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BROOKINGS CAFETERIA PODCAST

RULE THE WAVES, RULE THE WORLD

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DEWS: Welcome to the Brookings Cafeteria, the podcast about ideas and the experts who have them. I'm Fred Dews.

Earth's oceans are central to global trade and energy flows, are the locus of the most important military relationships and potential conflicts, and are bellwethers of global climate change. In his new book, "To Rule the Waves: How Control of the World's Oceans Shapes the fate of the Superpowers," published by Scribner, Brookings Senior Fellow Bruce Jones takes readers on a fascinating voyage through this water world via the great ports, ships, geographies, and history of our ocean planet. And on this episode of the Brookings Cafeteria, Jones shares with me some highlights from the book, including his visits to one of the largest cargo ships in the world and a naval base in Norway over a hundred miles north of the Arctic Circle.

Also on this episode, Senior Fellow David Wessel explains one unnoticed provision of the 2017 Trump tax bill, the Opportunity Zone, which was intended to encourage development in poor neighborhoods around the country but instead unleashed a tax break gold rush for economic and political elites.

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First up, here's David Wessel.

WESSEL: I'm David Wessel, and this is my economic update.

In 2017, Congress tucked a provision into the big tax bill that led to the creation of an archipelago of 8,764 tax havens across the United States called "Opportunity Zones." It's a lucrative capital gains tax break sold as a way to induce wealthy people to invest in poor neighborhoods.

When I first heard about them, I was intrigued, especially after I learned that Opportunity Zones were the brainchild of Sean Parker of Napster and Facebook fame. He funded a startup think tank in Washington, the Economic Innovation Group, and it skillfully lobbied OZs into existence.

I wanted to know more, so in May 2019, I went to the Opportunity Zone Expo at the Mandalay Bay in Las Vegas. It was like dropping into a modern-day gold rush. One guy was wearing a cowboy hat wrapped with a piece of white paper that said in large black letters "Looking for OZ Funds." He owns a factory that does contract packaging for wine and liquor and wanted investors to help him relocate.

In the exhibit hall, I met a fellow whose booth was decorating little green plants. He was soliciting investors for his company's business growing lettuce and indoor vertical farms. "When was the fund launched?" I asked. "Yesterday," he told me.

I struck up a conversation with a woman from Southern California who told me a friend had asked her to help him run his real estate OZ fund. She decided against it. "So why are you here?" I asked. Turns out she bought an Andy Warhol painting 30 years ago. It's now worth a couple million more than she paid for it. She's thinking about selling it and putting the profits into an Opportunity Zone fund.

"What's it a painting of?" I asked. "Three dollar signs," she told me.

So how do OZs work? Well, they're aimed almost exclusively at people sitting on substantial, unrealized, and thus untaxed, capital gains. If you sell an asset—stock, property, art, whatever—you can defer paying capital gains taxes on the profits until 2026. Then you put your profits into a building in a census tract designated as an OZ by a governor, and you'll owe zero

capital gains tax on the profits you make on that investment, providing you stick with it for 10 years.

Now, there aren't many better ways to avoid capital gains taxes altogether. As a tax lawyer named Brad Cohen put it at that Las Vegas expo, this one has a huge advantage over the alternatives. You don't have to die.

Tax breaks to lure money to down-and-out neighborhoods are not new. This one is different, though. There are no limits on how many people can take advantage of it, nor on how much tax revenue the U.S. Treasury may forego. There are a few no-go's: no tanning salons, golf courses, or liquor stores. There's some IRS rules. But by design there's essentially no rule for any bureaucrat to approve or disapprove a project that uses a tax break, nor any requirement that a project benefit residents of a Zone. Parker and EIG reason that the way to get people to put their money into these neighborhoods would be to avoid the complicated rules attached to predecessors of Opportunity Zones.

So, how did Parker pull this off? Well, in 2013, he hired a pair of D.C. insiders—Steve Glickman, a Democrat, and John Lettieri, Republican—to build EIG. First, they cleverly made the case not for the tax break, but instead sought to show that America was suffering from a plague of geographic inequality, not only income inequality. Parker, meanwhile, stepped up his campaign contributions and diversified from nearly all to Democrats to 50/50 Democrats and Republicans. Their key recruit was Senator Tim Scott, the South Carolina Republican, who turned out to be one of four senators who shaped the 2017 tax.

Parker and EIG enlisted an impressive roster of sponsors in the beginning. The process was an education for Parker. He told me just when you think you've convinced the key decision-maker, you find out that, like a 1980s video game, you beat the boss only to find out there's a big

boss, only to beat the big boss to find out there's an even bigger boss, and you're kind of just like, I thought I won this thing. Why is there always another level?

