

Law and the New Logistics

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I appreciate the opportunity to speak here in Hawai'i (by video, alas). As a practicing lawyer, I work on some particular matter, and research the heck out of that one matter, and then go off to work on something else. I rarely get to see the whole picture until and unless I get to talk in a class. In collecting my own thoughts, I also repeat the sounding joy of conveying the learning, of paying it forward, to lawyers just beginning their careers.

For this arcane specialty, the need and the pleasure are doubled—to help both me and you understand an area of the law that tends to get very little respect. You don't see entire courses, or even entire class sessions, on this topic. Transportation law is something we lawyers are told we must pick up when and as an issue hits us in the face, as it will surely do sooner or later and after that from time to time.

My subject today is law and the *new logistics*. I say “new” logistics in terms of increments, additions to what should be called “background” logistics. Background logistics, not “old” logistics, is still a very live subject. People have been transporting goods ever since there have been people. Some of you may grow up to be railroad lawyers. Longstanding logistics subjects are still relevant to lawyers and non-lawyers today.

The traditional picture you get in economics is that everyone either makes things or buys things. Here's my first quotation, from that authoritative legal reference, [*Encyclopedia Britannica for Kids*](#):

A society's economy is based on creating wealth through selling and buying. The people who do the selling and buying are producers and consumers. Producers create, or produce, goods and provide services, and consumers buy those goods and services with money. Most people are both producers and consumers.

Producers produce and consumers consume. That's usually the way that people think of the world's economy: we put each of us into one or both of those two categories. Well, there's a third category. How do goods and services (and technology) *move* from those who make them or store them, on the one hand, to those who purchase or consume them on the other?

Here is a second quotation, an [example](#) of the typical comment that is made during a commercial crisis of any type:

I'm not sure end users care about the details of transportation, except when they don't work.

“Except.” *Except* when the overseas courier package never arrives. *Except* when a ship gets stuck in the Suez Canal. *Except* when rebels attack the Red Sea shipping lanes. It’s when things go wrong that suddenly we all become very interested, and suddenly everyone on social media is an expert, in how transportation works and, by extension at least for us lawyers, how transportation law works.

“Logistics” is a fancy umbrella term for the management and execution of the movement of products from producer to consumer. It takes place in a number of dimensions. First the functions, starting with packaging and storage, which may sound straightforward but can be complicated with fragile and perishable items. It extends to the physical act of transporting. It includes the “breaking bulk” of a large package like a shipping container or crate—when and where is it divided into individual items—which may sound trivial but which is highly relevant for tax, insurance and other purposes. It includes the policy and economic aspects of clearing borders in export and in import. Now we have the collection, transmission and processing of information about that movement and of the goods in transit—from whether a container is radioactive to how many stops away is that Amazon truck. Near and dear to lawyers’ hearts is the management and transfer of transportation risks, which I will cover in detail below.

Beyond functions, logistics is also concerned with the different vehicles, the media of transport if you will. Some vehicles, like ships, have been around for millennia. In between then and now, we have seen vehicles, railroad trains, aircraft, pipelines and other media. Others, like autonomous drones, are as recent as today’s Instagram feed.

The players in this field start with the classic category of carriers, the entities that control the vehicles and bring goods from one place to another, and the shippers and purchasers or consignees on either side of those carriers. There are lots of middle-people these days; you can have brokers, logistics service firms and what used to be called “freight forwarders.”

Logistics is an arena in which a perhaps surprising number of public policies play out. I don’t have to remind you of that in a time like March of 2025, with all the discussion of trade restrictions and tariffs. The movement of goods is where we see enforcement of norms in national security, physical and cyber security, environment, safety and health, and all manner of socioeconomic goals.

And logistics is big business. It may be as much as [an eighth of the world’s GDP](#).

Collectively, these are the things that we refer to in the law as *logistics*—note the plural *S*. (Some of you who have taken biology or business courses might have heard of [logistic curves](#), with no plural *S*. Those are *S*-shaped curves starting off slow, then accelerating steeply, then plateauing as a quantity reaches a saturation point. For extra credit, what’s the relationship between a *logistic* curve that you see in predator-prey relations or product innovation adoption cycles, and

what we're talking about here in the law of *logistics*? That's a cliffhanger question to be held until the end of this article.)

As a practicing lawyer, I would get into these areas one by one, feeling different parts of the proverbial elephant. I'd be asked to review a contract with a shipping firm. I'd be asked who would bear the risk if something were lost or damaged. I'd be asked to interpret how to comply with the regulations. But I didn't get a full picture of the topic.

