

Ferroequinology with Matt Anderson

Ologies Podcast

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Oh Heeey! It's your great-grandpa's granddaughter who's also your wife but whatever because it's the 1700s. Alie Ward (and that will make sense later) back with another episode of *Ologies*. This time, we are off the rails with a real, first-class episode about train stuff. All kinds of train stuff. Whoop! But before we get to this interview, some quick business.

Thank you to patrons. I see you. I appreciate you. You make this podcast happen every week. I would not be able to pay an editor (Hi Steven. What's up?) to make the show without you guys, so patrons get extra content. They get to submit their questions to ologists ahead of time. They get some AMA videos once a month in which I'm usually disheveled and maybe too candid, but that's part of what you get. If you ever want to spot other ologites in the wild, there are t-shirts and hats and bathing suits, etc., pins at ologiesmerch.com, and on Mondays I post your photos on the *Ologies* Instagram in the things. So if you wear *Ologies* merch around, just let me see it. Let me see it kiddos. Let me look at it.

Also, I'll be in Portland on September 15th for an event called Camp Ologies. It's a one-day thing with some ologists who will be there. There's going to be some weird crafting, a lot of science gabbing, some games. Generally just an excuse to make new friends in the woods. Tickets are 40 bucks. I'm excited to see some of you there.

Thank you for rating and reviewing and subscribing and keeping *Ologies* in the top 20 or so science podcasts on iTunes with all the big shows that have, like, staffs and record in not closets. I am somewhat... I would say I'm in the orange area on a scale of creepiness. Not quite red, but I'm in orange and I read all of your reviews because it's just so nice that you leave them. To prove it, I read a fresh one each week. This one is from msoldier16. [phonetic] They say,

This podcast is such an easy listen and makes the most ordinary and seemingly uninteresting topics seem like that little thing you've been missing in your life. Would rate six stars if possible.

Thank you, msoldier16! If you're like, "I don't think I'd be into this topic," go back and listen to it. I hide some weird stuff in there for everyone.

Okay! Ferroequinology. Y'all, this is the best etymology you will ever hear. It doesn't get better. This is going to be the best one, so let's do a drumroll before I break it down. [drumroll] It means 'iron horse'. Ferro equine. Iron horse. It is the study of trains. Hulking, puffing, crushing, tireless, history-altering trains. Okay, so Wendy at the Henry Ford Museum sets me up with a ferroequinologist, and this dude is responsible for the care of a priceless collection of historical cars and planes, several locomotives, and an operational steam train. More on why that's a huge deal later.

The last time I went to The Ford I stood staring up at this massive, coal-powered, steam locomotive, the Alleghany, which is two stories tall. It's as long as a 12-story building and it could pull 160 cars full of coal up the Appalachian Mountains. Train nerds, it's a 2-6-6 with a power output of 7500 hp, and non-train nerds, that's as technical as this episode really gets. I'll be honest with you, I just wanted to make everyone happy. Anyway, I was like, "Whoa. Trains. What?"

We met up in this little classroom off the main museum entrance, and this guy has been on TV so much talking about transportation history that he is able to produce concise, factually accurate soundbites with correct dates. He's like a tennis ball machine. He's amazing. He's an absolutely inexhaustible treasure trove of train facts so let's not miss this! All aboard for ferroequinologist, Matt Anderson.

Alie Ward: How do you feel about the term 'ferroequinologist'? Do you love it as much as I do?

Matt Anderson: I love it. It's a lot of fun to say and it's one of those terms that when people first hear it, they're absolutely confused by it. But then when you break it down, it makes perfect sense. Right?

Alie: Iron horse. Is that what they were called initially?

Matt: Yes. They were referred to as iron horses, and any Western movie that you watched, they talked about the iron horse and so forth. It's a logical, I think, description of a locomotive.

Alie: Oh, 100%. When I found out that ferroequinologist was a word, I lost my marbles. I was like, "You're kidding me! That's amazing! Whoever thought of that's a genius!" So once you have secured the most enviable business card, what kinds of jobs can you do as a ferroequinologist? What's your title here?

Matt: I'm Curator of Transportation here at The Henry Ford.

Alie: How long have you had this job?

Matt: I've had this job now for about six and a half years.

Alie: Really? Was it your dream?

Matt: It was. I grew up in Michigan, not in Detroit but we used to drive down here every summer to visit the museum and the village. A chance to come work here was a dream come true.