There were no hearings, no discussion at markups or House-Senate conferences, there was little scrutiny of details beyond some scrubbing by congressional technical staff. No national newspaper even noticed the Opportunity Zone provision until a full month after Donald Trump signed the Tax Cuts and JOBS Act into law.

The law set basic guidelines for the Treasury to come up with a list of eligible census tracts, governors were allowed to pick up to 25% of the eligible tracts. Some picked wisely, some didn't. The Trump Treasury didn't overrule them. Indeed, at every opportunity, the Trump Treasury made their rules more favorable to taxpayers and investors.

So, what happened on the ground? Not surprisingly, money flowed to the best off of the Opportunity Zone tracts. Hard data are scarce, but a look at 2019 tax returns by Joint Committee on Taxation economists finds that only 16% of the OZs got any money and half the money went to just 1% of the Zones. Much of the money appears to have gone to real estate projects that would have been built anyhow, though some of them sooner than would have happened without the tax incentives.

Opportunities Zone money is funding the revival of downtown Erie, Pennsylvania, and affordable housing in South L.A. But it's also financing a Ritz Carlton in downtown Portland, Oregon, and a Virgin hotel in New Orleans. Self-storage facilities, which create hardly any jobs, are sprouting with OZ money. So is luxury student housing in university towns eligible only because college kids show up as poor in census tallies. But in places like a struggling community of immigrants outside Portland called Rockwood, or in Baltimore's gritter neighborhoods, there's very little OZ money that I could find.

So, my bottom line? I think the proponents of Opportunity Zones intended to craft a tax break that would make rich folks put money into poor neighborhoods. But they were idealistic, arrogant, stubborn, and naive. They overestimated the idealism of wealthy investors, underestimated the energy and craftiness of tax lawyers, wealth managers, and accountants, and were so determined to avoid the bureaucratic red tape of past initiatives that Opportunity Zones probably will do more to save rich folks money on their taxes, than change living conditions in America's poor neighborhoods.

Oh, and that Warhol painting? She decided not to sell it. She's going to leave it to her kids. But you can read all about that in my new book, "Only the Rich Can Play: How Washington Works in the New Gilded Age." It comes out October 5th.

DEWS: You can pre-order "Only the Rich Can Play" wherever you like to buy books. And now, here's my interview with Bruce Jones on his new book, "To Rule the Waves," just published by Scribner.

Bruce, welcome back to the Brookings Cafeteria podcast.

JONES: Thanks for having me.

DEWS: So, as I mentioned in the intro, we're here to discuss your just fabulous new book, "To Rule the Waves." And I'd like to ask you to share with our listeners sort of the origin story of this book. How did you get the idea? Discuss your passion for it because it really comes through in the reading of the book.

JONES: Thanks for saying that. It really was a passion project. Look, there was so much that was changing. I was spending a lot of my time working on the question of the, quote, rising powers traveling to India and Brazil and China. I was watching things play out in a changing Arctic with changing levels of sea ice opening up new commercial possibilities, as well as new

oil and gas discovery. We were watching the kind of political contours changing around globalization. And I was looking for a way to understand how this all fit together and to explain how it all fit together.

And it's one of those things where sort of everything came together and occurred to me that when I was thinking about China, I was reading a ton of pieces by Brookings scholars and others in D.C. about naval rivalry mounting in the South China Sea, the East China Sea in the Arctic. Obviously, the sort of melting sea ice was the key factor in changing the dynamics there. I'd been working with the UN on counter piracy operations, got a sense of the scale of commercial trade. So, I began to realize that the oceans were present in all the things that I was working on, although we never talk about them, we never look at the world through that lens.

And then there was this sort of crystallizing moment. I wrote about it in the book. I was in the Amazon, of all places, in the rainforest, a thousand miles away from an ocean in every direction. And I went out onto the river itself. And what do I see steaming up the river but a cargo ship stacked high with containers from the Maersk company, which I recognized from the time I spent in Copenhagen. Just a kind of crystallization that sea-based globalization had been so transformative for the rising powers and that it was part of what was at stake as China was trying to find its place in the world and in increasing tension with the United States, with the Navy, with the Navy at the front line in that. And that's sort of what took me down this path.

And the more I read and the more I worked on this, the more powerful the lens seemed to become. I mean, just to take one instance, something I learned as I do the research, I had no idea that 93 percent of all of the data that flows around the world, when we're using our smartphones, when we're using social media, when we're on Zoom meetings, or when we're on Facebook, when we're doing financial transactions, online banking, Amazon shopping, whatever it is—93

percent of all the data in the world flows across the oceans on these fiber optic cables that line the seabed floor.

