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Dollar and Sense podcast
How does control of the seas affect global trade and security?
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BRUCE JONES

Director, Project on International Order and Strategy
Senior Fellow, in the Foreign Policy program; Center for East Asia Policy Studies; Center for
Security, Strategy, and Technology
The Brookings Institution

DAVID DOLLAR

Senior Fellow, Foreign Policy program, Global Economy and Development program, and the
John L. Thornton China Center
The Brookings Institution

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DAVID DOLLAR: Hi, I'm David Dollar, host of the Brookings trade podcast, Dollar and Sense. Today, my guest is Bruce Jones, a senior fellow at Brookings and director of our Project on International Order and Strategy. Bruce has just published a book called "To Rule the Waves," which is about the importance of controlling the world's oceans given the role they play in commerce and security. So welcome to the show, Bruce.

BRUCE JONES: Thanks for having me on, David. Really a pleasure to be with you.

DOLLAR: So, what I liked about the book—one of the many things I liked—is you have a lot of rich detail about the reality of international trade in terms of ports and container ships, et cetera. You describe an interesting visit to the port of Elizabeth, New Jersey. So why don't we start with that? What role does this port play both in commerce and on the security side?

JONES: It was a fascinating visit, and it was actually two visits. I went with the Coast Guard and then with Customs and Border Patrol. This is, of course, essentially the Port of New York, it's just that the Port of New York is now in New Jersey. That's true around the world, by the way, that what used to be ports at the heart of cities have been pushed out into the suburbs simply because of the scale of what happens in these ports now. It is no longer possible to accommodate them in the hearts of metropolitan areas.

This is the largest port, in New York, by value. The Port of Los Angeles is larger by volume; New York is still the largest in the U.S. by value. And you can go there—first of all, just the sheer physical scale of these ports—you can visualize, it's a way to visualize the vast role that sea-based globalization plays in our lives. So, let's start with the place where I went, container examination station, where a number of goods are sort of pulled off the ships for inspection either because of concern about smuggling or piracy or counterfeit or drugs or what have you. It gives you a window into every facet of our appetites, whether it's for flat screen TVs or furniture

or paper towels or rice or strawberries or apples or medical equipment or high technology goods. They are all flowing into our ports through these containers, as are large quantities of drugs, and interrupting the flow of drugs from containers is an important part of the security now.

So, you can see sort of literally every aspect of American consumption on display in these ports. You have these vast what are called RoRo ships, which are roll-on/roll-off ships that are essentially huge ferries that can carry up to about 8,000 cars in a single ship. They are how most of us get the cars that we buy in our markets. We don't think of cars as being a sea-based trade, but of course they are. So, you can see the economic scale.

Then there are a whole series of layers of security that go along with that. The final layer I describe is nuclear monitoring. Every single one of the containers that enters our market goes through what looks like essentially a large X-ray machine which is tracing for radiation of a variety of types. There's a range of forms of inspection and intelligence gathering about this trade.

There's the Coast Guard which can intercede ships entering the Port of New York itself or board them. But what's really striking to me is the way in which the Coast Guard has developed this global network of security arrangements through what's called the Container Security Initiative (CSI), which has given it the capacity to inspect ships, ports, and bills of lading, and conduct intelligence gathering in ports around the world, including in China and all sorts of other countries that have signed up to CSI, as it's known, as a way of facilitating trade into the United States.

It's striking to me because so often in the narrative of these things, globalization is described as something that has constrained American sovereignty. Of course, the exact opposite is true. It's been a device by which the United States has extended its sovereignty and extended

its security intelligence operations to ports around the world. One of the major ways we can secure the flow of trade these days is through these Coast Guard operations, through CSI, literally around the world.

DOLLAR: So, we are basically using our market power there.

