product is manufactured by a competitor, such an action would be illegal per se. 195 Under this Article's framework, a per se violation is thus a prohibition. The more fact-intensive inquiry under the rule of reason tests "whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition." 196 While this extremely broad statement might suggest that any fact is relevant to the inquiry, the salient facts under the rule of reason are "those that tend to establish whether a restraint increases or decreases output, or decreases or increases prices." 197 If an anticompetitive effect is found, then the action is illegal and the rule of reason operates, like the per se rule, as a prohibition. 198 The rule of reason can also operate as a disincentive, even if no [\*178] court finds an anticompetitive effect, as uncertainty and litigation risk may discourage firms from undertaking legally permissible, environmentally positive industry collaborations. 199 Associations of firms have adopted numerous mechanisms of private environmental governance to address the management of common pool resources like fisheries, forests, and the global climate. 200 Examples include the Sustainable Apparel Coalition's Higg Index 201 and the American Chemistry Council's Responsible Care program. 202 But private industry standards raise special antitrust concerns. An agreement among competitors with respect to product or process specifications may exclude competitors who fail to meet such standards, raising the specter that such industry collaborations really constitute output limitations or efforts to limit competition. 203 While the U.S. Supreme Court has scrutinized private standard-setting associations carefully, 204 it has noted that if associations "promulgate … standards based on the merits of objective expert judgments and through procedures that prevent the standard-setting process from being biased by members with economic interests in stifling product competition … , those private standards can have significant procompetitive advantages." 205 In the absence of price fixing or a boycott, a rule of reason analysis generally applies to product standard setting by private associations. 206 The uncertain outcome [\*179] inherent in the application of antitrust law in this context could therefore serve as a potential disincentive to the adoption of private industry standards. 207 The challenge of course is that some form of explicit sanctions on noncompliant industry members may be necessary for private industry standards to be effective. In the context of private reputational mechanisms like the New York Diamond Dealers Club, 208 Barak Richman has pointed out that the Club's use of reputational sanctions and voluntary refusals to deal with actors who flout industry norms, while welfare enhancing, could nonetheless amount to violations of antitrust law. 209 This echoes the concern raised by Andrew King and Michael Lenox in their extensive empirical analysis of the Responsible Care program created by the Chemical Manufacturers Association (now the American Chemistry Council). 210 King and Lenox concluded that the absence of explicit sanctions on members who failed to meet the standards set by the program left the program vulnerable to "opportunism." 211 While they suggested that industry associations could look to third parties to enforce the rules, 212 an alternative way to facilitate the long-term environmental benefits of stronger sanctions would be to interpret antitrust law in conformity with the environmental priority principle presented below. 213 [\*180] In some instances, the conflict between the values of promoting competition and conserving environmental resources can be stark. 214 Jonathan Adler, for example, has identified this conflict in the context of fisheries - a tragedy of the commons situation in which some form of collective action is required to avoid overfishing. 215 He cites as an example Manaka v. Monterey Sardine Industries, Inc., in which a fisherman was excluded from a local fishing cooperative. 216 The fisherman sued the cooperative under the Sherman Act, and the court found an antitrust violation in his exclusion. 217 While the fishing cooperative's policies were no doubt exclusionary, Adler contends that they also promoted conservation by restricting catch. 218 The fishery collapsed by the 1950s, a collapse Adler hypothesizes might have been "inevitable" but that perhaps might not have occurred in the absence of the antitrust suit. 219 While a court performing a rule of reason analysis must consider whether a restraint on trade suppresses or destroys competition, Adler points out that courts may also "consider offsetting efficiencies from otherwise anticompetitive arrangements." 220 It is not clear, however, that the courts have consistently taken these factors into account. 221 Among other potential remedies, Adler argues that to resolve this tension between antitrust law, on the one hand, and private collective action to conserve environmental resources, on the other, courts should more actively consider the "ancillary conservation benefits of otherwise anticompetitive conduct." 222 Recognizing the long-term health of a fishery would be consistent with antitrust law's purpose of ensuring viable markets exist in the future, and consistent with the environmental priority principle introduced below. 223

#### Prohibit can mean ‘severely hinder’---doesn’t necessitate a ban.

Washington Court of Appeals 19 (KORSMO-judge. Opinion in State v. Kimball, No. 35441-5-III (Wash. Ct. App. Apr. 2, 2019). Google scholar caselaw. Date accessed 7/13/21).

His argument runs counter to the meaning of the word "prohibit." It means "1. To forbid by law. 2. To prevent, preclude, or severely hinder." BLACK'S LAW DICTIONARY 1405 (10th ed. 2014). As "severely hinder" suggests, a "prohibition" need not be an all or nothing proposition.

#### **Anticompetitive practices are strategies that have anticompetitive effects.**

Wells 16, Executive Notes Editor, Washington University Global Studies Law Review, J.D., Washington University in St. Louis. (Todd Wells, “Exploring the Space for Antitrust Law in the Race for Space Exploration,” Washington University Global Studies Law Review, Vol. 15, 2016, LexisNexis)

Antitrust law attempts to fight anti-competitive actions. "Anticompetitive practices refer to a wide range of business practices in which a firm or group of firms may engage in order to restrict inter-firm competition to maintain or increase their relative market position and profits without necessarily providing goods and services at a lower cost or of higher quality." The Organization for Economic Cooperation and Development, Glossary of Statistical Terms, Anticompetitive Practices http://stats.oecd.org.proxy.library.georgetown.edu/glossary/detail.asp?ID=3145. Obviously, with such a broad definition of anticompetitive practices, many types of actions can fall under the regulation of anticompetitive law. This can cover forms of collusion, price fixing, bid rigging, bid suppression, complementary bidding, bid rotation, subcontracting, and market divisions. Price Fixing, Bid Rigging, and Market Allocation Schemes: What They Are and What to Look For, U.S. Dep't of Justice, http://www.justice.gov/atr/ public/guidelines/211578.htm. An even broader approach would put patents under antitrust law. "All of these developments, in Congress and the Courts, are in the spirit of harmonizing patent and antitrust law, generally in the direction of subsuming patent law under antitrust law. From the perspective of providing clarity and certainty for those who are the targets of patent and antitrust suits, harmonization has much appeal." Robin Feldman, Patent and Antitrust: Differing Shades of Meaning,13 Va. J.L. & Tech. 1, 7 (2008).

## CP — Voluntary Compliance

#### Shipping industry profits are massive

Etter & Murry ’22 — Lauren Etter and Brendan Murry; “Shipping Companies Had a $150 Billion Year. Economists Warn They’re Also Stoking Inflation;” <https://www.bloombergquint.com/business/supply-chain-crisis-helped-shipping-companies-reap-150-billion-in-2021>

[TITLE]: Shipping Companies Had a $150 Billion Year. Economists Warn They’re Also Stoking Inflation

(Bloomberg) -- Ocean shipping rates are expected to stay elevated well into 2022, setting up another year of booming profits for global cargo carriers — and leaving smaller companies and their customers from Spain to Sri Lanka paying more for just about everything.

The spot rate for a 40-foot container to the U.S. from Asia topped $20,000 last year, including surcharges and premiums, up from less than $2,000 a few years ago, and was recently hovering near $14,000. What’s more, tight container capacity and port congestion mean that longer-term rates set in contracts between carriers and shippers are running an estimated 200% higher than a year ago, signaling elevated prices for the foreseeable future.

#### Antitrust has to be a backstop — only threat of antitrust can force action — In order to grant leniency there has to be the threat of antitrust.

Stoller 21, Research Director for the American Economic Liberties Project. (Matt, Too Big to Sail: How a Legal Revolution Clogged Our Ports, <https://mattstoller.substack.com/p/too-big-to-sail-how-a-legal-revolution?utm_source=url>)

Finally, we have to restore mid-sized ships and ports. In Portland, Maine, a mid-size port that serves mid-size ships is now thriving, serving both exporters and importers in a reasonably smooth manner. That’s a good model. Public investment in new shipping firms would be useful here. Of course, we can’t undo 20 years of ultra-large container ship construction, but we can end incentives for building more of them by charging harbor maintenance fees based on ship size, or otherwise forcing carriers to internalize the full cost of big ships. This will have to be on a national scale, with the threat of antitrust, so carriers can’t play U.S. ports off one another.

#### Economy stable, but counterplan shatters it with deficit spending that spurs inflation.

Schultz et al. 21 (George, former US Secretary of the Treasury and Secretary of State, “America’s Excessive Government Spending Must Stop,” 23 February 2021, <https://www.project-syndicate.org/commentary/risks-of-excessive-us-government-spending-by-george-p-shultz-et-al-2021-02>, DOA: 9-11-2021) //Snowball //strikethrough of rhetoric

STANFORD – Many in Washington now seem to think that the US federal government can spend a limitless amount of money without any harmful economic consequences. They are wrong. Excessive federal spending is creating grave economic and national-security risks. America’s fiscal recklessness must stop.