My spotty piecemeal education really struck me my first time that I spoke on this subject at law school—smack dab in 2020 and the outset of the COVID-19 pandemic and the worldwide responses to it. In the wake of that episode many traditional transportation rules and practices shut down, and new rules and practices were crafted. My major question then was what changed during the years 2020 to 2023—and which aspects are going either to return to normal, or to create a new normal. Now, here we are in the trade wars opening the year 2025, probably having a new set of major questions about what is transitory and what is going to remain in the worldwide movement of goods.

Logistics as a subject for lawyers has been around for a long time too. I found there was even a large treatise, [*Transportation, Logistics & the Law* \(2d ed. 2004\) by William J. Auguello](#). You can see from an excerpt of the table of contents the kinds of subjects that it addresses:

1. *Federal v state jurisdiction*
 2. *Regulation of railroads, motor carriers, airlines and ocean carriers*
 3. *Regulation of brokers, forwarders and third-party logistics firms*
 4. *Liability for loss and damage*
 5. *Cargo insurance*
 6. *Importing and exporting*
 7. *International laws and treaties*
 8. *Hazardous materials regulation*
- [plus thirty-two Appendices of treaties, statutes, regulations, contracts and glossaries]

Jurisdiction, regulation of railroads, administrative agency proceedings, international treaties limiting liability, thirty-two appendices...

All this content frankly seems pretty dry. Not only dry, but also ancient: when you buy your airline ticket, if you really click through to read the fine print, you will find that many of the current rules for casualties during an aircraft flight were set in [Warsaw in 1929](#), barely out of the biplane era; that treaty, amended in part and for some countries in [Montreal in 1999](#), still governs some topics. The book makes it sound as though the rules have been with us forever, with slight modifications here and there.

What I want to communicate by the term “the new logistics” is that under the placid surface conveyed by that treatise are roiling waters. We are encountering an emerging range of significant raging issues.

- Most recently, we see trade actions reminiscent of trade wars of the 1890s and 1930s in terms of sanctions, tariffs, counter-tariffs, and other restrictions.
- We have real wars, real unrest, affecting the way in which goods are moved.

- We have current developments in macroeconomic conditions with inflation levels not seen for some time compounding those hot and cold conflicts.
- We have not only a prior pandemic (and the COVID-19 fatalities continue to this day). We have the risk of future pandemics and quarantines and the ever-looming threat of additional restrictions, in terms of both the biological condition itself and what governments might impose in response to them.
- We have employment shifts, with jobs and locations of manufacturing moving either close to you, say in the United States, or far away from you, toward a supply hub on another continent.
- We have impacts of employment and manufacturing on political conditions. What is the union representation of the workers? How do they vote? What environmental and labor standards apply to the workforce and the manufacturing process?
- We have all sorts of physical security issues, ranging from international criminal networks to porch theft.
- We have cyber security issues, with threats from afar through remote access to facilities and threats close at home simply through phishing of passwords.
- We have changes in the types of vessels and other vehicles. The law has not sufficiently caught up with tiny drones on the one hand, and huge ships on the other—ships some of which are now longer than the canals are wide.
- Makers used to maintain inventories of products or replacement parts for a multiple-year product life. Now, some products cycle within months before they become obsolete and an upgrade is necessary. How much your warehouse of products or parts has also changed thanks to the pandemic—a lean, “just in time” approach has in many cases been replaced with a stockpiling, “just in case” mentality.
- The law has not caught up with autonomous technology, starting with machine learning and extending to more sophisticated versions of artificial intelligence.
- We have gone from individual smaller firms running the logistics sectors to big box companies, and from big box companies to big tech companies. We used to think that Walmart and Costco were the big logistics companies. Then we thought it was DHL and FedEx. Now it’s Amazon. What has changed in the marketplace—Amazon is practically a marketplace all by itself by any definition—and what is the exposure of individuals to these players with large market shares?
- And all of these new or modified conditions are added to the old-time perils of the sea. Those dangers still exist, augmented by economic changes and climate change.
- Throughout all of logistics, we see the impact of public goals in the form of treaties, statutes, regulations and executive branch actions.

- Regardless of tail winds or head winds from government, there is an inexorable movement toward sustainability and the greater electrification of logistics.

Exhale.

I am figuratively grabbing you by the lapels of your coat and urging you, “*This is interesting stuff, darn it!*” This is *not* what is suggested by that dreary table of contents. There are all these subjects that could be torn from any of today’s headlines.

In this presentation, I’m going to talk about selected issues in the new logistics.

- Number one, how does logistics work when it works? How do goods move from somebody to somebody else who don’t know each other, who don’t have a connection with each other, who don’t have any reason to trust each other?
- Number two, how does logistics go wrong? What are some of the unhappy things that happen—loss or damage in transit, the fragility of supply chains, or surprises in changes in government policies?
- Number three, given the fact that something might go wrong, what does the law have to say about logistics risks? How do we collectively allocate those risks—either contractually or by background rules—and how do lawyers fit into the solutions? Once the risks have been initially allocated, how do parties go about managing the uncertainties?
- Number four, how is *sustainability* in all its manifold meanings relevant to logistics? What is changing, and what is being proposed to change, in the ways in which transportation interacts with its environment?