JONES: We are. And the scale of our market—as you know very well—is so big that, I mean, it's extremely costly not to be able to sell into our market and to do it as efficiently as possible. You don't have to be part of CSI to sail into our market, but it adds a layer of complexity and cost if you are not. So, from Shanghai to Bremerhaven to where have you, ports have signed up for the Container Security Initiative and it's a very important part of the security of our trade flows now.

DOLLAR: Another thing that comes through clearly in your book, Bruce, is the growing scale of these container ships. So, you actually traveled on one of these ships, is that right?

JONES: I spent 10 days on what was then the largest container ship in the world and sailed from Singapore to Shanghai. These are vast vehicles. One of the ways I describe this to people, I think we have gotten used to thinking about aircraft carriers as giant ships. The largest aircraft carrier in the world in operation is the USS Nimitz. If you took two of the USS Nimitz and dropped them down into the space occupied by the ship I sailed, you would still have room left over for the Empire State Building. I mean, these are vast, vast ships. It was called the Madrid Maersk. It's been overtaken now. That ship could carry—the terminology of the trade is 20,500 TEU or twenty-foot-equivalent units. Most containers now are 40 feet; they are double units. So, it could hold about 10,000 of the double-sized containers or 20,000 TEU.

While I was on the ship, there was sort of gossip and rumors that somebody was going to sail a 24,000 TEU ship, and all the crew was like "that's impossible." Of course, in fact, that's happened now. Somebody has a 24,000 TEU ship.

I described them as cathedrals to globalization. They are just on this enormous scale. And to be on one and to see the vastness of the operation—I sailed into the Port of Jiangyin, south of Shanghai, which is vastly the largest container port in the world now, six times larger than the Port of Los Angeles. It's just a way of visualizing the dramatic scale that this operates on.

This has been a fairly rapid change. I mean, it's been a steady growth; it's not a one-time revolution. It's been steady growth since the 1960s. Marc Levinson, who wrote the original book about containerized shipping, sort of awed at the scale of these ships when they were sailing 10,000 TEU. They are sort of double that size now and growing fast. And there is I think—I talk about in the book—pretty much a precise one-to-one ratio between the size of container shipping and the scale of global trade. They have flowed together.

DOLLAR: One way to think about 20,000 containers on a ship: part of the Chinese Belt and Road Initiative is trying to strengthen that overland link from China to Europe, including the rail link. And I know in a recent year, in the whole year, 20,000 containers went by rail from China to Europe. That's one ship. So, you know, at the heart of your book, the vast majority of world trade goes by sea.

JONES: I mean, I think I describe it somewhere between two-thirds and three-quarters of the flow of oil and gas is either found by sea or moves by sea. It's 85 percent of all commercial trade flows by sea. Then, of course, there are industries that don't rely on the flow of goods: software, finance, et cetera. But they do rely on the flow of data, and 93 percent of all data in the

world flows on undersea cables that line the ocean floor and are very vulnerable, by the way. So, ocean-based flows are simply, absolutely central to all of globalization.

DOLLAR: So, let's talk a little bit about global value chains or supply chains. It used to be that trade was primarily bulk commodities—like corn or coal—or finished products. Now, I think about two-thirds of trade consists of parts and components feeding into supply chains. So, what has brought about that transformation?

JONES: So, essentially what happened, it seems to me, is that the scale of containerized shipping and the dramatic reduction in costs that accompanied that has all but erased transportation as a cost, as a factor in competition. A couple of points here.

In the book I illustrate by referring back to the founder of Maersk, which is the largest shipping company in the world now. Peter Maersk got his start selling commodities around the Baltic Sea in a sailing ship. And his ship could carry roughly the equivalent of 20 containers of goods. He had a crew of 26. I sailed on the Madrid Maersk which had 20,000 container equivalents of good and had a crew of 23. It's just a fantastic increase in efficiency of costs. Mark Levinson, when he did his study of this in the in the 1980s and 1990s, estimated that it cost the same to send a pallet of T-shirts from Malaysia to New York as it did to drive them from the fashion district in lower Manhattan to Macy's in central Manhattan. And of course, the efficiencies have grown substantially since then.