The COVID-19 crisis has provided the latest impetus for government spending, even to the point of steering the American mindset toward socialism – a doctrine that has always harmed people’s well-being. But some say there is no need to worry about excessive spending. After all, they argue, record-low interest rates apparently show no sign of increasing. The economy was humming along just fine until the pandemic hit, and will no doubt rebound strongly when it ends. And is there even a whiff of inflation in the air?

This thinking is dangerous~~ly short-sighted~~. The fundamental laws of economics have not been repealed. As one of us (Cogan) demonstrated in his book The High Cost of Good Intentions, profligate government spending invariably has damaging consequences.

High and rising US national debt will eventually crowd out private investment, thereby slowing economic growth and job creation. The Federal Reserve’s continued accommodation of deficit spending will inevitably lead to rising inflation. Financial markets will become more prone to turmoil, increasing the chance of another big economic downturn.

Financial markets’ current relative calm and low consumer-price inflation are no cause for comfort. Previous periods of sharp increases in inflation, rapidly rising interest rates, and financial crises have followed periods of excessive debt like a sudden wind, without warning.

Shultz and Taylor’s book Choose Economic Freedom shows that economic indicators in the United States gave no hint in the late 1960s of the subsequent rapid rise in inflation and interest rates in the early 1970s. Likewise, financial markets during the years immediately preceding the 2007-09 Great Recession provided little indication of the calamity that would ensue.

## CP — Regulations

#### 2---do the cp---regulations expands the scope of core antitrust laws by increasing prohibitions.

Bradford and Chilton 18 (Anu Bradford, Henry L. Moses Professor of Law and International Organization, Columbia Law School. Adam S. Chilton, Assistant Professor of Law and Walter Mander Research Scholar @ the University of Chicago. “Competition Law Around the World from 1889 to 2010: The Competition Law Index” , Columbia Law School Scholarship Archive Faculty Scholarship, <https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=3519&context=faculty_scholarship> , 2018, date accessed 9/5/21)

The Scope Index is the closest to the CLI in that it also measures the law in the books, treating prohibitions as elements that increase the scope (or stringency) of the law and defenses as elements that reduce the scope (or stringency) of the law. Basic categories in the Scope Index and our CLI are also the same, even if somewhat differently labeled. For example, we refer to “anticompetitive agreements” where the Scope Index refers to “restrictive trade practices.”

#### Deterrence deficit---regulations can’t deter anticompetitive conduct.

Dogan 08, \*Stacey L. Dogan, Professor of Law, Northeastern University; \*Mark Lemley, William H. Neukom Professor, Stanford Law School; of counsel, Keker & Van Nest LLP; (October 2008, “Antitrust Law and Regulatory Gaming”, https://scholarship.law.bu.edu/cgi/viewcontent.cgi?article=1873&context=faculty\_scholarship)

Our goal in this paper is not to persuade the reader that these particular examples of regulatory gaming violate the antitrust laws (though we think they do) or that other examples, such as regulatory price squeezes, do not violate the antitrust laws. Rather, our point is that whether or not particular acts of regulatory gaming harm competition is and should be an antitrust question, not merely one that involves interpreting statutes or agency regulations. Regulatory agencies and even Congress cannot prevent gaming ex ante. Experience with the pharmaceutical industry suggests that if Congress acts to squelch one form of gaming, companies will find other ways to game the system. And even if Congress or the regulating body can surgically fix a particular type of exclusionary behavior, such an ex post response (unlike the threat of antitrust treble damages) does nothing to compensate for past harm or to deter future gaming behavior. Some level of antitrust enforcement – with appropriate deference to firm decisions about product design and affirmative regulatory decisions that affect market conditions – provides a necessary check on behavior, such as product hopping, that has no purpose but to exclude competition.

#### Regulation is strictly domestic, antitrust isn’t.

Hovenkamp 03, Ben V. & Dorothy Willie Professor of Law and History, University of Iowa. (Herbert, Fall 2003, “Antitrust as Extraterritorial Regulatory Policy”, 48 Antitrust BULL. 629, pg. 632-633, https://heinonline.org/HOL/P?h=hein.journals/antibull48&i=637)

This change from government agency control to antitrust control is beginning to have one consequence that was not foreseen. While regulatory regimes in the United States could be state, federal, or local, they were for the most part quite strictly territorial. For example, residents of Minneapolis might have their retail electricity regulated intraterritorially by the federal government, the State of Minnesota, or perhaps even the city. But it is unlikely that retail electricity in Minneapolis would be regulated by the State of Illinois or the government of Canada. The antitrust laws do not exercise the same territorial circumspection. Under traditional ideas about regulatory control it would be almost unthinkable that the United States would attempt to apply its law to a Mexican telephone company's rate structure or customer selection policies; under modern conceptions of antitrust law it is not. The global reach of antitrust extends very far. Actions that occur abroad can be condemned under the Sherman Act if they have an intended, substantial and foreseeable effect on United States commerce. 5 Appellate courts have even approved criminal indictments under United States antitrust law for activity that took place entirely abroad.6

#### Expertise deficit---if other agencies are granted authority to regulate, they will underenforce.

Dogan 08, \*Stacey L. Dogan, Professor of Law, Northeastern University; \*Mark Lemley, William H. Neukom Professor, Stanford Law School; of counsel, Keker & Van Nest LLP; (October 2008, “Antitrust Law and Regulatory Gaming”, https://scholarship.law.bu.edu/cgi/viewcontent.cgi?article=1873&context=faculty\_scholarship)

I. The Relative Efficiency of Antitrust and Regulation The growing antitrust deference to regulation is cause for concern. Both antitrust and regulation are economic responses to market failures.46 Implemented correctly, both are designed to serve the ends of economic efficiency.47 It is therefore reasonable to judge the relative efficacy of antitrust and regulation by economic criteria. And judged by those criteria, virtually all economists would agree that antitrust-overseen market competition is superior to industry regulation. In particular, none of the arguments the Court has offered as a reason to prefer regulation to antitrust withstand scrutiny. Relative expertise. It is true, as the Court emphasized in Trinko and Credit Suisse, that antitrust courts are generalist courts, while regulatory agencies tend to specialize in a particular industry and its problems. That specialization should, all other things being equal, mean that expert regulators will do a better job than judges or juries of reaching the right result. But other things are far from being equal. Antitrust courts have two significant advantages over regulatory agencies when it comes to promoting competition. First, antitrust courts are trying to promote economic efficiency, while regulators often aren’t. For decades, efficiency has served as the sole criterion on which to judge antitrust rules. And courts have had over a century in which to hone those rules to achieve that end. Without question, courts have made mistakes in the past. But there is a strong consensus among antitrust scholars that the wave of cases in the last 30 years has largely moved antitrust in the right direction, eliminating any significant risk that antitrust enforcement will do more harm than good.48 Scholars may fight over whether a Chicago School or a post-Chicago School approach will achieve the right result in specific cases,49 but for the most part they are tinkering at the margins: the law and the scholarship have converged with respect to both the proper goals of antitrust and the general rules that will achieve those goals. Regulation, by contrast, is frequently not even intended to achieve economic efficiency through competition. Occasionally that is because of a legislative judgment that competition is impossible, though the number of industries thought to be natural monopolies for which markets won’t work has shrunk dramatically in the past four decades.50 Industry regulation that excludes entry in order to promote a natural monopoly, as telephone regulation did before 1984, is not likely to achieve a competitive outcome. More often, the goals of the legislators who establish regulatory agencies, or the goals of the regulators who run those agencies, are to achieve something other than competition. Indeed, many regulations are aimed precisely at eliminating competition, as was the government- sponsored raisin cartel in Parker v. Brown51 or any of its modern descendent crop-support programs administered by the Department of Agriculture. It should be obvious that regulations intended to reduce competition will not promote it. But even if the regulation is not directly inimical to competition, competition is frequently irrelevant to, or at best a minor consideration in, a regulator’s agenda. Regulators may care about the safety and efficacy of a drug, for example, and only incidentally about whether there is competition in the sale of that drug. They may seek to reduce traffic deaths or air pollution by mandating technology, regardless of the effect that mandate has on the price manufacturers can charge or the number of products they sell. These are laudable goals, to be sure, but they are not competition-related goals. An agency tasked with achieving these goals is likely to ignore threats to competition from the industry it regulates so long as those threats do not compromise its core mission. Thus, the state and local governments that enacted the privately-drafted National Fire Protection Code at issue in Allied Tube into law were interested in stopping fires; doubtless they thought little if at all about the competitive effects of the code, even though it turned out that the code was drafted by interested private parties with the purpose of impeding competition rather than promoting fire safety.52 Even those agencies whose mission expressly involves consideration of competition issues will not necessarily make it their first among potentially conflicting priorities. The SEC, for example, which as Justice Breyer pointed out is dedicated to improving market information and expressly considers competition among other issues in setting regulation,53 is first and foremost an investor-protection and information-disclosure agency, not an agency that investigates and weeds out cartels or other anticompetitive practices. It is unlikely to devote much in the way of time or resources to such issues, because even if it is tasked to consider such issues they do not reflect the agency’s primary purpose. Similarly, even an agency like the Federal Communications Commission that is directly focused on competitive conditions in a particular market may naturally pay attention primarily to that market, and give less if any attention to the effect its rules might have on competition in adjacent markets or competition from unanticipated new businesses. This arguably explains the FCC’s willingness to largely ignore the effects of its decisions on the Internet, for example: it is telecommunications, not the Internet, that the FCC is tasked to regulate. Agencies that view competition as secondary, or view it through the lens of a particular industry’s characteristics and interests, are less likely to create and enforce rules that optimally encourage competition.54 At a bare minimum, therefore, the industry-specific expertise of an agency must be balanced against the competition-specific expertise of the specialist antitrust agencies: the Federal Trade Commission (FTC) and the Department of Justice Antitrust Division.