So, it was just an illustration that when you sort of step off land for a moment and step out into the oceans, you can look at these big changes that are happening in geopolitics and globalization, energy markets, climate change, from a different vantage point. And that's what I was hoping to do with this book.

DEWS: Well, you succeeded fabulously, Bruce, and I'm glad that you brought up your trip to the Amazon, because obviously you traveled all over the world, before you were even writing this book, but during the writing of this book. And it's a very visual book and I hope some of that will come out in our discussion here. And also, you brought up that data point. There's so much great data in the book. And also, I just want readers to read the acknowledgments. I don't know if other people read acknowledgments of books. I always read acknowledgments of books because there's fascinating personal information there. And they will learn a little bit more about your family history that has a very deep connection to the ocean. So go read the acknowledgments.

As we dive into the substance more of the book, Bruce, I'd like to start with a passage from the Introduction that I read a few times. I had to stop and think about it because it's so amazing, and I'd like for you to read it. And the idea here is that you use a tsunami as a metaphor for world affairs. And I'd like you to read it now. But then I want listeners to know that we're going to discuss some other things and we'll come back at the end. And then I'm going to ask you to unpack the metaphor, but if you could just read that from your introduction.

JONES: Thanks, Fred, I'm happy to. The passage is, "As we witness the epic scale of modern global trade, the mounting tensions of naval power, and the drama of climate change

playing out in warming oceans, it's hard to resist a sensation that we are now at that moment, just before such a tsunami, standing ashore when the tide has quietly flowed outward far farther than a normal, that eerie, quiet moment before the sea surges back in, destroying much of what we have come to know."

DEWS: Just hearing you read that gives me chills and again, for listeners, we're going to come back to that. But think about that as we go through this discussion. The book is very much a "now" book, it's a very much a public policy book. But it's also a history book, of oceans, of ocean exploration, of commerce on the oceans. And the historical themes that you discuss throughout the book are fascinating and illuminating. You talk about Zheng He's Treasure Fleet in the 15th century, Portugal's voyages of exploration and colonization, of course Britain's ascension as the world's dominant ocean power, and then the rise of the U.S. Navy, among others. What about the history of our relationship with the oceans stands out for you?

JONES: I was really struck by this. I read a huge amount of material for this book, everything from naval journals to port economics to insurance, maritime insurance manuals, to you name it. I was reading a ton of different materials in the public policy space and in the contemporary space. But very little of that I found illuminating in terms of understanding the dynamics that were at play. And it was really when I decided to go back further and read more of the history that I started to feel like I was reading material that explained what we were watching. When we look back and we see how important competition on the world's oceans—naval, scientific, for resources, commercial, how important that was to the contest between empires, that very violent first interaction between Europe and Asia—it seems to me a much more redolent set of histories to draw from than those of the Cold War, which inform so much of the contemporary policy debate about what we're dealing with.

So, when people say, are we in a new Cold War and these kinds of things, I don't find those metaphors persuasive. I'm struck by how much the earlier histories of competition on the oceans seems to illustrate the dynamics that we're confronting. And I was very struck to realize how central oceanic exploration and scientific exploration on the oceans was to the kind of forging of American internationalism, whether that's the U.S. Exploring Expedition to the Southern Ocean, or the kind of great scientific endeavors of that period, of the 1800s, or the kind of early American naval explorations of Asia, the oceans are not a central part of our sense of ourselves as a nation, but they are in fact central to our history as an international power.

DEWS: So, as you mentioned at the top, you traveled to the Amazon, but you traveled all over the world in your research for this book, and you saw a lot of amazing things. And again, it comes out in the book. One of the places you visited, not only the port, but also the great ship, the *Madrid Maersk*, one of the great cargo ships that plies the oceans. It's an astonishingly large and sophisticated cargo ship. Can you paint a picture of your visit to that ship? How did it feel? What did you see?

JONES: I'll certainly try. And by the way, if you go to the Brookings website where the book is listed, there's a linked video where you can see some of the imagery done by a fantastic Brooking photographer, some imagery of the ship and some video. I mean, this is a thing of an astonishing scale. Just to do the metrics first and then I'll try to convey the experience. We think of aircraft carriers as behemoths of a ship, right? The USS Nimitz is the largest aircraft carrier in the American fleet. You can take two of those, drop them into the space occupied by the *Maersk* and still have room left over for the Empire State Building. I mean, this is a mammoth, mammoth ship.