Alie: Did you see some of these trains when you were growing up? The same ones that you are in charge of?

Matt: I did. I have a picture in my office of me as a six-year-old boy standing on the pilot of the Allegheny. It's very cool to come back here now and get to work with it every day.

Alie: Did you realize when you were growing up that that was making that much of an imprint? How do you become a transportation enthusiast who turns into a job?

Matt: The enthusiast part's easy, right? I've been into trains and cars really since boyhood, but I never really considered that people actually made a living at museums. It never occurred to me until I actually went to college. I initially was going to be a high school history teacher and then took a class called Intro to Public History and learned about this idea of working in museums, archives, libraries and thought, "You know, that might be kind of fun." And so far, it has been.

Aside: Quick shout out to the Museology episode with Ronnie Cline who breaks down what it's like to work behind the scenes of all the exhibits that the rest of us aren't allowed to touch but really want to like, sooo bad. Okay. Matt.

Alie: When you were growing up were you into trains?

Matt: I was, yes. Took my first train ride at two years old and I absolutely loved watching them go by, riding them, anything that had to do with them. Playing them, certainly. Definitely.

Alie: Why do you think people like trains so much? I feel like there's two kinds of people. There are people who are into trains and then there are people who are like, "What? Yeah. Trains are cool." Like, train enthusiasts are into it. What happens to get people so into trains?

Matt: I've got my enlightened, intelligent answer and then I've got my gut answer. I think the enlightened answer would be that trains are really unique in American history in that they're so closely tied with the history of this country. I mean, we've had railroads for all but 50 years that we've had a nation. You think about the role they played in the Civil War. You think about the Transcontinental Railroad, the effects it had really even into the early 20th century. It's really, really fascinating to study.

But I think the simpler answer is we're just fascinated by big things and on land you can't find anything much bigger than a train. It's just incredibly impressive. It's kind of awesome to see one, to feel one. You feel trucks and cars but not the way you feel a train which kind of rumbles in your chest even before you see it. That's an amazing thing.

Alie: I never thought about that, about the really visceral experience of having a train go by.

Matt: It's really... You go to a railroad crossing and there's almost this building climax. You hear the bells and the lights start ringing. Kind of builds up the anticipation. Then you hear the whistle in the distance or the horn and then the ground shakes underneath you as this thing goes by and you just hear the rumble of that diesel motor. It's a lot of fun.

Aside: At least one person has been identified as being in a monogamous relationship with a steamy locomotive. This German man named Joaquim does admit though that he has this affinity for fixing things and that can lead to emotional infidelity with other objects. A California woman named Carol is married to a train station in San Diego. She rides a bus 45 minutes a day just to hang out in the station and touch the walls and talk about her day, which honestly sounds like a healthier relationship than a lot of people have. I have never dated anyone who would ride the bus that long to kick it with me, especially while I was at work multitasking.

Alie: Did you grow up with train tracks near you? Did you hear them or see them growing up?

Matt: Yes. We had train tracks not too far from where I was. I grew up in a town that had two railroads, and kind of typical of American cities, we lost one of our railroads in the 1980s. A lot of lines have now been abandoned as the railroads have consolidated their operations, but I would run out and watch trains on both of them. A lot of fun.

Alie: What was the dumbest thing you ever put on a track? *[Matt laughs]* Be honest!

Matt: Like everyone, of course I put my share of coins on a railroad track to watch the pennies and the nickels get flattened. I probably shouldn't say this for publication, but at one point a group of friends of mine actually put jumper cables on railroad track near a railroad crossing to activate the crossing because it's fun to experiment, "How do those things work?" And that did it. It was a lightly-used line. It was in the middle of the night. We didn't put anyone in danger, but it was kind of fun to do.

Aside: Do I need to tell you not to do this? Because don't do this. Don't do this. Also, with the distraction of the internet now, kids would probably be like, "Uuugh. That prank is way too much work." It's too much laborious mischief!

Alie: They run on electricity?

Matt: Yes. The crossing signals are actually completed by what in effect is a short circuit caused by the metal train axle and the wheels passing over the track so your jumper cable can create that same effect.

Alie: I had no idea.

Matt: Don't try this at home.

Alie: Don't! Did you go and find the coins after you flattened them?

Matt: Of course, yes. And they fell off the tracks. You had to dig through the ballast and the stones, but I pulled them out. It's amazing. There was really nothing recognizable of those coins after the train went over them.