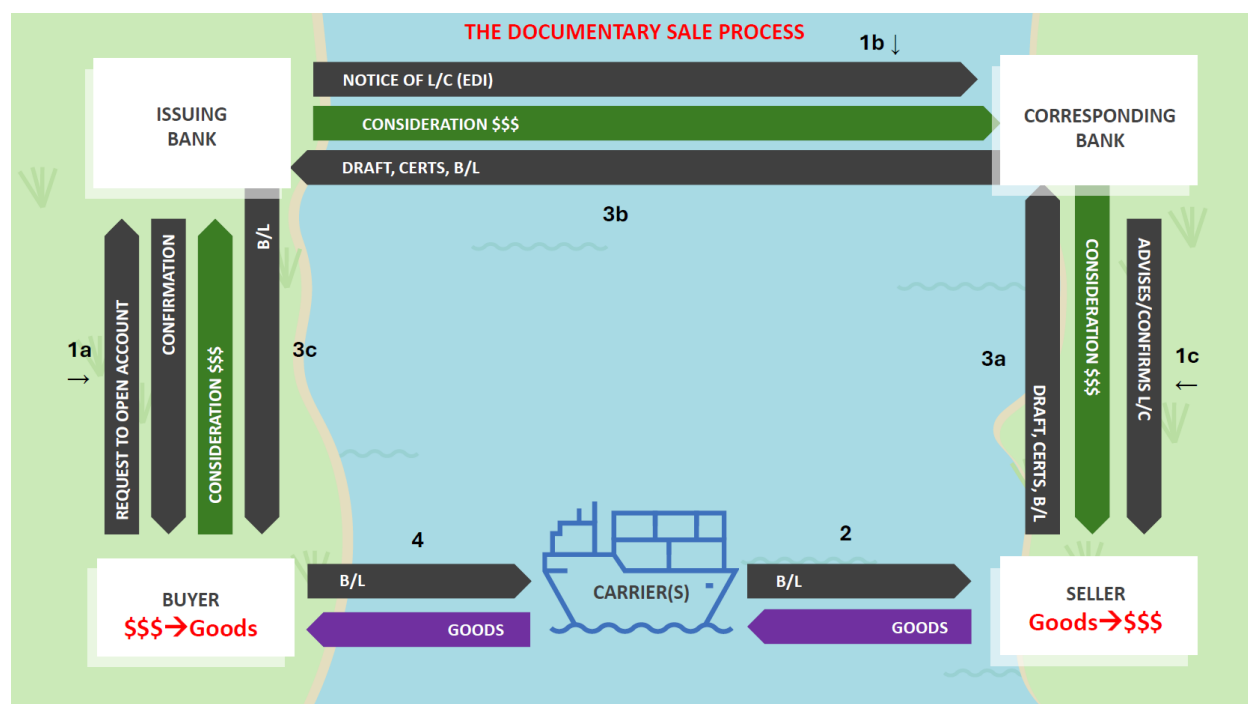
First, how does logistics work when it works? This is perhaps the one and only *Uniform Commercial Code cartoon*. At least I don’t know if anyone else has tried to animate a UCC transaction. This may be how the Acme Corporation shipped its anvils and giant magnets to Wile E. Coyote. (It may be a crude cartoon, but so was [Steamboat Willie](#) and look what happened to him. Laugh all you want, though I suppose that is the whole point of a cartoon.)

If I have done this right, you should see an embedded mp4 of the individual steps in a typical logistics transaction. Click on it and watch a few times to master the rhythm of the deal. Then take a look at the still photo of all the steps. Then go back to the cartoon. I analogize this to listening to a song and then reading from the sheet music.

Drumroll:

[The Rob James UCC cartoon](#) (click on link)

The still photo:



In any event, here we go. Down at the bottom of the picture you will see a *seller* who initially has goods of some sort, and a *buyer* who initially has money of some sort (it doesn't have to be U.S. dollars; it might be any currency—euros, renminbi, Tether).

What we have here is the classic playground trade between one kid holding a frog and another kid holding a bag of marbles. Except in this case, perhaps the frog is a shipment of computers and the marbles are \$20 million. The question in the schoolyard is how you get both kids to let go of their possessions. Who on Earth would let go of the frog before getting the marbles in return? The playground problem is augmented here, because the kids are on different continents, an ocean away from one another. The seller may not know the reputation and creditworthiness of the party ordering the computers; the buyer may not know the reputation and manufacturing quality of the party selling them. How do they nonetheless make a trade?