When I first saw it was one of those moments where the brain and the senses didn't connect. I saw this thing out offshore. I was in Tanjung Telepas in Malaysia waiting for the ship to dock and I was looking for the ship and I didn't see it. And then there was this thing, this sort of mammoth, large square thing moving towards me very slowly. And eventually my brain caught up that what I was looking at was a ship. It was just so much larger than anything that you think of a ship being. It took a while to compute. And then walking down into the hold of the ship, at one stage, they were loading up containers into it, it holds the what's called TEU equivalence or container equivalents, 20,500 container equivalents—

DEWS: —those are those big metal containers that we might see on trucks or on trains and sitting in ports?

JONES: Exactly. Which are the essential building blocks of globalization. Twenty thousand TEU equivalents roughly equates to about 10,000 of those boxes, which could be on this single ship. And I walk down into the hold that I'm looking up at a stack of boxes. Twenty-four high, twenty-four wide, twenty-four long. It's just this giant mammoth structure. I remember as a kid driving around the country and you'd come to these crossings where an arm would come down, you'd be waiting for a train to pass. And it was always fun to count how many rail cars would go by. And if you were lucky and you saw a really big one, maybe a hundred cars would go by, and it would take three or four minutes. The containers on this ship, it would take 50 of those trains to carry the containers on this ship. It's just a mammoth, a mammoth thing. I described it in the end of the Cathedral of Globalization. It's so big and of such an epic scale.

And by the way, that scale translates into astonishing productivity gains. I calculated that between the start of the Second World War and present day, if you look at the gains to

transportation of goods, it's a roughly 17,000 percent gain in efficiency. I can't think of any other sphere where we've had those kinds of gains in productivity and efficiency as we've had in containerized shipping. And it's really revolutionized, it is what revolutionized, global trade.

DEWS: And back to the history, there is a lot that you put into the book about the history of containerization, the development of the technology of those ships and of those containers specifically. So, again, the book is full of some fascinating information. I want to ask you to also to talk about the size of the ports. And this is one that really, really shook me. The growth of the mega ports, for example, like Tangshan, which is just off the coast of the city of Shanghai. Can you tell listeners how, for example, the largest ports in the United States compare to that Chinese port and others around the world?

JONES: Yeah, it's pretty striking. If you go back 30 years, 30 or 40 years, New York Harbor was the largest port in the world and all the rest of the large ports in the world were in the West. Fast forward to 20 years and you get a couple of the ports in Asia: Singapore, Hong Kong, Busan in Korea in that list as well. Los Angeles, Rotterdam, New York, still the largest ports in the world. Fast forward 10 years and suddenly you're getting several Chinese ports in that list. Come forward to the present day, and all of the top five ports are Chinese and the United States doesn't have a single port in the top 10.

Shanghai last year moved 42 million containers in and out of its port. The largest in the United States is Los Angeles, which did 8 million. So, it's just on a completely different scale. The just overwhelming size of the Chinese port infrastructure and China's role in globalized shipping and in the global economy, the trade dimension of the global economy, you really feel it when you're there in that vast port over four large sets of reclaimed land that they built up, one

of which is entirely run by automated machines and artificial intelligence, by the way, a very sort of hyper modern port. But just on a totally different scale than anything in the West at this stage.

DEWS: Bringing up China there is not only a reminder that it's an essential fact of global trade, but it also is an essential fact now of, I think, China's kind of strategic outlook in Asia, but possibly also globally. And you talk a lot in the book about China's near seas, but then also about the ring of islands that it faces, I mean, including Japan, the Philippines, and others. Can you first talk about, very broadly, the role that navies, that countries' navies, have played to trade and things like climate research? And then can you also talk about how we should be thinking about this, the rise of China's navy, specifically in the context of these massive ports in China?

JONES: There was a revelation to me to understand quite how important the Navy was to the ocean sciences. I guess that should have been obvious to me, but it wasn't. And to climate research, that was a new fact for me. The Navy's played a huge role in generating our understanding of climate change.

The U.S. Navy specifically plays a very unique role on the world stage as the guarantor of freedom of trade and the guarantor of freedom of energy flows. And it is a kind of striking thing, right, that the United States will deploy military power to help make sure that trade goods and energy goods flow into China or Japan or India or Europe or wherever it may be. We play this sort of global security role in protecting the free flow of goods on the open ocean. And that's crucial to the operating of the global economy. And we see it challenged by Somali piracy in the Indian Ocean, by Malaccan piracy in the Straits of Malacca. And it's the U.S. Navy that tends to put together the coalitions that respond and to lead that response and to ensure the free flow of trade and energy.