Aside: For real though. Playing on train tracks: super dangerous! People have suffered fatal consequences by putting even a penny on the track and then standing on another track not knowing which track the train was barreling down, so maybe outsource the work, man. Pinterest lead me to a designer in the tumbleweed-strewn wilds of west Texas who sells necklaces hand fashioned from locally sourced “train-squashed pennies off the railroad tracks in Marfa.” 60 bucks. Pretty cute. Speaking of dusty vistas and westward expansion, I asked Matt for a quick history lesson and [*in the distance and echoey*] Whoo! He delivered.

Alie: Can you give me a little bit...? I know this is like a huge question. I get this is a huge question. Can you give me your, like, cocktail party history of trains in America?

Matt: I could. The railroad as a concept as we understand it today really starts in 1828 with the Baltimore and Ohio Railroad, which was the first common carrier railroad in the US. Which means it wasn't just hauling stones from a quarry or coal from a mine, but it was carrying all kinds of freight. It fascinates me that the first stone, the ceremonial cornerstone, for that railroad was laid by a man named Charles Carroll of Carrollton, who at that time was the last living signer of the Declaration of Independence. [*Alie gasps*]

Aside: I was like, “Oooh! Maybe I’ll find out a fun fact about this Charles Carroll of Carrollton,” and boy howdy kiddos, did I. Okay, I’m going to be quick. First off, he was the wealthiest of all of the founding fathers with a fortune equivalent now to about a half a billion dollars. He was from Maryland. He thought slaves should be freed, [*DJ airhorn, abruptly interrupted*] but not his. [*“What?”*]

He also married his cousin and the merry, married cousins had seven kids, most of which didn’t make it. But one son was kind of a rich ne’er-do-well, like you would expect to see in an ‘80s movie about a frustrated, rich father with a deadbeat kid, or like now in high political office. Anyway, Chucky C had a remarkable shelf life and lived pretty much for an eternity. This guy was like an alive mummy. When it was time to lay the first railroad brick, they were like, “Haul out Charles Carroll of Carrollton. (That was his official name) Let’s get him up here! He’s 91 years young. Let’s see him.” He lived to 95 until he didn’t, and then there was a national day of mourning.

Okay, that was a lot of information but let’s hop the bullet train to Infoville because Matt is a walking encyclopedia. He’s about to give us the most succinct railroad history lesson maybe ever.

Matt: You’ve got this direct link to Fourth of July, 1776, here at the start of the railroads. It’s a great way of kind of passing the torch to the next generation in American history. Then from there lines kind of built up around the United States. They started as regional affairs like that. The B&O was supposed to connect Baltimore with the Ohio River. Other small states and communities built their railroads. In Michigan, we had fairly early railroads. Our first line was built in 1837, and we’d only been a state for a year at that point basically. Then those smaller lines start to grow into each other and consolidate. The Civil War is a big turning point, too.

And then after that you've got things like standard gauge now, where railroads aren't... Some of them were 6 ft before, some of them 4 ft 8½ in. They all became the same gauge so we have a real interchangeable network, and then they peak right about 1915, 1916 with the maximum mileage in the US. Then from that point it's been a slow story of abandonment of lines or backtracking, if you pardon the expression. And of course a lot of that is because of the automobile and then later airplanes, as well. But railroads are still a vital part of American life today. We just don't think of them. They're like the plumbing in our house; you just take it for granted until something goes wrong.

Alie: Oh god, that's true. Is it hard for you because you also curate automobiles here? Do you have something in your head that's like a little 'trains versus cars'? Like are you ever a little p.o.'d at cars because of how they took over for trains?

Matt: I do wish that we had the robust passenger network that we had even just 50, 60 years ago that we just don't have today. I mean Amtrak is out there, but it's really a skeleton of what we once had. It would be nice to hop into a train sometimes and take a trip some distance rather than having to drive there. So yes, there's a little bit of me who is like that.

But I also realized that railroads had a part in popularizing the automobile. They saw the car not as an enemy when it first appeared, but they saw it as a possible ally. Farmers can bring goods from their farm to our depot rather than us having to build all these little branch lines that don't make enough money for us. But obviously cars grew a little farther beyond what railroads anticipated.

Alie: What happens to abandoned railroad lines? Are they paved over? Are they just kind of sitting there like, "Maybe we'll use them later with different types of locomotives."?