My cartoon features three other characters. In this simplified picture there is a single *carrier*, which is the term for the proprietor of a ship, truck, plane or train, more likely a combination of several vehicles that move with goods between the locations. Then there are a couple of banks: an *issuing bank* on the buyer side and a *corresponding bank* on the seller's side, literally on a "bank" of the body of water illustrated on this crude chart. Those are the five players that I'm going to work with.

You can find all this in Article 7 of the Uniform Commercial Code if you look hard enough. The first thing that happens, **Step 1**, is the buyer opens an account with the issuing bank, if not previously opened, and has sufficient deposits in that account. The issuing bank is thus in possession of money to pay for those computers.

The issuing bank confirms to the corresponding bank that the buyer's account is open and funded. The issuing bank issues a documentary letter of credit, a fancy way of saying that it is ready to let that money go provided it receives the right pieces of paper—in this case, the bill of lading evidencing shipment of the goods, and a draft ordering payment of the purchase price to the seller or order. The corresponding bank lets the seller know that the letter of credit is open. (If the seller is really paranoid and doesn't trust the issuing bank, it can pay a bit more and have the corresponding bank not just advise but also "confirm" the letter of credit, putting the corresponding bank on the hook as well.) Taken as a whole, this first step equips the seller with assurance that a trustworthy intermediary, the issuing bank, has the money and is obligated to release it in return for the bill of lading.

Step 2 ensues. Armed with that assurance, the seller puts the goods into the hands of "the carrier." That could be a truck that just travels between the seller's factory and a port, for onward transport, and similar segments of ships, trains, planes and trucks. The seller receives something back, namely the aforementioned bill of lading. In short, the bill of lading is a document (whether physical or electronic in form) that evidences that goods have been surrendered to a transportation firm and that the named party, or in the case of a negotiable bill of lading, the named party or whoever else to whom that bill of lading has been assigned for value ("negotiated")), has the right to demand delivery by the carrier of those goods. So the seller has given up the goods, but in recompense it now holds that precious bill of lading.

Step 3 follows. Run backwards through the daisy chain. The seller tenders its bill of lading to the banks in accordance with the letter of credit and makes a draft demanding payment. Once the issuing bank gets the bill and the draft, it is obligated to let the money go. With the bill of lading in hand, the issuing bank gets that bill of lading to the buyer. The buyer has seen its account at the issuing bank debited by the purchase price, but it knows that the issuing bank has the bill of lading representing entitlement to the goods.

The final **Step 4** takes place when the last vehicle arrives at the point of delivery—when the buyer greets the carrier delivering the goods. The buyer tenders the bill of lading and the carrier hands over the goods.

The conclusion of the cartoon shows we have come full circle. Instead of the seller having the goods and the buyer having the money, it's the seller having the money and the buyer having the goods.

This picture is almost complete, except for one small detail—the incurring and payment of fees. The buyer and seller have to pay for the carriage and for the banks, though I hope not for any lawyers. But there is always some friction, some transaction costs a la [Ronald Coase](#).

When things go right, this is the way they go right. Bills of lading and letters of credit can be physical documents, but they can also be electronic and transmitted in encrypted form. Whether tangible or intangible, the documentary process ensures that at each and every stage, anyone who parts with money or goods receives entitlement to the return consideration. Thus each of the parties is protected, even though this buyer and this seller don't know each other and may never deal with each other again. It's pretty remarkable how often this works well. This is how you are transacting all the time you order goods from far away, thanks to the background rules like Articles 5 and 7 of the UCC.

That [bill of lading form](#), by the way, in large part is unchanged from antiquity. The same subjects have been addressed, though the goods have changed. My favorite poem in some way related to the Uniform Commercial Code (doesn't *everyone* have a favorite UCC poem?) is "Cargoes" by John Masfield, of "In Flanders Fields" and "Sea Fever" fame. It rather sardonically chronicles the decline in the romance of high seas commerce, from the exotic treasures and riches of yesterday to the mundane claptrap and bric-a-brac of today:

*Quinquereme of Nineveh from distant Ophir,
Rowing home to haven in sunny Palestine,
With a cargo of ivory,
And apes and peacocks,
Sandalwood, cedarwood, and sweet white wine.*

*Stately Spanish galleon coming from the Isthmus,
Dipping through the Tropics by the palm-green shores,
With a cargo of diamonds,
Emeralds, amethysts,
Topazes, and cinnamon, and gold moidores.*

*Dirty British coaster with a salt-caked smoke stack,
Butting through the Channel in the mad March days,
With a cargo of Tyne coal,
Road-rails, pig-lead,
Firewood, iron-ware, and cheap tin trays.*

Some of the romance may be missing from modern commerce, true, but the rules are much the same. The bill of lading describes the goods, the vessel or other vehicle, and who is to receive the goods. There are clauses either confirming or modifying the allocation of risks between the seller and recipient on the one hand, and the carrier on the other hand. These forms are prescribed by treaty or regulatory agencies, or are contracts of adhesion that the carrier will not modify. These bills of lading are lurking in the background of all transactions and are invisible when things go well.

