

MIT Alumni Books Podcast | Brilliant Beacons

[SLICE OF MIT THEME MUSIC]

ANNOUNCER: You're listening to the *Slice of MIT Podcast*, a production of the MIT Alumni Association.

JOE This is the *MIT Alumni Books Podcast*. I'm Joe McGonegal, Director of Alumni Education. Eric

MCGONEGAL: Jay Dolin is my guest. He is PhD, class of 1995.

Author of a dozen books, most recently, *Brilliant Beacons, A History of the American Lighthouse*, published, this spring, by Norton. Eric Dolin, thanks for joining us. Your editor approached you with the idea for the book, I read. Why say yes?

ERIC JAY DOLIN: Well, it was an interesting story. For all the other books that I've written, I've come up with the idea. But I just finished a book called, *When America First Met China*, and I was looking around for another topic. And I wasn't having much luck.

And that's when my editor contacted my agent. He said that he had had lunch with the head of sales at Norton, and they wanted to know if I was interested in writing this book. Initially, I didn't say yes because I knew nothing about lighthouses. So I asked for about a month to read a bunch of books on lighthouses and get immersed in the topic. And I was, just, fascinated.

I had no idea that lighthouses were so interesting. I knew almost nothing about them. But after doing all that reading, I discovered that this is an amazing story of the American experience. Lighthouses offer a great opportunity to tell a narrative history of the United States that is really fascinating and consequential.

It was a book about war, technology, disaster, personal triumph, art, poetry, hope, technological innovation. I mean, it had a little bit of everything. And when I finished the book, I looked back, and I realized that each chapter could have been its own book. There's so much rich history, out there, about America's lighthouses.

MCGONEGAL: I started reading the book-- I couldn't tell I had an MIT alum at work in the accounting that you were doing of each and every lighthouse. From the very beginning to the-- I think, in the first chapter, or so-- the first 12 lighthouses, and, then, 700 by book's end-- we've gone through that are extant in America. But how else is your MIT education alive and well here?

DOLIN: When I went to MIT, in the Department of Urban Studies and Planning, I was committed to becoming a professor of environmental policy. But about halfway or three quarters of the way

through my graduate degree, I decided that I didn't want to be a professor, in large part, because I knew that the kinds of articles and books that I would have to write to get tenure at a good university were not the type of writing that I, really, was interested in. And I had a tough time during my PhD program-- I'll be the first to admit it. And so, I wasn't going to be a professor. And I finished my PhD, and I worked for the federal government environmental groups for many years.

But writing had always been something that I loved to do. In fact, when I was struggling with my PhD, one of my advisors, Larry Bacow, he saw that I was having a tough time. And he made a recommendation. He said, Eric, you know, you're a really good writer. Why don't you drop out of the PhD program and become a writer?

And I looked at Larry, and I said, the only thing more pathetic than a PhD student is a writer. So I went forward, and I finished my PhD. But there is a strong connection between my writing and my graduate degree. And those are the skills that I learned while I was at MIT.

Even though I had a tough time, I became an excellent researcher. And I was very good at synthesizing huge amounts of information and putting them into, what I thought were, readable prose. So those skills have served me well for every single book that I worked on because I'm not intimidated by the research.

I think I've honed the skill of writing for a general audience as opposed to an academic audience. I think I'm still bridging the academic and the popular world, but my interests and my focus are definitely on the popular side. And if I could write books that share some of the excitement I felt, in doing the research and the writing, with the reader, then I know that I've accomplished my goal.

MCGONEGAL: For alumni who are chemists, you've got some chemistry, in here, of talking about the types of whale oil in winter and summer that are used as a fuel. Plenty of optics for the physics majors, the geographic range of light. What is the geographic range of light?

DOLIN: The geographic range of light, just, has to do with the height at which the lantern room is of the light. So, obviously, you have the curvature of the earth. The higher the light, the greater distance away that it can, potentially, be seen. But that also has to be synced with the luminous range of the lighthouse, and that's the power of the light itself.

So if you have a 50-foot-tall lighthouse, obviously, you'll be able to see much further out than a

25-foot-tall lighthouse. So on the East Coast, we tend to have very tall lighthouses. On the West Coast, where there are these promontories that are already 100 or 200 feet above sea level, the lighthouses are often a little stubbier.

MCGONEGAL: You talk about the other obstacles for optics-- the ash that accumulates on the windows.

DOLIN: Right.

MCGONEGAL: Well, you write about the Gay Headlight in Martha's Vineyard, the salt accumulation on the outside the window.