## K — Cap

#### Rejecting megaships rejects expansionist capitalism

Chua 18, Phd Dissertation in Political Science University of Minnesota. (Charmaine, Containing the Ship of State: Managing Mobility in an Age of Logistics, <https://conservancy.umn.edu/bitstream/handle/11299/200214/Chua_umn_0130E_19452.pdf?sequence=1&isAllowed=y>}

Beyond the anecdotal, a glut of private equity investments have been flowing into shipping in recent years, as asset valuations have hit rock bottom and private equity investors are looking to capitalize on downturn periods. This has potentially devastating consequences, since these companies in particular are under pressure to generate faster turnovers, and look to pull out of investments in 3-5 rather than 20-year horizons. Much like the mortgage crisis, shipping is being financed under terms that are far too easy. As one Maersk employee remarked to me in an interview, ships are being built ‘more and more, bigger and bigger everywhere, often for reasons that are not economic.” This statement underscores some of the irrational rationalities that underpin these modes of speculation and uncertainty. We might thus understand monstrous ships and associated infrastructural mega-projects not as infrastructure - the underneath, unnoticed elements of technical operations - but as monstrous structures: projections of modernity within a state-capital nexus that seek to simultaneously construct a global space for logistical circulation as they place their hopes in the continuity of capitalist accumulation. The bankruptcy and collapse of Hanjin Shipping in August 2016 is one indication that the gigantism of these logistics complexes are indicative of some of capital’s irrational rationalities. The language of monsters captures the tension in which decisions that appear at the outset to be rational, ordered and calculative run up against chance, fortune and mystery. As David McNally notes in his book on the centrality of the monstrous as a strategic-theoretical metaphor for global capitalism, “the idea that something monstrous is at work in the operations of global capitalism is never far from the surface today” (McNally 2010, 9). The etymology of the monster derives from the Latin monere (to warn). Amongst other things, McNally argues, “monsters are warnings - not only of what may happen but also of what is already happening” (ibid). Gordon and Gordon similarly note that fear and uncertainty accompany monster metaphors because they are often employed in the face of disaster. Monsters “are harbingers of things we do not want to face, of catastrophes” (McNally 2009, 10). Following these theorists, we might understand the megaship as a monster that expresses both fascination with the grandiose, and fear in the speculative future that is to come. The simultaneous allure and fear of monster capital becomes evident in even a cursory survey of the shipping industry’s reaction to megaships. Shipping professionals who exhibit a fascination with perpetual expansions of megaship scales express a contemporary social imaginary in which monstrous ships simultaneously strike a mixture of fear and fascination between that which is knowable, and that which is not, or as McNally puts it, “the role of human creation in the process of economics in particular and science more generally, and the anxiety induced by the impossibility of exorcising the unknown - economic or otherwise” (ibid.). Marx himself intuited this gothic character of capitalism through the use of the monstrous as a metaphor. In the Grundrisse, Marx explains: “capital posits the permanence of value (to a certain degree) by incarnating itself in fleeting commodities and taking on their form, but at the same time changing them just as constantly; alternates between its eternal form in money and its passing form in commodities; … But capital obtains this ability only by constantly sucking in living labor as its soul, vampire-like” (1973, 646). As Jack Halberstam notes, Marx here describes the economic system in which we live, capitalism, as gothic “in its ability to transfer matter into commodity, commodity into value and value into capitalism” (Halberstam 2013, 103). In situating growth of global logistics infrastructure within an analysis of monstrosity, I am working in part against a tendency in literatures on infrastructure to neglect a broader analysis of the crisis tendencies that arise when infrastructures are built in service of facilitating global flows of capital. Contemporary discussions of infrastructure often focus on the fragility and failure of large-scale physical fixtures (Graham 2009; Chu 2014) In these treatments, infrastructures are the assumed background to everyday life that is “often hidden, assumed, even naturalized” (Graham 2009, 2): they are the mechanical facilities and organizational structures that maintain and undergird the social life of cities - ensuring that waste is processed, water is potable, and that households have steady supplies of electricity and energy. As various literatures in sociology, geography and anthropology suggest, these otherwise mundane systems only become visible or eventful when they cannot cope with population pressure or budgetary crises, and experience systemic breakdown or disaster (see for e.g. Graham 2009; Star 1999; Edwards 2003). In these instances, infrastructures become spectacles of state failure, evidence of the inability of federal and municipal governments to equitably distribute the basic technical apparatuses for collective life (Latour 1999; Larkin 2008 & 2013; Star 1999). Yet, these shortcomings do not only result from the failures of national fiscal regimes or localized governments. As Timothy Mitchell argues, “they also reflect a contemporary world in which financial infrastructures allow the accumulation of capital to bypass the work of building durable or productive structures for collective life” (Mitchell 2014, 437). As capital has been drawn into large infrastructures, it flows into projects that weaken rather than enhance the possibilities for future collective life: into pipelines for oil exports, skyscraper condominiums, privatized airports, and fracking fields. In addition, these fixed, immobile, and large-scale infrastructures, increasingly massive in size as they seek to service larger volumes of containers coming into the port, extend the fixed infrastructure of distribution - and the associated pollution, noise, and spatial expansion entailed in their construction - unevenly across the city, effectively shifting the costs, and socializing the risks onto society (Li 2009).

#### Capitalism is sustainable---dematerialization and decarbonization

Adler 22, is the Johan Verheij Memorial Professor of Law and the founding Director of the Coleman P. Burke Center for Environmental Law at the Case Western Reserve University School of Law, where he teaches courses in environmental, administrative and constitutional law. (Jonathan, 01-12-2022, “Markets and Dematerialization,” Human Progress, https://www.humanprogress.org/markets-and-dematerialization/)