So, then you put yourself in China's shoes. And on the one hand, you would think China could say, well, terrific. I mean, we profit from this free trading system, this globalization. We're major players in it. We need these huge imports of energy, of oil and gas by sea. And how nice the U.S. Navy is doing the security role for us. We can sort of free ride on that. And for a while, I mean, before they had the capability of doing anything different, that was the approach they took. But I think it's a deeply uncomfortable position for them to realize that these kind of absolutely vital flows into their economy are ultimately secured and guaranteed by the U.S. Navy. It's a profoundly unsettling position.

And so what we've watched is a kind of major change in Chinese strategic thinking. You referenced earlier on the historical material about China in the 1500s. That was the last time that China had developed a kind of ocean-going capacity. They've been preoccupied in the intervening centuries on inland defense. But their huge exposure to global trade, I think, is the key factor in explaining why they've gone back out to the seas now, first, as you said, to the near seas—the Yellow Sea, the East China Sea, and the South China Sea. But well beyond that now, where they have a huge stake in global commerce and they are developing both the commercial infrastructure, the naval capacity, and I believe trying to develop the basing capacity to project naval power at a scale that's commensurate with their stakes in globalization.

DEWS: And one of those seas that you just mentioned, the South China Sea, is, my understanding is part of the larger geography of an area around Malaysia, the Malacca Straits, that you've called the most important waterways in the world now. It's displaced New York Harbor and anything in Europe. And China is right there. But the U.S. Navy is right there as well. And my understanding from your book is that India is developing a navy, and so on. Can

you talk about the importance of that geographical region to issues of trade and to issues of strategic competition and to possible military conflict?

JONES: I argue in the book that not just the South China Sea, but the wider reaches of the Western Pacific, that the Western Pacific is to our current reality what Eastern Europe was to the Cold War, i.e., it's the front lines of potential militarized conflict between the powers. During the Cold War, we used to worry about Russian tanks moving through the Fulda Gap in East Germany. And I think that's replaced by worrying about Chinese submarines breaking out of the Luzon Strait in the Philippine Sea and out from that sort of inner chain of the near seas out into the wider Western Pacific. It's not just the South China Sea. It's all the seas that border China's eastern shore, the Yellow, the East, and the South China Sea, and then bleeding into the Philippine Sea and from them out into the wider Western Pacific.

And there are vast stakes. Fifty percent of the world's economy borders those seas or flows through those seas. And so you have every player in the world preoccupied, every major player in the world preoccupied, by what's happening there. India, which obviously has a huge stake in the Indian Ocean, is developing its naval capacity there, but also looking up towards the Western Pacific and increasing its naval patrols in the Western Pacific. Japan has a powerful navy. People don't really focus on that. We've thought of Japan as a sort of pacific, not the ocean, but a peaceful player. But it has a very powerful navy and a very powerful submarine fleet, which is the first line of defense against Chinese expansionism. Australia has an important navy. Major European navies, especially Britain, are rebuilding some of their capacity to deploy into the Western Pacific.

And so I describe it in the end as a budding global naval arms race. Obviously, the United States and China are at the core of that. Russia has reactivated some of its former naval strength,

it's a player in that region as well. But it's really the United States and China at the core, but with every other major power implicated by this by this fight for an ability to control or defend space in the Western Pacific.

DEWS: Well, there's only so much space, and if more and more ships and submarines and other capabilities are being developed and deployed by so many more countries, I mean, where does the naval arms race end?

JONES: Well, it's a big place, I will say that. One of the things that was very striking to me, sailing through the South China Sea, we talk about this kind of incredibly crowded sea and there's several hundred submarines underneath there and the world's busiest shipping channel. And there would be days I'd be sitting on the deck of the *Maersk* or up on the bridge, looking out over the oceans and, for hours at a time, maybe I'd see one other ship or two other ships. I mean, so the oceans are a very big space. Right. And it is where there's a little bit more room for optimism. In that sense, it's unlike Eastern Europe in that the sort of two navies can co-exist in the same terrain in the way that two land armies really can't.

And actually what we've seen in the South China Sea is that the early American concerns that the Chinese presence there would be to choke off trade were always exaggerated and haven't come to pass, that China has no interest in choking off trade. Quite the opposite, right? They need that trade. So do we. So in a funny way, we have a kind of a similar interest, at least in terms of the trade flows.