DOLIN: Yeah, the salt-- well, if any of your listeners have been to Gay Head, they know that those cliffs are absolutely gorgeous. There are multihued clay, there's oranges, reds. But the problem is that clay can often become airborne.

And it was primarily the clay mixed with salt, that used to blow up along the hill, up over the ridge, and land on the panes of glass that were at the outside of the lantern room. And the keeper there-- way back in the early 1800s-- used to have to go out and manually clean the panes of glass, quite often, to keep them free from the grime. And, in fact, he asked for a raise from President Thomas Jefferson, partly on account of that extra work that he had to do that other lighthouse keepers, up and down the coast, weren't required to do.

MCGONEGAL: Then he got a \$50 raise.

DOLIN: Yes, he got a \$50 raise.

MCGONEGAL: Talk about how involved presidents were with lighthouses. I guess it speaks to the essential nature of them in the 1700s versus, I don't think President Obama has thought a lot about lighthouses in the last eight years. But you had, it was the ninth law passed by a Congress, and you had George Washington considering how much certain lighthouse keepers drank.

DOLIN: Yes. Also, keep in mind, back then, the federal government was much, much smaller. So there were a lot of things that the higher-up officials kept their eye on, that in later years, as the government got so much bigger, they had to delegate responsibilities. So it was partly a function of how important lighthouses were to the commerce of the country. But, also, the size of the government enabled presidents, even, to reach down and get involved in those kinds of day-to-day decisions that they certainly wouldn't want to be involved in-- or couldn't be involved in-- in later years.

MCGONEGAL: And even before we had a country, somebody like Benjamin Tupper-- tell us the story of Benjamin Tupper's Boston lighthouse attack. This was 1775?

DOLIN: Yeah, 1775. Well, lighthouses don't differentiate between friend and foe. So when the American Revolution started, and was centered in Boston, the American rebels were concerned that the lighthouse-- out at the mouth of Boston Harbor-- would help guide the British Navy in and out of the port. So George Washington ordered Benjamin Tupper, along with 300 soldiers, to disable the lighthouse so the British couldn't use it.

They burned a lot of the structures out there. They killed a number of British Marines in the process. But, then, the Brits knew how important the lighthouse was to their naval containment of the city. And they sent a whole slew of Marines and engineers out to Brewster Island where the lighthouse was located. And over the span of a number of months, they rebuilt the lighthouse so that it was gleaming once again.

But that wasn't the end of the story. Because the following year on March 17th-- which, anybody who went to MIT, probably, knows is celebrated as Evacuation Day-- the British Navy left Boston Harbor and headed to Nova Scotia. But before they left, they were harried by American soldiers shooting at them. And they decided to leave a parting gift.

And a couple of Marines landed on little Brewster Island with a keg of gunpowder. They put it at the base of the lighthouse. They lit the fuse. They got back in their boat, went back to their ship, sailed off. And within about an hour, the lighthouse was reduced to rubble.

So the lighthouse that you see, now, at the mouth of Boston Harbor-- Boston Light-- it was actually built in 1783. The first one was built in 1716, but then the British blew it up. And the new nation, however, needed that lighthouse, so they rebuilt it.

MCGONEGAL: This is a buzzkill for anybody who celebrates Evacuation Day. Actually, the British got the last word that day.

DOLIN: They did.

MCGONEGAL: The book, it's a celebration of a very analog device in our world. You know, a candle lighting the way, at first, in the dark. And then, you know, advances. Is there anything, today, that makes lighthouses a 21st century technology?

DOLIN: Yeah, well, some of them are powered by solar panels now. They have small halogen lights. They don't use Fresnel lenses anymore. I mean, a number of them still have Fresnel lenses.

But most of them have modern optics that use the Fresnel technology-- the prismatic technology-- to bend the light and focus the beam in a particular direction. They're modern in that sense. And there's electrical feeds, and there are switches that go on and off. But I wouldn't say that modern lighthouses are examples of high tech.

MCGONEGAL: Of course, lighthouse keepers, nowadays, are nonprofits. The Coast Guard still manages a number of them, right?

DOLIN: Right.

MCGONEGAL: And individual owners who have probably tricked them out with all sorts of high-tech gizmos. But not what they were intended for, necessarily. You talk about the range of prices that these fetch in the open market these days. \$10,000, somebody paid for a lighthouse on Lake Erie.