Dematerialization may be the most important, yet unsung, example of environmental progress in the 21st century. It is commonplace to observe that the relentless drive to do more with less has led to more efficient resource use, so that a soda can today is made with a fraction of the metal required 50 years ago. But dematerialization is not merely a story about increased efficiency or per‐​capita reductions. What is now being observed represents a fundamental decoupling of resource consumption from economic growth, such that as mature economies grow, they not only use fewer resources per unit of output, but they also consume fewer resources overall. In short, economic growth in the most developed nations increasingly coincides with a net reduction in resource consumption. The United States in particular is “post‐​peak in its exploitation of the earth,” according to Andrew McAfee in More from Less: The Surprising Story of How We Learned to Prosper Using Fewer Resources — and What Happens Next. McAfee, a principal research scientist at MIT, explains, “We’re now generally using less of most resources year after year, even as our economy and population grow.” The United States uses less gold, steel, aluminum, copper, stone, cement, and even paper than it did at the start of this century, despite the continued increase in gross domestic product. Annual consumption of all but six of the 72 resources tracked by the U.S. Geological Service are “post peak.” We also use less fertilizer and water while growing more crops. Plastic consumption is up, as is energy use, but these two appear to have been decoupled from population and economic growth as well. How does this dematerialization occur? Some examples may be useful. The dematerialization of soda cans is relatively easy to grasp, particularly for those of us who can remember the heavier cans of the 20th century. Aluminum cans weighed 85 grams when introduced in the 1950s. By 2011, the average can was under 13 grams. Cans today are not only thinner and lighter, they are produced more efficiently, with fewer separate sheets of metal. Substitution can be an even more powerful source of dematerialization. Consider telecommunications. A single fiber optic cable made from less than 150 pounds of silica can carry the same volume of information as multiple 1‑ton copper cables. And were that not enough, satellite and wireless technologies enable us to bypass the use of physical cables altogether. We can communicate more and yet use vastly less material to do so. This not only saves copper, but other resources too. Think of all the paper saved by e‑mail, e‑banking, and e‑readers. Markets or Malthus? It was not expected to work out this way. Throughout the modern era, doomsayers have predicted the imminent depletion of one resource or another. Human impact on the natural environment was to increase inexorably with the rise of wealth, technology, and population, inevitably colliding with the earth’s natural carrying capacity. It seemed “logical and inevitable” that “the planet’s finite stock of these resources would someday be exhausted.” Yet, this is not what happened. Instead, “capitalism and tech progress are now allowing us to tread more lightly on the earth instead of stripping it bare.” The Malthusian “limits to growth” have not merely been delayed or forestalled; they have been transcended. This was neither planned, nor anticipated, nor is it the product of the ecological agenda advanced by the modern environmental movement. Since the first Earth Day in 1970, environmental advocates have called for constraints on consumption, limits on technology, and greater recycling. None of those impulses, in McAfee’s view, did much to encourage dematerialization. Indeed, he suggests, pushing for recycling may have cut the other way, insofar as recycling dulled the price signals that incentivized producers to do more with less. The environmental policies born of the 1970s may have “worked amazingly well” to reduce pollution and related environmental harms, but they played just a bit part in the story of dematerialization. We do more with less not because of government regulation or administrative direction, but because of capitalism and technology. These are the dominant forces driving dematerialization in the most developed countries and they could unleash similar gains in the rest of the world. We “want more all the time, but not more resources,” McAfee notes. We want more of what resources can provide, and one way to get more is to do more with less. Market capitalism both facilitates and enhances the underlying incentives that drive efficiency gains and technological advance. This not only leads to dematerialization but also promotes “critical aspects of well‐​being,” including health and prosperity. What’s left to be done While celebrating dematerialization and dramatic improvements in many measures of human well‐​being, McAfee acknowledges there is more to be done. He devotes the latter part of the book to considering the challenges that remain. Dematerialization has occurred in the wealthiest nations, but it has yet to reach much of the world. Some types of pollution are declining, but others — including plastic waste and greenhouse gases — are not. He also worries about the potential effects of economic concentration and “disconnection among people and declines in social capital.” Not everything wrought by capitalism and technological advance has been positive, even if the net result is a good one. McAfee is an optimist, but he sees serious storm clouds on the horizon. He is particularly concerned about the atmospheric increase in greenhouse gases and writes that reducing “the carbon intensity of our economic activities” is “the most important task for responsive governments.” He is right to be concerned about climate change, but his discussion of the policy options is somewhat thin and disconnected from the central thrust of his book. Market‐​driven capitalism and accompanying technological advances drove dematerialization and could drive decarbonization as well, particularly if carbon emissions are priced. The proper suite of policies could facilitate a decarbonization in energy to rival the dematerialization we observed in telecommunications. Yet, the nature of any government interventions matters. Ill‐​conceived policies could blunt the market incentives that drive more efficient resource use. McAfee gives such questions relatively little attention, however. He also is too quick to credit regulatory interventions for prior environmental gains, such as the reductions in air and water pollution over the past half‐​century. Those trends often began before the regulatory measures he celebrates, and some regulatory measures may well have caused more harm than good. McAfee did not set out to write a wonky treatise on environmental policy, and More from Less is not one. The book tells the story of capitalism’s triumph over material scarcity with clarity and insight. He ably explains how modern society has achieved material ecological sustainability, and market capitalism was the cause. At a time when capitalism is viewed with suspicion, More from Less rises to its defense. Global challenges remain, but More from Less suggests solving such challenges will require more capitalism, not less.

## DA — SCOTUS Nomination

#### No legitimacy crisis—Support for the court is moderate

Schmidt 2/22/22, professor at the Chicago-Kent College of Law. (Charles, Interviewed by Graham Vyse assoc Editor of Signal, ‘Zero Legitimacy’, <https://www.thesgnl.com/2022/02/us-supreme-court-legitimacy-christopher-schmidt/>

A growing number of Americans disapprove of the U.S. Supreme Court, which is returning to the center of their national politics this year as President Joe Biden chooses a nominee to fill retiring liberal Justice Stephen Breyer’s seat and the Court’s 6-3 conservative majority is poised to overturn the landmark abortion-rights decision Roe v. Wade. Earlier this month, the Pew Research Center reported that Americans’ view of the Supreme Court is “as negative as it has been in many years.” (The Pew survey, conducted before Breyer announced his retirement, found that 54 percent of U.S. adults still had a favorable view of the Court, but a Gallup poll last September showed just 40 percent—a low point since 2000.) The Court is facing perceptions of partisanship, with even a member of the Court, the liberal Justice Sonia Sotomayor, herself recently asking whether the institution would survive “the public perception that the Constitution and its reading are just political acts.” All of this has led to a growing public debate in America about the Court’s legitimacy—even talk of a “legitimacy crisis.” Is there one? Christopher W. Schmidt is a professor at the Chicago-Kent College of Law, a co-director of the school’s Institute on the Supreme Court of the United States, and the author of an upcoming book about the Court’s relationship with the American public over the last century. As Schmidt sees it, the institution isn’t anywhere near a real legitimacy crisis, because he sees a real legitimacy crisis as meaning mass defiance of the Court’s rulings. While overturning Roe would be controversial and consequential, Schmidt says, he won’t expect it to change the American public’s fundamental sense of the Court’s legitimacy—though the impact of such a ruling might be magnified by big victories for conservative opinion in upcoming cases on affirmative action, guns, and voting rights. At the same time, he says, the Court has become a more prominent political issue in U.S. elections than it was a decade ago—or than it’s been through most of U.S. history. This shift might make the Court more divisive, Schmidt says, but it will also help prevent it from seeming irrelevant to people’s lives. Graham Vyse: To start with, what does it mean for the Court to have legitimacy in America? Christopher W. Schmidt: The default meaning of legitimacy, as people tend to use the word in the media and most popular discussions—particularly with these concerns about a crisis—has to do with public opinion: Do people approve of or have faith in the Supreme Court? The Court has typically had an approval rating of 50 or 60 percent during the past two decades. You may have seen a lot of references to polling last fall, showing Court’s approval rating as being historically low—down to about 40 percent in some polling—if still nowhere near as bad as approval ratings for Congress. There are also legal and moral definitions of legitimacy. A lot of people on the political left are attacking the Court in strong terms right now, saying it’s acting in an illegitimate way. They’re not just saying it’s hurt its opinion polling; they’re saying it’s doing things wrong—abandoning legal precedent, using inappropriate legal interpretation, being too influenced by partisanship. Vyse: Do you think the Court is facing a legitimacy crisis? Schmidt: No—and I realize that’s a little against the grain. A lot of people in America think the Court is either in a legitimacy crisis or on the cusp of one. There’s some ideological division on that question. Liberals are more likely to say it’s facing a legitimacy crisis than conservatives are. Library of Congress Part of my thinking is, I’m not sure what public opinion of the Court ought to be. There’s an assumption that really high public-opinion polling is good for the Court as an institution. I’m not sure. If the Court wanted to increase its approval ratings, it could issue some patriotic rulings here and there, try to split differences, and not be in the public consciousness as much. But we don’t want a U.S. Supreme Court that would do what’s needed to have an 80 percent approval rating. We want a one that can intervene on certain issues in ways that may be very unpopular at the time.

#### That emboldens the conservative majority to be more aggressive—moderate or low cred constrains them

Gibson & Nelson 14 James L. Gibson¶ Sidney W. Souers Professor of Government¶ Department of Political Science¶ Professor of African and African American Studies¶ Washington University Michael J. Nelson¶ Ph.D. Candidate, Department of Political Science¶ Graduate Student Associate, Center for Empirical Research in the Law¶ Washington University in St. Louis¶, Can the U.S. supreme court have too much legitimacy? In Making Law and Courts Research Relevant: The Normative Implications of Empirical Research (pp. 169-179). Taylor and Francis.