Two things make it much more complicated, or three things. One is Taiwan, because between the East China Sea and the South China Sea is the Taiwan Strait and the island of Formosa. And so all the complexities of Taiwan play very closely into this naval space. And two, China is clearly going outward past just those seas. It's exploring a commercial presence and a

scientific presence in the Arctic. It's built its first naval base in the Red Sea at the western edge of the Indian Sea. It's clearly got an expansive ambition to deploy a blue water navy. You can be panicked about that or calm about that. I'm somewhere in between. But I think it is a critical fact of what we're watching. And we are in this very tense arms race in the Western Pacific already.

DEWS: Let's move on to a new issue, that's energy. You talked about the flows of trade and energy around the world on the oceans a few minutes ago, and obviously energy then is very intimately connected to the oceans. And I didn't realize, for example, that most of the oil and gas exploration and extraction now occurs not on land, but in the water. So, can you share the scale of that and kind of discuss how that impacts geopolitics?

JONES: Yeah, the new exploration. And I think I did a calculation in the book that if you look at what's now extracted at sea or moves by sea, it's somewhere between two-thirds and three-quarters of all the oil and gas in the world gets to its final market or is found at sea or gets there by sea. The oceans are central to the reality of fossil fuel markets.

And it impacts geopolitics in a whole series of negative ways in my mind. First of all, whereas I said before, you know, two navies can coexist in a given sea. That's true. But two countries, unless they're closely cooperating, can't develop the same oil fields. And so when Russia finds gas in the Barents Sea, it has a huge stake in sort of securing and protecting that part of those waters. When China is finding oil and gas in the East China Sea, in the South China Sea, same deal. It's one of the major flashpoints in Asia. You have Vietnam, Indonesia, India, China, all competing for oil and gas in those seas. We have huge stakes in the Gulf of Mexico. Brazil in the Atlantic and the pre-salt formations there.

So, oil exploration changes the texture of what's happening in the oceans. You're not just transiting over the surface. You're now fundamentally concerned by the territory underneath. And that's creating tensions.

Second, when you think about a place like the Arctic, which had for so long been viewed as a kind of classic global commons place where we were primarily concerned about climate issues, et cetera. And that's just dramatically changed, where it's now a zone of intense commerce, hugely increased fishing stocks, and oil and gas exploration driving real tensions between the Russians, Americans, the Chinese, and others there. So, the energy piece of this is hugely critical and amplifies the tensions.

And I come back to Chinese import dependence. The China-watching space people spend a lot of time talking about the "Malacca Dilemma." As Americans, we're all aware of how important the flow of oil and gas out of the Straits of Hormuz is. Right? And we sort of worry about the Iranian navy interfering with flows, et cetera. Considerably more oil and gas flows through the Malacca Straits than through the Straits of Hormuz. So, it really is the most important choke point in global energy flows. And again, just deeply amplifies this Chinese sense of insecurity, the notion that we could choke off that flow and cripple their economy. That's actually harder to do than it is to say, but it is possible to do, at least in times of war. And that's an acute concern for the Chinese.

DEWS: Your mention of increased competition in the Arctic reminds me that another just amazing part of your book was discussion of the naval base under the mountain in far northern Norway, that seemed like it was decommissioned for many years and used for some other purposes. I think some Russian fishermen used to operate out of that. But now it's a naval base

again. And it's a very important piece of strategic thinking for NATO. Can you real quickly talk about that place?

JONES: I mean, that was an astonishing trip, I have to say. You go up to Tromsø which is two hundred miles north of the Arctic Circle. I was there in the winter and so it's almost always dark. You get these little glimmers of twilight for parts of the day. And I went with the company that owns the facility down to this mountain, and it's just this large granite mountain, this tiny little opening we drive into this opening and you drive for a considerable period of time in this narrow tunnel deep into the mountain. And you turn a corner and what opens up in front of you is this giant hangar filled with water. And it was a naval base carved out, literally carved out, into this mountain over the course of about 40 years. And during the Cold War, I think it was NATO's northernmost vantage point on the Russians.

And then, as you say, it was decommissioned. Right? In the happy days of the post-Cold War. We weren't worried about the Russians. We weren't worried about naval competition. It was decommissioned. You had all sorts of things happening there: training dogs, storing pleasure boats, all sorts of crazy stuff.

But no, now it's back. And it was sold back to the Norwegian Ministry of Defense. And lo and behold, the first thing they did was forge an agreement with the U.S. Navy and there are American submarines back in that base, keeping a close eye on the Russians and the Chinese.

So for me, it was of signifier of the rapid pace of change and the worrying trend of change in terms of what's happening and in geopolitical terms. It's, of course, also the launching point for a lot of this energy exploration, which is now possible in the Norwegian Sea and the Barents Sea, as well as now vast fisheries, the Arctic. It's one of the ironies of climate change, that the melting of the sea ice in the Arctic is hugely increasing the productivity of the Arctic

fisheries. So there's in the short term a commercial gain from the melting of sea ice. But of course, there are longer term negatives there.