So, it's basically taken transportation out of the cost; it has taken geography out of the equation. It makes no difference whether you are in lower Manhattan or Kentucky or central China. The distance is irrelevant to the cost of your goods, and that has enabled low-cost producers to enter the global market. I make the claim in the book, which I think is well-founded,

that it really was bulk shipping that enabled the rising economies, and above all China, to enter the global market in the way it has and to be able to be a factor in production.

What that has resulted in is going from, you know, it became fashionable in the 1980s to do just-in-time production, sort of copying Japanese production models. We are now in a system of global just-in-time production where virtually everything we consume is an integrated product that relies on multiple different flows of shipping around the world. I describe in the book the dozens of sea-based inputs that come into the production of an Apple iPhone or Nutella. I mean, even simple products have multiple different goods sailed around the world before they are integrated into what we actually consume.

DOLLAR: You also get into the role of the U.S. Navy. If we remember, part of the impetus for developing a Navy more than 200 years ago was dealing with the Barbary pirates and protecting commerce on the high seas. We still have pirates today. So, what do modern pirates look like, and what do you see as the role of the U.S. Navy in maintaining this freedom of the seas?

JONES: Modern pirates look an awful lot like old fashioned pirates: motorized ships instead of sail ships but exactly the same phenomenon. Of course, it was literally with the rise of sea-based trade and the reopening of the Chinese ports and therefore the huge role the Indian Ocean now plays and then the flow through the Indian Ocean, through the Malacca Straits, that gave rise to modern piracy. There are two real hubs of that. There's the Somali-based pirates that threaten shipping in the Indian Ocean and there's piracy through the Malacca Straits.

Let me back up one second. If you think about the period before the re-entry of China into the global economy, most of the trade flows were in the Atlantic. We were sending goods from Europe to the United States and back again, so those seas were bordered by secure or well-

organized states. Once you get through the Suez Canal and you are going through the Red Sea and out into the Indian Ocean and up into Malaysia and Singapore, et cetera, then you are spending a lot of time sailing on bodies of water that are bordered by insecure states that haven't got full control of their territory. Piracy can flourish in those contexts.

For a time, I think it was a kind of hopeful phenomenon, because what we saw was, although the United States Navy plays the critical role in counter piracy, it can't control the Indian Ocean and the Pacific entirely by itself. So, it pulled together a kind of huge coalition of countries to engage in counter piracy with it. Two major ones: one for the Malacca passing, the other for the Indian Ocean. Not only did you have all the major European powers sailing with the U.S. Navy there, you also had India, Brazil, China, and Russia all contributing, and remarkably actually all coordinated by NATO in the Indian Ocean.

There was a period of time where I was sort of hopeful that that presaged a kind of rational overlay on what is otherwise a mounting competition between navies—that the huge stakes that we all have in protection of trade would cause us to see it as a kind of common good and a common security activity. That still holds in the narrow sense of piracy. But it is this irony, of course, that just as our Navy was founded in the fight against piracy, so the Chinese navy really first began to sail out of the waters on its immediate shores as part of their counter-piracy operations out into the Indian Ocean. They opened their first overseas naval base in Djibouti at the place where the Red Sea connects to the Indian Ocean. And as that has deepened, it's pushed us, I think, into a different sense of their ambition and clashing with ours at the high seas.

DOLLAR: So, what is the potential for conflict between the U.S. and China out there on the seas? I think it's already occurring to some extent, or at least the risk of miscalculation on the part of these two navies.

JONES: So, I think, as I conclude in the book, we are already in a global naval arms race. We have been for some years now. It really starts with the move I just described. China hadn't been a seafaring nation for 500 years. It began to develop a navy to protect its shoreline in the 1980s. By the mid-2000s, it was making more expansive claims into the South China Sea, the East China Sea, the Yellow Sea. Then it's really counter piracy that pulls it out into the broader reaches of the Indian Ocean. But, you know, power has its own appetite and growth has its own dynamic, and the bigger it's gotten and the more capability it has the more it's been concerned to protect that capability further out to sea.