Legitimacy is, in Eastons (1965, 273) original formulation, a “reservoir of favorable attitudes or goodwill that helps members to accept or tolerate outputs to which they are opposed or the effects of which they see as damaging to their wants.” prudishly, scholars assume that legitimacy is a good thing; legitimacy enables courts to survive the issuance of unpopular rulings and to secure implementation of their decisions by other branches of government. On the other hand, courts with low stores of legitimacy faced an uphill struggle. If they are not viewed by other political actors and by the public as having the power to issue rulings that must be followed, the judgments of courts are impotent. We suggest, like the Portage in the cottage of the three bears, neither extreme is preferable. Too little legitimacy causes courts to run ”too cold” While too much legitimacy inspires courts to make rulings that are “too hot.” Ideally, courts should have a moderate to high level of legitimacy that enables them to make rulings without fear of reprisal while also keeping them humble. In Goldilocks famous phrase courts should seek a level of legitimacy that is just right.” Scholars have investigated how having too little legitimacy or a shortfall of legitimacy can affect the behavior of judges. The most recent (and perhaps best) example is Clarks (2009, 2011) analysis of EU S Supreme Court, which indicates that the court becomes increasingly unwilling to use its power of judicial review during periods in which it perceives its legitimacy to be low (see also Helmke 2002; Vanberg 2005). In other words, the scholarly record indicates that courts, believing they have low levels of institutional legitimacy, become stymied by fear and issue non controversial rulings and opinions that do not aggrieved the elected branches of government. In the language of Goldilocks, courts become “too cold.” “Cold” courts are normatively undesirable. As institutions, constitutional courts are valuable, in large part, because their power to interpret the constitution and accompanying power of judicial review enables them to reign in the elected branches of government when they make policies that lay outside the boundaries of power prescribed to them by the constitution. If a lack of legitimacy prevents courts from “checking” and “balancing” the other institutions of government, courts are unable to fulfill their role as a coequal branch of government. In short, a lack of legitimacy makes courts 2 accountable to the public because it causes them to lack the ability to achieve implementation of countermajoritarian decisions. But what if having too much legitimacy? The question of too much legitimacy is ultimately a question of too much independence. Our traditional understanding of judicial independence is based, in large part, on the ability of a court to decide cases both without fear of reprisal from external actors and with the knowledge that its decisions will be implemented by those actors even if they disagree with the legal policies set forth by the court. As Rios-Figueroa and Staton (2014, 107) write, “[j]udicial Independence requires not only that judges resolve cases in ways that reflect their sincere preferences but also that these decisions are enforced in practice even when political actors would rather not comply.” The Supreme Court itself has acknowledged the close relationship between these two concepts: justices O'Connor, Souder, and Kennedy, in their joint opinion in Planned Parenthood versus Casey (1992) write, The court's power lies…. in its legitimacy, a product of substance and perception that shows itself in the people's acceptance of the judiciary as fit to determine what the nation's law means, and to declare what it demands.. the court must take care to speak and act in ways that allow people to accept its decisions on the terms the court claims for them, as grounded truly in principle, not as compromises with social and political pressures having, as such, no bearing on the principle choices that the court is obliged to make. Thus, the court's legitimacy depends on making legally principled decisions under circumstances in which their principled character is sufficiently plausible to be accepted by the nation. (865-866) In short, legitimacy and judicial independence are inextricably linked. Just as too little legitimacy encourages greater judicial timidity, too much legitimacy can encourage less judicial deference because justices may believe that their enhanced institutional support provides them the political currency to increase the number of countermajoritarian decisions they make. In the case of the U. S. Supreme Court, therefore, greater judicial legitimacy can aggravate the so-called countermajoritarian dilemma by heightening the court's level of judicial independence and assertiveness. Like their counterparts on the opposite side of the spectrum, “hot courts” are also normatively undesirable. Indeed, the countermajoritarian dilemma is exacerbated when judges believe their constituents will accept virtually any decision their court makes; This might happen when judges believe their court has an extensive store of institutional legitimacy. Legitimacy is a form of political capital, with more political capital judges are more likely to believe that they can make their decisions, even their unpopular decisions, stick. Judges no doubt differ in their perceptions of their courts institutional legitimacy, just as they no doubt differ in their concern for the consequences of their decisions. But anything that increases the political capital of courts is likely to embolden judges to make decisions and write opinions that challenge the views of the majority. In short, too much legitimacy can lead courts to issue rulings that are “too hot.” If t0o little legitimacy leads chords to make rulings that are “too cold” and too much legitimacy emboldens them to issue rulings that are “too hot,” one of the court with “just right” levels of legitimacy? courts with this level of legitimacy have enough judicial independence to check and balance the executive and legislative branches of government under most circumstances, but they lack the sky high levels of judicial independence that enable them to make long strings of unpopular, countermajoritarian decisions without experiencing any negative consequences of those decisions. A “just right” court is also the most normatively desirable court because it balances judicial independence with some level of judicial accountability. Courts with this level of legitimacy are able to make decisions without fear of massive institutional reprisal, yet they are unable to ignore popular sentiment for long periods of time without facing negative consequences. In short, a “just right” level of legitimacy ensures that the court can play its proper role in the democratic political system while ensuring that it cannot expand its role into one that overshadows the proper role played by the other branches of government.

#### They’re constrained now

Bender & Segev 21, Frank Church Professor of Legal Research, Faculty of Law, BarIlan University, and Associate Professor, School of Law, Netanya Academic College. (Ariel & Joshua, CLE: THE ROBERTS COURT, STATE COURTS, AND STATE CONSTITUTIONS: JUDICIAL ROLE SHOPPING, 30 J.L. & Pol'y 1)

In this Article we reveal a dual dilemma, both material and institutional, that the Supreme Court in its current composition faces when reviewing liberal state court decisions based on the state constitution. The Article further describes substantive and procedural tactics that the Court adopts to address this dilemma, and illustrates the arguments by analyzing a number of recent Supreme Court decisions. The two dilemmas, the combination of which serve as a "power multiplier," of sorts, have arisen following the last three appointments to the Supreme Court, which resulted in a solid majority of conservative Justices nominated by Republican presidents. One dilemma, material in nature, that the Roberts Court faces, is between the federalist component of the conservative legal worldview, that requires federal courts to defer to state courts' rulings based on state constitutions, and its non-liberal component, based on conservative values. The second dilemma, institutional in nature, stems from the Roberts Court's legitimacy deficit among substantial sections of the American public, mainly supporters of the Democratic Party, which has increased as a result of the three recent appointments. The legitimacy deficit may make it difficult for conservative Justices to fully implement their judicial philosophy. We further argue that the emerging ambivalence of the Roberts Court, which is a consequence of the combination of these two dilemmas, is manifested, in addition to general avoidance doctrines and the specific state ground doctrine, also in two types of judicial tactics, substantive (such as seeking judicial compromise in order to reach a broad common denominator among the Justices) and procedural (such as encouraging other branches to carry out their obligations until the dispute is reasonably resolved), that the Court adopts in coping with liberal state court decisions based on the state constitution. In the last Part of the Article we illustrate our contentions by analyzing three recent Supreme Court decisions: Masterpiece Cakeshop, Ltd. v. Colorado Civil Rights Commission (2018), Espinoza v. Montana Department of Revenue (2020) following Trinity Lutheran Church of Columbia, Inc. v. Comer (2017), and Republican Party of Pennsylvania v. Boockvar (2020).

#### Future conservative court rulings will collapse democracy

Levitz 12/27/21, Associate Editor of Daily Intelligencer. (Eric, Why Is John Roberts So Popular Among Democrats?, https://nymag.com/intelligencer/2021/12/john-roberts-boasts-majority-approval-among-democrats.html)

Which is somewhat alarming. According to one recent analysis, conservatives are now likely to retain a majority on the Supreme Court into the 2050s. If the Court’s right-wing majority finds that it can continually push the boundaries of conservative judicial activism without undermining its own popular legitimacy, then the consequences for progressivism and popular democracy could be dire.

#### Their impact isn’t generic institutional legitimacy — it’s about content of conservative court rulings crushing democracy. It’s Trumpian populism, not loss of court cred that mattersv [KU HW reads blue]

Edward A. 1NC Kolodziej 21, Emeritus Research Professor of Political Science and Founder and Director of the Center for Global Studies, University of Illinois Urbana-Champaign, USA, “8. A modest way forward,” Global Governance: Evaluating the Liberal Democratic, Chinese, and Russian Solutions, Taylor & Francis, 11/29/2021

A final word refers to what the democracies can do collectively to defend themselves and to expand the promise of democratic rule. The overriding aim is for liberal democratic regimes to live up to their promise. The lure of illiberal, illegitimate rule must be contained and averted. Chapter 3 briefly outlines what has to be done. Specifically, Trumpian populism must be confronted and defeated if the United States is to regain its role as leader of the liberal democratic coalition.