Well, what happens when things go wrong?

The analysis begins with a series of international treaties, including in the maritime context the [Hague-Visby Rules](#) (there must be like fifty "Hague conventions" in the law). Each signatory

country has implemented it by local legislation. In the United States, that statute is the [Carriage of Goods by Sea Act or COGSA](#). It generally limits the liability of ocean carriers to \$500 per “package.” Don’t count on the legal liability of the carrier for big bucks. That limitation is per “package,” true, and people agonize over what’s a package—is it each individual iPhone or is it the entire container or crate of hundreds of iPhones? Overall, though, these statutes impose such a modest limitation that the practical solution is usually found through procurement of insurance. The party who bears the risk of loss or damage in transit—and we will cover below whether that is the seller or the buyer—is incentivized or obligated to insure the goods.

What else can go wrong? Entire supply chains can be broken. There are vulnerabilities from changes in government policies and the hazards of the macroeconomy affecting general economic conditions. There can be microeconomic hazards, like the closure of your favorite source or your sole source of a product. There are both physical security vulnerabilities and cyber security vulnerabilities. And there are completely unexpected contingencies, such as the COVID-19 pandemic and government responses to it, or what we are living through today with the re-emergence of high trade barriers.

The globalization of supply chains has dramatically increased. Goods may be shipped from Asia, but they come together through complex movements of raw materials and intermediate products from many other continents. There was a pandemic 25 years ago called SARS that almost everybody has forgotten about—because in 2000 Chinese exports in the world global market were relatively modest. Fast forward to today where China, and East Asia more broadly, are much larger percentage of the world’s manufacturing and commerce. COVID-19 had a far greater impact.

People talk about a supply *chain*, but it’s really more of a supply *web*. [Supply chains have supply chains](#). You can’t just simply view supply as a linear function because all of the manufacturing processes are dependent on one another, including the making of the machines that are used to make the machines. Your smartphone might have been assembled in Asia. But the materials in the typical phone are reported to have originated in 43 different countries—whether it’s cobalt from the Congo, neodymium from the United States, or lithium from Bolivia. There are some 70 elements on the periodic table that are contained in that little phone.

All those inputs have to make their way to that Asian factory to be assembled, and then make that fateful last trip. But the fact that the last shipment is departs a particular country tells you *nothing* about what it would take to regulate the trade in that particular commodity. Despite what politicians say, one cannot simply take that last stage and move the automobile assembly plant to Akron, Ohio. Where is the chassis made? Where do the airbags come from? Those are still where they were before your assembly plant move. That supply web has been woven over decades, and can’t be redone by simply slapping a tariff on the import of the good from that last factory. Understanding the density and complexity of the supply chain is important.

One practical and perfectly understandable reaction to supply chain vulnerability is to stockpile. It wasn’t too long ago that the mantra was to only have “just in time” inventory. It keeps your balance sheet in fine shape and allows you to respond immediately to changes in product demand and product design. Just in time inventory was also said to be responsible for the quick recoveries from economic downturns; as soon as demand rose the orders for manufacturing rose

and the overall economy kicked into action. [Now, the mantra is not “just in time,” it’s “just in case.”](#) With greater stockpiles to insure against supply outages, we might see longer economic recovery ramps as the inventories are worked off before the manufacturing orders resuscitate that depressed sector. So even a subject as arcane as transportation can shape the economic aspects of a business cycle and even determine the political aspects of a entire nation or set of nations. Wow!

Tariff and trade restriction issues are extremely complicated. An international law firm like mine issues all sorts of alerts on sanctions of various types, on the entire import trade from a country or on selected commodities like steel and aluminum. *The first tariff announcement is just 1. e4 in a long chess game*—what matters are the reactions and counter-reactions of nations, producers, importers, and consumers.

These tariffs have to be paid by someone, and the impacts of sanctions and trade restrictions have to be borne by someone. In the first instance the added costs may be paid or borne by the first importer or would-be importer of the good. What happens next? That money has to come from somewhere. Whether that importer (meaning its owners) has to swallow the cost, or whether it is able to pass it along to its customers and their customers inside that country, is a complex matter. It depends among other factors on the elasticity of demand, alternative sources of supply, alternative outlets for demand, the extent of participants’ market power, and the relevance of technological change.