We continue to insist that it's our central role to protect the flow of trade in the in the South China Sea, the East China Sea. For a while, China was content to free ride on that, but then they were not content to free ride on that. They were concerned that we had plans to cut off the flow of trade, which we do. We have sort of standing plans to blockade the flow of goods into China's ports. That's deeply uncomfortable for them; they wanted to counter that. And of course, there are strategic issues here and political issues here, namely Taiwan, which is right in the hearts of those seas. We know that Xi Jinping has a clear desire to force a reunification of Taiwan, either politically, if he can achieve it, or militarily if he if he must. He can't achieve that without a strong Navy. So, the kind of naval buildup by China, you could argue, is defensive and largely commercially oriented, or you can see it as strategic and threatening. And, of course, it's kind of in the nature of the tragedy of great power politics that the United States is not going to look at that and just take a bet that its defense. Then, of course, there are lots of other forms of Chinese behavior that cause us to interpret what it means that they have that military build-up. So, we have seen this rapid deterioration of U.S.-China relations of which the arms race in the Western Pacific is at the core.

One of the things I say in the book is that it is that rivalry, the naval rivalry in the Western Pacific, has been a key driver of the deterioration in relations between the two countries. We are now in an arms race. Russia is part of that. India is part of that. Japan is part of that. The European navies are sort of trying to restore their capacity to participate in that arms race in the Western Pacific. We saw last week this major new agreement between the US, UK, and Australia to provide Australia with nuclear submarines, long range strike. So, this is really heating up. This is now, in my mind, the key flashpoint in geopolitics is the naval arms race centered in the western Pacific.

DOLLAR: Bruce, you mentioned the role of data, particularly the undersea data cables. So much of data is traveling that way. Can you explicate that a little bit more? Who actually owns the cables? I would think they would be a great source of vulnerability. I mean, if you have a war in this modern world, is cutting off the data going to be key? And is that really going to hamstring militaries, or do they have ways of operating around that?

JONES: I described it in a recent publication as the most important and the most vulnerable network in all of globalization. Think about every part of our economy, every part of our life, this Zoom meeting, your cell phone, your financial transactions, ordering stuff on Amazon, military commands all relies on the vast flow of data, and undersea cables are, as I said earlier, 93 percent of those flows. So, it's vastly important.

They are astonishingly vulnerable. A friend and colleague of mine just sent me some photographs a couple of days ago. He decided spur of the moment to go and visit the docking station for one of these cables in Djibouti—kind of just meandered and meandered around [with] almost no security. Some of them are owned by governments. Some of them are owned by companies. Microsoft and Google just collaborated to lay across the Pacific the fastest data cable

there is. There are a number of navies that have the capacity to tap them, and a number of navies that have the capacity to disrupt them. Storm systems can disrupt them.

Whether or not they will be disrupted in times of war is a tricky one, because as with globalization, it's a two-way reliance. We could choke off the cables, but our own economy is fundamentally relied on that flow of data. The same for the Chinese. I think the worrying scenario is in a military move against Taiwan that the Chinese military would cut off the cables to the Taiwan Straits. There are ways to do that that only interrupt data flow in Taiwan, but it's pretty easy to make a mistake in that and to trigger a wider cut off of flows. So, I do think they are a very vulnerable node of globalization.

DOLLAR: The last part of your book, Bruce, takes up policy recommendations for the U.S. and for the world. In particular, you argue for remaking globalization. So, what do you have in mind there? What are the key issues for the U.S. and for the world?