DEWS: Well, so let's turn to that. The longer-term negatives, the issue of climate change represented by the changing Arctic, but also the changing Antarctic and everything in between. One of the final chapters in your book is called "Hot Waters Rising." And to be honest, Bruce, I found it very distressing, especially the section on the destructive chain reaction of melting in the western Antarctic. Am I right to be distressed about that?

JONES: Oh, yeah. Look, in writing it, I tried to navigate a course between sort of extreme gloom on the one hand and passivity on the other. And that's not just for communication reasons, it's for scientific reasons. And the larger a scientific phenomenon is, the larger the uncertainties are. That's just in the nature of scientific measurement. And so when you look at the rates of melt in the Southern Ocean, when you look at the quantity of sunlight reflected off the ice, which sort of takes a lot of the heat out of the waters, that's changing. As the ice melts, more water, more heat is coming into the water. It's a kind of gathering phenomenon. We project that out and over a long period of time, in the worst-case scenario, the effects are catastrophic.

But it's over a long period of time, like hundreds of years. That seems to me too long a period of time for human politics to deal with it in a meaningful way. So if you look at what's likely to happen in the kind of 50-year timescale, then it's somewhere between manageable and bad, not catastrophic, at least for the rich countries of the world who have the capacity to do large scale engineering and land reclamation, and then to manage changing water flows. But still bad.

What I also try to highlight here is for me across the climate change space, this is a recurrent theme for me. There's just this deeply unfair reality that although it's the rich world

that has pumped all the carbon into the atmosphere and thus heating into the oceans, the places that are going to feel the consequences of this much faster than that and in a much more devastating way are the poorest countries in the world. Right? Myanmar, Bangladesh, low lying parts of India. I mean, these places are going to be dealing with very difficult changes in sea levels and in weather patterns. They already are, that's not a future tense. That's a present tense with much less capacity to deal with it.

So, one of the things that I try to point to in the book is an advantage that the United States has that we never talk about is we're by far and away the world's leading country in terms of the commercial capacity for maritime engineering, for marine engineering. When we talked about the deep sea oil exploration, this is all American engineering, the capacity that's been developed to go out several hundred meters deep in the oceans and find oil and gas, the capacity to drill for oil and gas in deep sea water. That's all American engineering capacity originally. Now, some of it spread to other Western firms, but it's a huge strength of the United States.

China obviously has a big engineering capability, but the United States has the leading edge here. And we should be developing that because we are going to be dealing with these rising waters. We are going to have to deal with adaptation to a changing climate. We can do all the mitigation work we want. We're going to have to deal with a lot of adaptation. And that's a policy issue, but it's also an engineering issue. And we have critical capacities there that we should be talking about and wielding more than we are.

DEWS: Just as the negative effects of climate change are experienced differently across countries, between the developing countries, between developed countries like the United States, you also explain how climate change plays out differently in a way that adds to the competition over command of the seas rather than cooperation. Can you talk about that some more?

JONES: It was a striking realization to me as you look at the adaptation question. So let me just give you two examples. And here I'm drawing from just an astonishing body of scientific work that was done recently by the IPCC, the Intergovernmental Panel on Climate Change, put out a massive report on the interplay between the oceans and climate change. And one of the really striking pieces in there is they take a look at the warming rates in different seas and overlay it with protein demand by nearby populations. Right? And what you see there, for example, is the South China Sea, which is a fairly shallow sea, is one of the places where ocean warming is very advanced and very intense, which is depleting fish stocks at precisely the point in time where economic growth in Asia is creating a huge demand for proteins from fish. And so you have a shrinking stockpile of fish and growing demand. Right? Which produces obvious tensions.

Contrast that to the Arctic where, as I mentioned before, the melting sea ice has this ironic effect of hugely increasing the productivity of the Arctic fishing grounds. So, we're profiting in sort of our ability to pull fish in out of the ocean and feed our population. China's suffering and it's driving Chinese fishing fleet out all over the world—Angola, into the Atlantic, all over the place. And that's increasing tensions. It's put them in confrontation with the Philippines in the South China Sea. The first time that the Chinese navy actually seized a vessel in the South China Sea, it was a Filipino fishing vessel, it wasn't a naval ship. So that competition for the resources of the seas is being changed by the way the oceans' warming is playing out and it's amplifying competition rather than the opposite.

DEWS: So now and looking ahead, what do you think Americans need to know or even care about when it comes to our nation's relationship with the oceans, from all the angles that you discuss in this book, there's military, economic climate and more?