#### Lower legitimacy constrains shadow docket use

Bedell 12/23/21, MA Student University of Chicago, (Mike, Public Perception May Curb Supreme Court’s Shadow Docket, https://chicagopolicyreview.org/2021/12/23/public-perception-may-curb-supreme-courts-shadow-docket/)

The term “shadow docket” refers to the Supreme Court’s non-merits docket and consists of the many emergency orders and summary decisions that the court must issue as part of its routine judicial duties. The merits docket, by contrast, is what is typically used when the court hands down its most important decisions. In contrast to the merits docket, shadow docket rulings are made without full briefing or oral arguments and often do not include any supporting reasoning. Additionally, they provide no indication of how the Justices vote. The shadow docket is often used to deny certiorari (a petition for the court to hear a case) or in cases where the court must act quickly to prevent an imminent harm, such as emergency appeals in death penalty cases. But recently, the shadow docket has been used more frequently in controversial cases that impact the rights of large numbers of people, and it appears that the court is using it in an inconsistent, and arguably partisan, way. For example, although the court refused to intervene to block the Texas abortion ban, it has been all too willing to step in to protect religious liberties by blocking New York’s occupancy-based restrictions on religious services during the COVID-19 pandemic and to limit the reach of executive power by striking down the CDC’s ban on residential evictions during the . In other words, the court’s shadow docket rulings, and how the court utilizes the shadow docket, appear to favor Republican policies over Democratic ones. This raises serious questions about the public’s perception of the Supreme Court and the transparency of its decision-making. As part of an independent judiciary, the Supreme Court is supposed to be guided and constrained by the rule of law, not the principles of any political party or the personal or political beliefs of the Justices. When it is not, the public’s faith in the independence of the court and its decisions suffers. The Supreme Court is constrained in salient cases In response to these concerns, the Senate Judiciary Committee recently held a hearing in which University of Texas law professor Stephen Vladeck, an expert on the federal courts, laid out a series of reforms to the shadow docket that Congress could implement. However, a recent study by Logan Strother suggests that the court is sometimes responsive to external constraints without formal restrictions. The article identifies a disagreement among scholars about the extent to which external factors constrain the Supreme Court. These external factors include, for example, the public’s perception of the court’s legitimacy, the court’s fear of sanctions such as impeachment or court packing, and its concern that its decisions will not be implemented by those who disagree with the decisions and are charged with enforcing them. One previous study concluded that the Supreme Court is constrained in salient cases (as measured by mentions of decisions in media sources after the decisions are announced by the court), especially in “lateral” decisions (those that must be implemented by non-court actors), because the court fears non-implementation by such actors (Strother 2019, 130). But another study found that the court is constrained in non-salient cases, because it doesn’t want to damage its institutional legitimacy, and that it reserves counter-majoritarian decisions for particularly important cases (Strother 2019, 130-31). It’s possible that the court may curb its use of the shadow docket in significant cases To resolve this conflict, Strother replicates these studies using a pre-decision measure of salience, which accounts for media mentions of cases prior to the Supreme Court’s decisions in those cases, rather than a post-decision measure. This allows him to test the effect of the salience of cases as they come before the court. He finds that public opinion constrains the Supreme Court in salient cases, especially in salient lateral cases, but not in non-salient cases. Of course, Strother’s study concerns external constraint on the Supreme Court’s decisions on its merits docket, not its use of its non-merits docket. But could the court be similarly constrained in its use of the shadow docket? After all, the term “shadow docket” has appeared in at least twenty pieces in the New York Times, Washington Post, Chicago Tribune, and Wall Street Journal between September 1, 2021, the date of the court’s decision in Whole Woman’s Health, and October 16, 2021. In contrast, it appeared in fewer than 15 pieces in these newspapers in the eight months prior to that, and fewer even than that during all of 2020. This increasing media attention surrounding the matter reflects greater public awareness of, and likely heightened concern over, the shifting use of the shadow docket by the Supreme Court. As a consequence, if Strother’s findings can be extended to Supreme Court procedure, it’s possible that the court may curb its use of the shadow docket in significant cases, or at least use it in a more consistent way, out of fear of erosion of public perception of its legitimacy and the transparency of its decision-making.

#### Shadow docket kills democracy [KU HW reads blue]

Michael 1NC McAuliffe 12/28, adjunct professor at William & Mary’s Law School and a senior lecturing fellow at Duke University’s School of Law, former federal prosecutor serving both as a civil rights prosecutor at the Department of Justice and as a supervisory assistant U.S. attorney in the Southern District of Florida, served as the elected state attorney for Palm Beach County, Florida, “Our courts are at risk of losing their legitimacy,” Tampa Bay Times, 12/28/2021, https://www.tampabay.com/opinion/2021/12/28/our-courts-are-at-risk-of-losing-their-legitimacy-column/

As the year closes, American leaders wrestle each other in unrelenting contests for power submerged in ideology, demagoguery and self-interest. No one side can win in any lasting sense in a republic, but that doesn’t stop the combatants from fighting to the death –– aiming for the demise of ideas and at times, it seems, of actual people. Our era in America is as histrionic as any Marvel film, but no guarantee exists that good eventually prevails.

In a rule of law nation, issues –– minor or major –– that arise from these battles often end up in the courts for ultimate resolution. The courts can play a critical stabilizing role as the country moves in fits and starts along the timeline of history. Courts replace violence. That function, however, depends on the court’s credibility as a true referee and arbiter, not an ordinary soldier on the field.

This year has been a study in contrasts for the courts — much to be confident in, but too many judicial acts beneath their legal veneers appear to be political in nature. First, what was inspiring.

The trial judges in the criminal cases involving the deaths of Daunte Wright, Ahmaud Arbery, and George Floyd –– all receiving intense national coverage and scrutiny –– provided examples of calm judicial guidance throughout the proceedings. These judges acted with professional diligence so that all parties had a fair hearing in what were highly charged matters. The resulting verdicts should be viewed as credible, regardless of whether they are considered correct by all.

The exception in the criminal trial courts might be the Kyle Rittenhouse trial in Wisconsin. In that case, the presiding judge repeatedly and publicly ruminated about the media coverage of his rulings and behavior. The judge, while very experienced, seemed notably unaware that he was himself being judged by a nation that needed the focus to remain on the the sensitive issues being decided by the jury.

On the civil side, trial courts overwhelmingly responded with transparency and timeliness to the onslaught of lawsuits filed contesting the presidential election. Over 60 suits in state and federal courts requested relief ranging from rejecting particular ballots to declaring losers to be winners based on specious claims of fraud. Importantly, one can make the statement that there was no widespread election fraud with extra confidence because of the actions of trial court judges who, on the record, allowed the parties to present evidence they had (or didn’t have) based on objective law and rendered their decisions in public.

Unfortunately, the most troubling portrait of the judiciary over the past year comes from the U.S. Supreme Court, our highest court. During oral argument in the challenge to the Mississippi law outlawing abortions after fifteen weeks, the justices appeared to engage in a culture war in microcosm. A lay observer could well think the legal issues were a mere proxy by which the justices served up what was expected of them by their constituencies, whether that might be senators who conferred the position, a president who made the nomination, an advocacy group, or some other source of support. The debate didn’t appear to be about deference for long-standing precedent articulating a constitutional right. Further, the court’s energetic use of the “shadow docket” (which does not employ the usual process of filings, advocacy, and opinions) in cases including the litigation over the Texas statute that arms private litigants with the ability to punish abortion providers and those seeking abortions undermines any eventual decision the court issues.

Courts are at ongoing risk of devolving into factionalized forums that serve the loudest advocates with the most resources, or the judge’s own personal views. The current political and cultural fights are testing the justice system’s role as the best and most legitimate forum for resolving disputes (aside from free and fair elections). The courts first must provide due process to all parties who enter the halls of justice while not allowing abuses of the system to stall progress or preclude finality (election results). All else flows from that fundamental principle.

The upcoming year may answer the question whether we are a democracy in terminal decline. The courts will play a decisive role in that determination.

## DA — Business Confidence

#### Ukraine reverses recovery – uncertainty has spiked

Bhattarai 2/25

Abha Bhattarai, Tony Romm and Rachel Siegel, Washington Post, “U.S. economy appeared ready to surge, but Russia’s invasion of Ukraine could send shockwaves, “https://www.washingtonpost.com/business/2022/02/25/economy-us-russia-ukraine-gas/

A few weeks ago, the coronavirus’s fading omicron variant, falling gas prices, and a newly buoyant stock market set the table for what many felt could be a surging U.S. economy in 2022. But those rosy scenarios are suddenly in doubt, as rampant geopolitical uncertainty has helped drive up energy prices and send global markets on a roller-coaster ride. These changes could give many consumers and businesses pause and put more pressure on Washington leaders to respond, even though it is unclear how exactly they will intervene.