JONES: It's an easy thing to say and hard thing to do. Look, I end by emphasizing this frank fact of the deep tension between our natural and our economic interconnections on the one hand and the deepening reality of geopolitical tension on the other, and a worry that it's going to be impossible to operate those two things simultaneously. I'm therefore a sort of a reluctant subscriber to some version of the notion of "allied-shoring" or, you know, these kind of phrases that get used which look to the question of whether we couldn't shift some of the supply to countries with which we are less likely to be in direct conflict.

What I try to emphasize in the book is we have to start having a conversation about the vast costs that that would entail. This is not some cheap thing that we could do. It's a vast cost. Some of it will happen naturally as China moves up the value chain. Some of it can be done in very limited fields. Some of it will be very expensive.

All of that would be easier if India genuinely moved to open its economy and the way that it has sometimes said it will do but has never actually done. One of the things I point out in the book, if you look at an economy the size of India, now the fifth-largest economy in the world, it does not have a single port in the top 25. It's just a measure of the reality that India has not yet meaningfully opened itself up to globalization. It has in very specific sectors, but not in a deep way. A lot of what we would want to do to remake globalization would be easier if India did that. I sometimes think that we need we don't need a foreign policy for the American middle-class the way Biden says, what we need is a foreign policy for the Indian middle class, which is vastly important in terms of what happens next on climate change, vastly important what happens on naval dimensions in the Indian Ocean.

So, as I said, I sort of reluctantly conclude that some version of that is the only way we can avoid what otherwise we risk, which is a kind of extremely sharp and expensive interruption in in globalization if we get to the point, which I think is likely, that we actually see direct contestation between our navies in the South China Sea, the East China Sea, and out into the Western Pacific. So, a retooling of supply chains of that type is probably a logical move. It's an expensive move, but we have passed the point, I think, where globalization is in any meaningful way serving as ballast against the deepening tensions with China. And we have to kind of begin to recognize that and have a serious conversation about what that will cost and how we move that way.

DOLLAR: I share your frustration about India. I've done some work on India for the World Bank over the years. I did an investment climate study; visited a lot of factories all over the country. They face a lot of challenges in terms of opening up.

JONES: They do. But as I say in the book, it's obviously for them to decide what role they want to play, on all the major debates that described in the book, if they, as they seem to be doing, choose to genuinely develop their Navy and work closely with us and others through the quad, it's a real game changer in naval terms. What they choose to do next on urbanization and industrialization, what fuel mix there is in that, is the central question in whether or not we miss our targets or hit our targets in climate change. And what role they choose to play in the global economy will be, I think, crucial to the options that we do or don't have in terms of remaking globalization.

DOLLAR: But if India opens up, isn't it likely they would become deeply integrated with China? I mean, as we get out later in the century, these would probably be the two biggest economies in the world. They border each other.

JONES: Well they are very integrated now, as you know, and they are each other's largest trading partner, so that could happen. But I do think there has been a sea change in India—no pun intended—a sea change in Indian thinking about what China is, the risks that China poses to them, the vulnerabilities that they have. It's a country they have fought three wars within this century alone. So, I think there is a desire to find a different way to do business.

Again, this is all extremely expensive and may not happen, but if it doesn't, then we will certainly face this kind of acute interruption in global supply chains if and when there is a direct confrontation with the Chinese.

DOLLAR: I'm David Dollar and I've been talking to my colleague Bruce Jones about his new book, "To Rule the Waves," which will give you fascinating insight into how commerce actually takes place on the high seas. And Bruce, it emphasizes your final point there that it's probably going to be very costly to try to untangle some of these supply chains because they are

so embedded and so efficient. So, this is a really good book to give you the background to understand these geopolitical debates.

JONES: Thank you, David. I really appreciate the conversation.

DOLLAR: Thank you all for listening. We'll be releasing new episodes of Dollar & Sense every other week, so if you haven't already, follow us wherever you get your podcasts and stay tuned. Dollar & Sense is part of the Brookings Podcast Network.

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Until next time, I'm David Dollar, and this has been Dollar & Sense.