DOLIN: That's the low end. And there have been, almost 50 lighthouses, have been sold to private individuals. And that's only after the Coast Guard, first, has to offer the lighthouses that are no longer central to their mission. They, first, have to offer them to government agencies or nonprofit groups who will take care of them. And they can transfer the lighthouse and the lighthouse station free of charge.

But if there are no takers, that's when the government will put the lighthouse up for auction, and private individuals can bid. And, as you said, the cheapest sale-- or the least expensive sale thus far-- is, that, \$10,000. But the most expensive is right here in Boston, or a little bit outside of Boston. It's the Graves Light, which, if you head out a little bit beyond Boston Light, and you, basically, take a left and go up towards Nahant, you'll hit Graves Light, which sold, a few years ago, for \$934,000.

MCGONEGAL: Bookends the book, so to speak, with Boston Light in your epilogue. No spoilers here-- you visit Boston Light. They're some of the most beloved and romanticized things, you say, photographed.

There's some ugly ones and some uninspiring ones. And you ended the book with a visit to your own lighthouse, too. Talk about Marblehead Light.

DOLIN: Marblehead Light, the original Marblehead Light, was built in 1835. It was a squat, 23-foot-tall

stone-- or maybe brick-- lighthouse. They're not exactly sure. And it worked fine.

It was out on Marblehead Neck, which is a promontory next to the harbor. Marblehead Neck wasn't used for much, other than pasturage and drying fish. So it was easy for the mariners, coming in and out of the harbor, to see the lighthouse from afar. But, then, in the 1860s, wealthy people-- predominantly from Boston-- started building, what were called summer cottages, on the Neck.

And today we call them mansions. They're rather large houses, and they block the lighthouse. So the mariners started complaining. And the lighthouse board decided, first, to put up a 100-foot pole and raise a kerosene lantern to the top of it every night. But that wasn't a satisfactory conclusion.

So they agreed to build a 100-foot tall, brick lighthouse. But in the end, they decided brick was too expensive. So they built a skeletal tower out of iron, which is the lighthouse that stands there today. It's about 105-feet tall.

I've never done a poll, but my guess is, maybe half the people in town don't particularly like it. It's not super attractive. The other half absolutely love it. You can see it on logos throughout the town.

People paint it a lot. I like it. I would have preferred a brick or a stone lighthouse out there because it's much more in keeping with the character of New England. But it has its own charm.

MCGONEGAL: Customers who bought this book-- Amazon tells me-- also bought *Valiant Ambition, George Washington, Benedict Arnold, and the Fate of the American Revolution*, by Nathaniel Philbrick, *The Gene, an Intimate History*, by Siddhartha Mukherjee, *Number the Stars*, by Lois Lowry, *Hillbilly Elegy*, by J.D. Vance. Talk about that company and this book sitting along it.

DOLIN: Well, it's great. Well, actually, Nat's a friend of mine, I know him. He wrote a blurb from my whaling book, way back, in 2007. And since then, I've been able to get together with him a number of times. I enjoy his books.

The other books I am familiar with. I'm honored to, one, be a writer, two, be a reasonably successful writer, and three, to have my readers be the type of people who would read those books. I feel extremely fortunate to be a writer, period. And anything else that happens is great.

MCGONEGAL: You're already knee deep into the next one.

DOLIN: Yeah. Actually, this morning, I was working on it. It's a book on pirates, on American pirates. Looking at how pirates influenced the colonies and how the colonies influenced pirates, from the mid 1600s to the early 1700s.

MCGONEGAL: And tell me what else you're reading right now.

DOLIN: I just finished an interesting book called, *Lab Girl*. It's a big bestseller by Hope Jahren. It's about a woman who is a biologist and geologist. And it's, sort of, a book interweaving her life as a scientist with her personal life, which takes some very dramatic twists and turns.

I'm just starting a book now. An acquaintance of mine, Laurence Bergreen, just sent me an advance review copy of his new book called, *Casanova, the World of the Seductive Genius*. But I want to add that I don't read a lot for enjoyment. Because every single book that I've written on topics that I don't know a lot about-- and I'm not a trained historian, even though people call me an historian-- so I have to read so many books just to get up to speed enough to write something, that almost all of my time is taken up reading books, and articles, and primary documents that relate to the topic that I'm working on at the moment.

MCGONEGAL: And Eric Jay Dolin is the author of *Brilliant Beacons, a History of the American Lighthouse*, published by Norton, in April 2016. Eric Jay Dolin, thanks for joining me.

DOLIN: Thank you very much.

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