#### Confidence is at a historic low – Inflation and Worker Shortages

Reuters 2/8

“U.S. small business sentiment drops to 11-month low -NFIB” February 8, 2022 https://www.reuters.com/business/us-small-business-sentiment-drops-11-month-low-nfib-2022-02-08/

WASHINGTON, Feb 8 (Reuters) - U.S. small business confidence fell to an 11-month low in January amid persistent worker shortages and higher prices for materials, a survey showed on Tuesday. The National Federation of Independent Business said its Small Business Optimism Index dropped 1.8 points to 97.1 last month, the lowest reading since February 2021. Scarce workers and rising labor costs remain the main areas of worry for businesses. Snarled supply chains as the global economy rebounds from the COVID-19 pandemic, fueled by massive stimulus from governments, have unleashed inflation. The pandemic, now in its third year, has also disrupted labor supply, making it difficult for goods to move from factories to consumers. There were a near record 10.9 million job openings at the end of December. The NFIB survey showed half of the 1,504 small businesses who participated in the poll reporting raising compensation. That was the highest reading in 48 years and was up 2 points from December. That corroborates to a surge in measures of wage growth tracked by the government. About 27% of small businesses said they planned to increase compensation in the next three months, down 5 points from December, but still historically high. Eleven percent said labor costs were their top business problem, down 2 points from December's 48-year record high reading. About 23% complained about labor quality. Faced with rising labor costs, the share of small businesses raising average selling prices jumped 4 points to 61%, the highest reading since the fourth quarter of 1974. Price hikes were most frequent in wholesale, manufacturing, retail and construction industries.

## DA — Protectionism

#### The turn outweighs the link—Shipping costs have more impact on trade than protectionism does

Bockrath 15, PhD Economist at Bureau of Economic Analysis and Instructor in Economics at University of Deleware. (John, Alliances and Concentration: The Economic Consequences of Market Structure in the Liner Shipping Industry, https://lerner.udel.edu/wp-content/uploads/2016/06/bockrath-preliminary-job-market-paper.pdf

Empirically, an immense amount of evidence demonstrates that trade costs are a significant determinant in the level of trade, especially for poorer nations (Lim˜ao and Venables 2001). With the notable exception of Hummels (1999), there are very few attempts to directly estimate transportation costs primarily because of data issues. Most empirical research instead estimates overall trade costs, which are an aggregation of all potential costs, including transportation costs, geographic barriers, and political barriers (Disdier and Head 2008; Anderson 2011). Most of this research into trade costs has been focused on political issues, such as free-trade-agreements or tariffs (Baier and Bergstrand 2007). However, there is considerable evidence that transportation costs are now the largest component of trade costs, eclipsing tariffs and other “traditional” trade barriers (Hummels 2001; Fink, Mattoo, and Neagu 2002; Hummels 2007). For example, Hummels (2007) found that in 2004 the median individual exporter to the U.S. paid $9 in transportation costs for every $1 they paid in tariffs. As tariffs and other traditional barriers have slowly decreased transportation issues become increasingly important to the international trading system. In short, while the extant literature has not directly engaged with liner shipping issues, current literature supports the concept that transportation issues can have substantial economic effects. The market structure of their industry will naturally influence the choices transportation firms make, which in turn will have important impacts on the entire global trading system. Thus, market structure in the liner shipping industry almost certainly has significant impacts on the global economy and should be a matter of concern for the broader economics literature.

#### Trade doesn’t solve war.

White 13, Emeritus Professor of Strategic Studies at the Strategic and Defence Studies Centre of the Australian National University. (Hugh, “China: Power and Ambition,” *The China Choice: Why We Should Share Power*, pg. 51-53, Oxford University Press)

Certainly, the more countries trade and invest with one another, the greater the economic cost of conflict and the stronger the incentive to keep the peace. America and China today are more interdependent economically than any two comparably powerful states have ever been before, and this will certainly restrain ambition and rivalry on both sides. The question is whether the restraints will prove stronger than the pressures going the other way. If interdependence does trump strategic and political ambition, we should be seeing it happening between the United States and China now – but we have not seen much evidence of that yet. So far the two countries seem to be acting very much as strong states in the past have acted as relative power shifts from one to the other. Pessimists like John Mearsheimer and Niall Ferguson remind us that before war broke out in 1914, the great powers of Europe had grown more economically interdependent than they had ever been before, and than they would be again for almost a century.12

The lesson to draw is that interdependence increases the incentive for leaders to subordinate political ambitions and ignore nationalist sentiments, but it does not remove the need for them to take these bold and [politically] politicaly risky steps. The hard choices still have to be made. It is easy for leaders to see that economic interests require them to compromise their countries’ aspirations for international status and power, but it is harder for them to acknowledge that to their people, and harder still to put their economic interests ahead of strategic and political ones when a choice has to be made. In fact, most often people see it as shameful to put economic concerns first when issues of power and status are engaged. What president would tell the American people that their country will compromise its position on an issue like Taiwan in order to protect America’s economic interests? What Chinese leader could make the same argument to the Chinese people? When a choice has to be made, especially when it has to be made in the glare of an international crisis, it is very hard to put economics first.

In some ways the obvious importance of economic interdependence increases rather than limits the risk that rivalry will escalate, because of the way it can affect one country’s view of the other’s priorities. There seems to be a pattern here: each side believes that the imperatives of interdependence will press more heavily on the other. That inclines both governments to assume that the other will compromise to protect the economic relationship, so they do not have to do so. In Washington they expect China to back down from its challenge to America once Beijing understands the economic risks of rivalry. In Beijing they think America will blink. That makes both of them less inclined to compromise their own position – which makes escalation more likely.

Ultimately, faith in the power of interdependence boils down to faith in the power of money to trump other emotions and motivations. That is a risky proposition. We cannot assume that Chinese leaders will always choose rationally to maximise China’s objective benefits. They are no less liable than the leaders of any other country to allow what may be, or may seem to us to be, irrational desires for status and influence to trump the rational calculations of national interest.

Economics is important, but money isn’t everything. Countries, like people, want to be rich, but they also want to be safe and to feel good about themselves. For countries, as for individuals, aspirations for security and identity often compete with material interests, and often win. America’s and China’s divergent visions touch on very deep issues of national identity in both countries, which can easily seem to outweigh economic imperatives when the crunch comes. And there is always something a little strange about the assumption, implicit in the interdependence argument, that our economic desires will suppress the urge to strategic and political competition when our desire to avoid the horrors of war will not.

## DA — Litigation

#### Private antitrust enforcement is high now and increasing

Posner and Weinstein 18, \*JD, Professor @ U Chicago Law School, \*\*JD Focused on corporate litigation (Eric and Lauren, “APPLE INC., Petitioner, v. ROBERT PEPPER, et al., Respondents. ———— On Writ of Certiorari to the United States Court of Appeals for the Ninth Circuit ———— BRIEF OF ANTITRUST SCHOLARS AS AMICI CURIAE IN SUPPORT OF RESPONDENTS,” Lexis)

Consistent with Congress’s two-track enforcement structure, today most antitrust enforcement actions are brought by private parties rather than regulators. Private litigation accounted for about 90% of antitrust filings in federal court each year between 1975 and 2012. See Hindelang Criminal Justice Research Ctr., Univ. at Albany, Sourcebook of Criminal Justice Statistics Online: Antitrust Cases Filed in U.S. District Courts (2012), https://www.albany.edu/sourcebook/pdf/t5412012.pdf; compare U.S. Courts, Table C-2A, http://www.uscourts .gov/sites/default/files/data\_tables/jb\_c2a\_0930.2017.pdf (approximately 650-700 civil antitrust cases filed in federal courts per year from 2013 to 2017), with U.S. Dep’t of Justice, Antitrust Div. Workload Statistics FY 2008- 2017, at 5-6, https://www.justice.gov/atr/file/788426/ download (approximately 40-110 civil and criminal cases filed by DOJ Antitrust Division per year from 2008 to 2017).

#### No emerging tech impact.

Sechser et al. 19, \*Todd S., Pamela Feinour Edmonds and Franklin S. Edmonds, Jr. Discovery Professor of Politics and Public Policy at the University of Virginia and Senior Fellow at the Miller Center of Public Affairs, \*\*Neil Narang, Associate Professor of Political Science at the University of California, Santa Barbara, \*\*\*Caitlin Talmadge, Associate Professor of Security Studies in the School of Foreign at Georgetown University. ( “Emerging technologies and strategic stability in peacetime, crisis, and war”, *Journal of Strategic Studies*, 42:6, pg. 728-729)

Yet the history of technological revolutions counsels against alarmism. Extrapolating from current technological trends is problematic, both because technologies often do not live up to their promise, and because technologies often have countervailing or conditional effects that can temper their negative consequences. Thus, the fear that emerging technologies will necessarily cause sudden and spectacular changes to international politics should be treated with caution. There are at least two reasons to be circumspect.