The gospel truth is that nobody really knows what the impact of some of these tariffs would be. I was educated in an era where free but fair international trade was considered to be the anchor of prosperity for all—let every country do what it does best. Tariffs, if they existed at all, were to be reserved for helping incubate nascent industries in a developing country, not for masking over problems of a declining mature industrial sector in a developed country that was no longer competitive in world markets. I don’t recognize the principles that I was taught being represented in the discussions today, and that goes for both political parties.

Physical problems and human interventions can stymie the global supply chain. This photo is of the Francis Scott Key Bridge in Baltimore in 2024.



I'm a landlubber, but I can tell something has gone wrong here. That [crash](#) prevented transit into and out of the Baltimore harbor, affecting shipments up and down the whole east coast of the United States.

Strikes can similarly impact the chain. In 2024, we witnessed labor actions for [Canadian rail transit](#) and before that in 2023, a [UPS strike](#).

There are all kinds of military and quasi-military actions. Ukraine and Russia are major sources of energy and agricultural products and certain critical minerals. Suez Canal traffic was reduced by up to 50% due to [attacks by Houthi militants](#) in the Red Sea shipping lanes.

Even a virus embedded in an upgrade of a software program can take down transit. Consider the [Maersk shutdown in 2017](#), causing massive outages for air and rail transit. Maersk is a big shipping line and they operate facilities handling a large portion of the world's transportation. They experienced a cyber attack that made almost all of their equipment useless. I say "almost." That is because there was fortunately a power outage in Nigeria and their branch office was offline and uninfected by the virus. That one office saved the entire corporation by already being disconnected. So a very nervous IT guy flew from Lagos to Copenhagen with the one and only working set of software instructions in his carryon luggage. I wonder if Maersk now has something like a "designated survivor" program where they keep one facility worldwide offline at all times to guard against the next virus. All I can say is that this is the kind of world we live in today.

Here in early 2025, we must refer to the [Panama Canal](#) and what we're seeing that may affect transportation. President Trump came out of the gate wanting to reassert influence over the canal, custody of which was transferred by President Carter and Congress back in 1979 effective in 1999. One ground for reasserting control was the fact that Panama entered into operation contracts with companies chartered in Hong Kong. Another was the magnitude of fees being charged for transit through the canal. Needless to say, this concern over operations and fees is colored, even over-shadowed, by the national security and economic tensions between the U.S. and China. In response, Panama vigorously reasserted its own sovereign control of the canal. In further response, an American investment firm, BlackRock, is acquiring an interest in operator contracts or entities.

It is hard to distinguish the rhetoric from the reality. Any lawyer should appreciate the differences among ownership, operatorship and control. Those are very different concepts. To say that a company is operator doesn't necessarily give it control to interrupt traffic or to set the rates it collects. The rates were set by Panama, the operatorship complied with them and other rules. There are a lot of atmospherics going on.

All that being said, the Panama Canal is truly important. It is the major thoroughway for Atlantic-Pacific Ocean commerce. When transit through the canal is restricted for any reason, it matters. Even climate change can play a role; recently there were some changes affecting water levels in some of the locks. And very expensive modifications were needed to accommodate vessels of extraordinary size. I suspect the costs of those modifications have something to do with the fees that are being contested by President Trump.

I reiterate that the lesson here for lawyers is that when an entity is said to control a function, pursue that a little bit. Ownership, operation, and control are very different things. Think of them akin to the bundle of sticks you heard about but never saw in your property law class. All of those attributes can be held by one party or they can be distributed. Where are the powers economic and political checks and balances?



ONE APUS, Dec. 1, 2020, en route Yantian-Long Beach

Then there are the traditional perils of the sea. This container ship heading from China to California ran into rough water, and [over 1800 of its 27,000 containers shifted off the vessel](#) into the briny deep Pacific. You can imagine the law school exam question you could make if you were the professor in a transportation law class. The ship left China destined for California, but the accident occurred in the open seas near the Philippines. What law applies? What forum will hear which cases? The shipment of all those containers was contracted for using all sorts of different bills of lading that probably have different boiler plate and governing law clauses. The owners of the contents of the 1800 lost containers are very sad, but do they have a remedy against the vessel? Do they have a remedy against the owners of the over 25,000 containers that didn't fall off, simply because they were lower down in the stacks? (Believe it or not, there's a claim under maritime and admiralty law to adjust the loss between the lost cargo and the remaining cargo, on the principle of "general average.") The carrier or the loading port might be liable for negligence or in some cases for liability without fault. And governments may step in, particularly if the sunken containers as in this case included hazardous materials.

Once again, insurance is going to step in for a lot of these claims. Likely it will be insurance company against insurance company, and in many cases after the smoke clears it will be apparent that the same insurance or reinsurance company is on both sides, which is rather amusing.