JONES: Yeah, I think it's important that we have a national conversation about several present realities. These are not future realities, they're present realities. We are in a global naval arms race, and we need to have a serious conversation about the costs of losing that race and the costs of competing in that race. And it's costly on both ends. We can't pretend that the situation is one that we can confront easily. It's going to be costly either way we want to play it. We have to have a serious conversation about that.

We have to acknowledge the reality that the U.S. economy is deeply torqued around the beam of sea-based globalization. We can't pretend that away. There's lots of commentary during the Trump era and during COVID about sort of unplugging from globalization or reshoring, these kinds of things. But those are superficial conversations relative to the actual scale of sea-based globalization, which we've built over 60 years. And it would take vast costs to undo.

I think we should be having a present conversation about sea level rise and ocean warming and what it's going to take to deal with that and the adaptation dimension of it. I talked about the engineering piece. And by the way on energy markets, too, you can hear people talk about the fact that we're now a net global exporter of energy and therefore we don't have to be worried about the security of energy flows. It's complete nonsense because we're still a huge importer of energy. We're also an exporter of energy and all of it by sea. So we're sort of doubly preoccupied now by the security of energy flows, both for our imports and for our exports.

So, we need to be having a kind of a present-day conversation about those realities and what is it going to take as an American project to keep up our leadership in that sort of complex of ocean realities. We're lagging badly behind in the commercial aspect and shipbuilding and others. Some of our allies do okay there. We need to have a serious conversation about what it's going to take to continue to lead in that space. Which doesn't necessarily mean matching the

Chinese navy ship for ship or building a 600 ship Navy. And there are different ways of thinking about that problem.

But we have to recognize the realities that we confront and to draw on the strengths that we have. As I mentioned, we have this astonishing capacity in maritime engineering. We have this amazing complex of oceanic sciences institutes. The Navy is still the most powerful and far-reaching Navy in the world. We have the only country in the world that has nuclear submarines at scale, and with all the advantages of those confer. We have a whole series of advantages. We don't talk much about it. We're not wielding them as a maritime capability. And I think we need to get serious about doing that.

DEWS: Bruce, I'd like to conclude this wonderful conversation by going back to that tsunami metaphor that you have in the introduction, and thanks again for reading that. I'd like you to now reflect on that metaphor, the idea that, the sensation, as you write, that we're at a moment where the water has flowed out, it's eerily quiet, but you know the water's about to surge back in and, as you write, destroying much of what we have come to know. Can you unpack that?

JONES: I'll confess that it's more a hunch and instinct than social science, that phrase. But as I think about the world that we're in, where we have over the course of 60 years built this sea-based globalization that wholly incorporates a country like China, countries like India, etc., the global economy is secured by the U.S. Navy, but the people who profit from that are both wealthy allies and even wealthier rivals. You start to feel this deep tension between the realities of our economic interconnection, the reality of our natural interconnection, and this mounting political rivalry and tension between the powers.

It's easy to say, oh, we're going to be in a new Cold War. But when we were in a Cold War with the Soviets, we weren't reliant on their economy and they weren't reliant on ours. It's a completely different situation. And I feel more than I can conclude that we're going to watch some deeply wrenching changes as we try to understand what it means to have a single global economy into which is integrated a deep strategic rival. That's not a situation we've had to deal with since the late 1800s. That situation didn't end well.

And I think that we're dealing with those kinds of changes of huge scale, quite apart from the worst-case scenarios in warming energies and climate change, which could also have hugely wrenching effects. I think we're standing on the precipice of a whole series of major changes. You can see them. You can feel them when you're out in the oceans. We haven't yet fully incorporated what they're going to mean for us as a country or for the world.

DEWS: Well, it's a fascinating and very important book. Bruce, thank you for bringing this to us and thank you for sharing with me on the Cafeteria your time and expertise today.

JONES: It was terrific, Fred. Thank you so much for having me. I really appreciate it.

DEWS: Again, it's "To Rule the Waves: How Control of the World's Oceans Shapes the Fate of the Superpowers," from Scribner, by Bruce Jones. Find it wherever you like to buy books.

A team of amazing colleagues helps make the Brookings Cafeteria possible. My thanks go out to audio engineer Gaston Reboredo; Bill Finan, director of the Brookings Institution Press, who does the book interviews; my communications colleagues Marie Wilkin, Adrianna Pita, and Chris McKenna for their collaboration. And finally, to Soren Messner-Zidell and Andrea Risotto for their guidance and support.

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Until next time, I'm Fred Dews.