First, very few technologies fundamentally reshape the dynamics of international conflict. Historically, most technological innovations have amounted to incremental advancements,

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and some have disappeared into irrelevance despite widespread hype about their promise. For example, the introduction of chemical weapons was widely expected to immediately change the nature of warfare and deterrence after the British army first used poison gas on the battlefield during World War I. Yet chemical weapons quickly turned out to be less practical, easier to counter, and less effective than conventional high-explosives in inflicting damage and disrupting enemy operations.6 Other technologies have become important only after advancements in other areas allowed them to reach their full potential: until armies developed tactics for effectively employing firearms, for instance, these weapons had little effect on the balance of power. And even when technologies do have significant strategic consequences, they often take decades to emerge, as the invention of airplanes and tanks illustrates. In short, it is easy to exaggerate the strategic effects of nascent technologies.7

Second, even if today’s emerging technologies are poised to drive important changes in the international system, they are likely to have variegated and even contradictory effects. Technologies may be destabilising under some conditions, but stabilising in others. Furthermore, other factors are likely to mediate the effects of new technologies on the international system, including geography, the distribution of material power, military strategy, domestic and organisational politics, and social and cultural variables, to name only a few.8 Consequently, the strategic effects of new technologies often defy simple classification. Indeed, more than 70 years after nuclear weapons emerged as a new technology, their consequences for stability continue to be debated.9

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## CP — Voluntary Compliance

#### US inflation collapses the global economy

Lachman 21, former deputy director in the International Monetary Fund’s Policy Development and Review Department (Desmond, “Could An Overheated U.S. Economy Create A Debt Crisis For Emerging Markets?,” <https://www.19fortyfive.com/2021/04/could-an-overheated-u-s-economy-create-a-debt-crisis-for-emerging-markets/>)

A specter is now haunting the emerging market economies. It is the specter of U.S. economic overheating that will raise interest rates and provoke a major reversal of capital flows from the emerging market economies. Any such capital flow reversal could have serious untoward consequences not only for the very troubled emerging market economies but also for both the U.S. and global economies. This especially would seem to be the case considering that the emerging market economies have never before been as indebted as they are today and that these economies now constitute around half of the world economy. There now would seem to be every indication that by the end of this year the U.S. economy will experience significant inflationary pressure. It is not only that with the passage of the Biden budget, but the U.S. economy will also be receiving this year a record peacetime budget stimulus of around 12 percent of GDP. It is also that it will be receiving that stimulus at a time that the Federal Reserve has its monetary pedal fully to the metal and that there is considerable pent-up demand in the economy. The resulting spurt in additional aggregate demand will be occurring at a time that the Congressional Budget Office is estimating that the U.S. economy is operating at a level that is only some 3 percent below its potential. It will also be occurring at a time that the U.S. economy is already recovering strongly from the pandemic’s ravages. The good news for the emerging market economies from an overheated U.S. economy is that there will be greater demand for their exports and higher international commodity prices. The bad news is that these gains will be dwarfed by the considerable damage that will be done to these economies by the higher US interest rates and the stronger dollar associated with U.S. economic overheating. As happened before during the 2013 Bernanke Taper Tantrum, higher U.S. interest rates will precipitate a sharp reversal in emerging market capital flows, while a stronger U.S. dollar will make it all the more difficult for the emerging market economies to service their U.S. dollar-denominated debt. Any capital flow reversal and a higher dollar would be hitting the emerging market economies at a time that they are very much more vulnerable to such an occurrence than they were in 2013. In the wake of the pandemic, all too many of these economies now have their highest public debt levels on record and budget deficits that are now in double digits as a percent of the size of their economies. It also does not help matters that many of these economies are still mired in recession and are yet to bring their Covid-19 pandemics under control. It also has to be of concern that these economies now have as much as $ 4 trillion in dollar-denominated debt. Any rise in the dollar will have the effect of increasing the burden of servicing this debt. Over the past twenty-five years, the world economy has had to cope with an Asian currency crisis, a Russian debt crisis, and a Latin American debt crisis. It would seem that if now we were to have an emerging market debt crisis, it would be very much more serious and more pervasive than earlier such crises. It is not simply because the pandemic has laid low on almost all of the Latin American and African economies. It is also because some major emerging market economies like Brazil, South Africa, and Turkey now all appear to be in dire economic and political straits.

## DA — Business Confidence

#### the FMC can revoke ANY exemption they WANT but are not now — this doesn’t thump the aff because it's about private suits writ large

Legal Information Institute ND – (“46 U.S. Code § 40103.Administrative exemptions,” [accessed 1/21/22], https://www.law.cornell.edu/uscode/text/46/40103, see)

1. **In General.— The Federal Maritime Commission, on application or its own motion, may by order or regulation exempt for the future any class of agreements between persons subject to this part or any specified activity of those persons from any requirement of this part if the Commission finds that the exemption will not result in substantial reduction in competition or be detrimental to commerce. The Commission may attach conditions to an exemption and may, by order, revoke an exemption.** (b)Opportunity for Hearing.— An order or regulation of exemption or revocation of an exemption may be issued only if the Commission has provided an opportunity for a hearing to interested persons and departments and agencies of the United States Government.

## DA — SCOTUS Nomination

#### In the long run the conservative decisions will collapse institutional legitimacy as well

Grove 19, Professor of Law at the William and Mary Law School, (Tara, The Supreme Court’s Legitimacy Dilemma, <https://harvardlawreview.org/2019/06/the-supreme-courts-legitimacy-dilemma/>)

Until recently, “diffuse support” scholars have insisted that there is no reason to worry about this potential risk to the Court’s sociological legitimacy. After all, with swing Justices (like Justices O’Connor and Kennedy), the Supreme Court has reliably issued a mix of “progressive” and “conservative” decisions in salient cases. In the past fifteen years, although progressives may have disliked the Court’s rulings on issues such as gun rights and campaign finance, they had good reason to cheer the jurisprudence on same-sex marriage and affirmative action; conservatives could do the reverse. That is, there have been no repeat “losers.” But this research also suggests that if the Court’s decisions in high-profile cases begin to point in only one direction, the “losers” might over time see little reason to treat the Court as a legitimate source of authority.

#### A more conservative court ultimately collapses legitimacy

Gibson 17, Sidney W. Souers Professor of Government, Department of Political Science, Washington University in St. Louis., (James, Article: Performance Evaluations Are Not Legitimacy Judgments:A Caution About Interpreting Public Opinions Toward the United States Supreme Court\*, 54 Wash. U. J.L. & Pol'y 71)

One obvious criticism of the empirical evidence adduced in this study is that it is static: it represents a snapshot of public opinion at only a single point in time. In the longer term, one could spin a story from these data that spells danger and peril for the Court. At the present, evaluations of the Court are connected to ideology; as partisan sorting in all phases of American politics takes place, it may not take much time for ideological differences to bleed into partisan differences. More important, performance evaluations today, which are indeed grounded in ideological differences, may ultimately [\*88] contaminate attitudes toward the institution itself. No theory of legitimacy suggests that a badly performing institution can maintain its institutional support ad infinitum. Adding fuel to this argument is that, although the Court today appears to some scholars to be moderate in its policy making, it is quite likely, given the Trump presidency, to become more ideologically extreme in the near future, which can, it seems, erode the institution's basic support. How long this might take, no social scientist can say. That there may be danger for the Court in the near future, however, seems reasonably likely.

#### Increased Legitimacy gives judges political capital to pursue their ideological agenda

Gibson 17, the Sidney W. Souers Professor of Government, Department of Political Science, Washington University in St. Louis., (James with Michael Nelson, , Lexis/Nexis)

In recent years, scholars have devoted a great deal of new attention to assessing the legitimacy of the U.S. Supreme Court. This interest reflects the realization that legitimacy is an invaluable form of political capital for the institution, an asset that often contributes to the solution of the Court's inexorable "countermajoritarian dilemma." 1 If the Court can add to the proportion of the population pleased by its decisions a sizable additional proportion who, while displeased, will accept the Court's decisions as legitimate, the justices can continue to be emboldened to perform their minoritarian role in the U.S. political process. It is no wonder, therefore, that the justices often fret about the need for maintaining their institution's legitimacy.