The final step in the management of risk is the allocation of exposures between the person shipping the goods, typically a seller, and the person receiving the goods, typically a buyer. This is not covered by the bill of lading, or the letter of credit. Instead, it is handled in the contract of sale, and for transportation risks this is the domain of INCOTERMS. So let me turn to that.

Have you ever seen three little letters in a contract like FOB or CIF? Those are INCOTERMS, shorthands codified in publications of the International Chamber of Commerce. (They have been around for quite a while, and even show up slightly differently in legal sources like Article 2 of the UCC. But INCOTERMS are the preferred authoritative source.) The ICC calls them “trade terms” but I think a better expression is “delivery terms.” Those three little letters are shorthand used in commercial transactions to incorporate by reference detailed clauses explaining completely (a) what a seller has to do to finish its job, (b) who has to clear customs for export and import, (c) who bears the risk of loss or damage in transit, and (d) who has to prepare what documents.

I have written an entire piece on this arcane subject, “[An Inkling of INCOTERMS](#),” available on [my personal website](#).

An Inkling of INCOTERMS

AN INKLING OF INCOTERMS® 2020
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Term, Mode	Meaning (must insert [place])	2 Seller's Delivery Obligation	3 Risk in Transit	4/5 Carriage Obligation/ Insurance Choice	6 Delivery Documents	7 Customs Clearance	9 Transportation Cost Allocation	10 Notices
EXW	Ex works [delivery place]	Place at B's disposal at named place, ready for loading by B or its carrier	B	B may arrange for carriage/B	B: evidence of taking goods	S: Assist B: Exp/Tran/Imp	S: None B: All	S: If needed for B to take goods
FCA	Free carrier [delivery place]	S premises: Load on B's transport Elsewhere: place at B's disposal on S's carrier, ready for unloading by B or its carrier	B	B/B	S: evidence of delivery Option: B: bill of lading when risk passes, not when loaded	S: Exp B: Tran/Imp	S: Exp, loading if S premises B: loading if elsewhere, Tran/Imp	S: delivered, or carrier failed to take timely
FAS	Free alongside ship [shipment port]	Place alongside B's nominated ship at named port—e.g., on quay or barge—or procure goods there	B	B/B	S: evidence of delivery	S: Exp B: Tran/Imp	S: Exp B: Tran/Imp, other	S: delivered, or vessel failed to take timely
FOB	Free on board [shipment port]	Place on board B's nominated ship at named port or procure goods there	B	B/B	S: evidence of delivery	S: Exp B: Tran/Imp	S: Exp B: Tran/Imp, other	S: delivered or vessel failed to take timely
CFR	Cost [and] freight [destination port]	Place on board ship at origin port (name it) or procure goods there	B	S/B	S: transport document (e.g., bill of lading)	S: Exp B: Tran/Imp	S: Freight, Exp B: Tran/Imp, other	S: If needed for B to receive goods
CIF	Cost, insurance [and] freight [destination port]	Place on board ship at origin port (name it) or procure goods there	B	S/S must buy clause A LMA/IUA insurance	S: transport document and policy or evidence of insurance	S: Exp B: Tran/Imp	S: Freight, Insurance, Exp B: Tran/Imp, other	S: If needed for B to receive goods
CPT	Carriage paid to [destination place]	Hand over to carrier at origin place (name it)	B	S/B	S: transport document	S: Exp B: Tran/Imp	S: Freight, Exp B: Tran/Imp, other	S: delivered, and if needed for B to receive goods
CIP	Carriage [and] insurance paid [to] [destination place]	Hand over to carrier at origin place (name it)	B	S/S must buy clause A LMA/IUA insurance (CIP 2010 clause C)	S: transport document and policy or evidence of insurance	S: Exp B: Tran/Imp	S: Freight, Insurance, Exp B: Tran/Imp, other	S: delivered, and if needed for B to receive goods
DAP	Delivered at place [destination place]	Place at B's disposal at named place, ready for unloading by B	S	S/S or B	S: as needed for B to receive goods	S: Exp/Tran B: Imp	B: Unloading, Imp S: Exp/Tran, other	S: if needed for B to receive goods
DPU (2010's DAT)	Delivered [at] place unloaded [destination place]	Unload at named place for B's disposal	S	S/S or B	S: as needed for B to receive goods	S: Exp/Tran B: Imp	B: Imp S: Unloading, Exp/Tran, other	S: if needed for B to receive goods
DDP	Delivered duty paid [to] [destination place]	Place at B's disposal at named place on S's transport beyond import customs, ready for unloading by B	S	S/S or B	S: as needed for B to receive goods	S: Exp/Tran/Imp B: Assist	B: Unloading S: Exp/Tran/Imp, other	S: if needed for B to receive goods

[Robert A. James, An Inkling of INCOTERMS® 2020](#)
(Full chart with annotations)

Those three little letters, supplemented by the name of the origin or destination point, purport to answer all those questions. What if your sale contract says FOB, and also has a clause entitled “Risk of Loss”? *Congratulations, you probably have a conflict*, because FOB incorporates by reference a risk of loss clause that likely differs from your express clause.

You should also know what INCOTERMS do not do. In particular, they do not define when and where and how payment is made. I’m sure you have heard the three little letters COD, or “cash on delivery,” which sounds like an INCOTERMS but it isn’t. Don’t look to INCOTERMS to define force majeure, or hardship excuses of any kind. What if your sale contract says FOB but doesn’t have a force majeure clause? *Congratulations, you have a gap*, which will be filled in by whatever background law governs your conduct.

The INCOTERMS question I am most often asked, typically by my friends the friendly tax lawyers, is where and when does title to the goods transfer. If you've had any commercial law class, you know that transfer of title is a very complicated subject, and frankly it isn't made any easier by INCOTERMS. My piece "[An Inkling of INCOTERMS](#)" provides an introduction to the analysis.

For this introduction, let me just show the INCOTERMS endpoints. The EXW term is the sweet life for a seller. An EXW sale contract is the seller saying to the buyer, "Buyer, I'm not going to lift a finger. Buyer, you or your carrier come all the way to the door of my factory. You and your carrier have to pick it up, load it in your vehicle, and take it all the way from my factory back to your home. Buyer has all the jobs, Buyer has the risk of loss or damage in transit, Buyer has the incentive to procure transit insurance, Buyer has to hire the trucks and ships, Buyer has to clear the goods through export customs and import customs, Buyer has to provide all the documents."

The polar opposite of EXW is DDP. The DDP term is the sweet life for a buyer. A DDP sale contract is the buyer saying to the seller, "Seller, I'm not going to lift a finger. Seller, you or your carrier have to bring the goods all the way to my buyer facility. Seller has all the jobs, Seller has the risk of loss or damage in transit, Seller has the incentive to procure transit insurance, Seller has to hire the trucks and ships, Seller has to clear the goods through export customs and import customs, Seller has to provide all the documents."

All of the many other INCOTERMS—including the famous ones like FOB and CIF—are some hybrid, with the seller having some of those jobs and the buyer having others. In any particular trade one side or the other will be better equipped to do some of the various jobs, like hire the vessel, insure the goods, clear customs, and do the other jobs—and of course they will price the sale accordingly, to compensate themselves for taking on their share of those roles and risks. See [my piece](#) for the details. (Or [hire me](#)!)

My final topic for today is [sustainability](#). Transportation is a global concern, not the concern of any one country let alone one government administration of any one country. Frankly, vessel emissions were one of the less regulated environmental impacts in our economy. Even developed countries historically did not heavily constrain use of bunker fuels and other high carbon emission sources, in part because they're used remotely from population centers. But there's now a great deal of focus on them, notwithstanding current political headwinds.

There is a very vibrant part of the world community of advocating for sustainable practices in transportation. There is a range of socioeconomic goals that are sought to be achieved, by requiring certifications in the transportation and import of goods. How were those goods produced? What kind of environmental, labor and child protection standards were observed in mining that critical material? Are materials being produced and recycled in a circular economic pattern? And how are end users best able to make informed decisions on which goods to buy and ship? There remains a great focus on development of efficient and economic sustainable fuels, electrification, even nuclear power for vessels. You will see that focus continue over your careers for sure.

All this is to say that logistics is an interesting and dynamic area of law. The 2020-2023 pandemic era produced a decade's worth of changes just in terms of patterns of how and where

goods are manufactured, shipped and warehoused. I think this year 2025 is going to produce an *additional* decade's worth of change on its own, through tariff and trade policies, responses and counter-responses. For both of these major episodes, we will experience which changes are ephemeral, set to recede from the landscape—and which ones are permanent, set to remain as elements of a new normal. One statement I can reliably make and assure you with certainty that whatever else changes, one thing's going to be constant and that is more regulation. Whether by self-regulation by parties or trade associations taking matters into their own hands, or by express regulation by governments or clusters of governments in trading blocs, you'll see collective action. It is malpractice to give this kind of lecture without mentioning that artificial intelligence will change things, so I add that to my pile.

Logistics is an area that's a little bit more exciting than that rather dry Transportation Law treatise table of contents.

(The answer to my extra credit problem, by the way, is that from what I can tell there is [no connection](#) between “logistics,” this subject of transportation, and “logistic” as in the logistic curve. “Logistic” curve comes from the Greek “logos” or expressed reason; “logistics” seems to come from the French word for lodging. Two things that almost sound the same are fundamentally different. Even if you got nothing out else out of this lecture, that lesson might be useful.)

For your time and kind attention, I thank you very much.