Matt: Yes. We've got a great program in this country called The Rails-to-Trails Conservancy, which has argued for the preservation of these corridors. And a lot of them, particularly here in Michigan where we've had a lot of lines abandoned, get paved over and turned into all-purpose, recreational trails for biking, jogging, hiking, you name it. It's a great use.

Aside: I had to see what they looked like so I checked the Instagram hashtag to see if anyone else had even heard of this, and hi, hello, there were 34,000 photos tagged #railstotrails. Good god the majesty! There's tunnels and lush greenery and biking and trestles you can walk over. I went to railstotrails.org and they have this interactive map. You can click your state. You can find all the abandoned railway lines you can hike on and I started getting - I'm not kidding you - stomach cramps from excitement just because it looks so beautiful.

But then looking at and retracing these abandoned tracks, it's a weird, kind of chilling reflection on late-1800s westward expansion in America. There's so much history there. Between 1870 and 1900, the railroads helped millions of east coast Americans and immigrants head west into the sunset, but not without a steep and just tragic price paid by Native populations.

And as long as we're brushing briefly up on American history, a note about the Underground Railroad. This was an escape network that freed, by some estimates, up to 100,000 slaves in America. Former slave, abolitionist, and activist Harriet Tubman herself made 13 trips to the South to free 70 slaves, but FYI, the Underground Railroad was neither literally underground nor was it a railroad. It was a secret movement, yes, and it used rail terminology as code, like the terms 'stations' and 'conductors', hence the name. These are topics that deserve their own in-depth, future episodes and they will get them, but anyway, go rail-to-trail yourself because it's very beautiful.

Matt: Theoretically those corridors are then preserved so if we find a need for the railroads later, we can put them back together and re-lay the track. But politically, I'm not sure how well that could happen because people get so attached to those trails that they will not want the railroad to come back in if we ever get to that point. So, who knows?

Alie: What happened in motor cities where you see a robust rail line and then cars start to take over, like in Los Angeles? What happened to the train system in Los Angeles or Detroit? Once the automobile came around, did it kind of phase it out more aggressively? More intentionally?

Matt: The automobile came at a bad time for railroads obviously bringing in all of this change. You're not long after the automobile appears on the scene we have the Great Depression where already, we have railroad lines and street-car operators suffering from losing traffic to the automobile, but now they've got this additional impact of the Great Depression. So they go through that period really not being able to invest and improve their equipment or improve the track and so forth.

Then they get hit with World War II, which all of a sudden there's now curbs on automobile transportation. There's rationing so people aren't driving. They're going back to street cars, back to railroads, and now railroads having suffered through the Depression are getting beat by too much traffic. You have to feel bad for some of the lines which thought that this is kind of a rebirth of railroad passenger service so they invest in new equipment at this time. But then of course, as soon as the war is over, everybody wants a new car, and they get them and then we're off onto the interstate highways and here we are.

Aside: To recap that, everyone said to trains, "Later loser. I'm buying a car," and then they were like, "Never mind. I'm back. We can't have cars because everyone is off killing each other." And the rail system was like, "Oh you came back to me. I am so happy I made you dinner. I knitted you a cardigan with our initials! I'm investing so much into myself for your return!" Then the war was over and we were like, "Psych! You suck! I'm spending my American dollars on metal cars," and the railroads were like, "My train heart. It is broken." So what's going to happen? Is there another act before the credits roll on our romance with trains?

Alie: Do you get excited about the future of rail? Like are you all up in Hyperloop news or are you like, "I'm strictly terrestrial railroad, vintage style."

Matt: It's interesting to read about these new technologies, Hyperloop, Maglev, whatever it might be, but then I also think we've got a proven technology in the railroad with the infrastructure already built. And yes, it would be cool to ride in something that goes 400mph, but I'd be perfectly happy with 150 miles under traditional railroad routes. So, we'll see what happens.

Aside: Before we get off track, let's just pump the brakes and cover quickly, how the hell does a train work? Here's the deal. Super Train Enthusiasts, you are going to think this is too simple. If you notify me telling me this info is too broad, I will simply respond with a link to Wikipedia. I just needed to know the basics, so I'm going to give you guys really broad strokes.

The first (air quotes) trains were just rutways in the roads in Roman times that carts could kind of just shimmy down with ease. Then in the 1500s in Germany, they started pulling bins full of stuff on tracks by hand and they called these 'hunds'. 100 years later they were like, "This is bull crap. Let's use horses," and they made things called wagon ways.

In the 1700s, a Scottish dude named James Watt invented the steam engine. Coal or wood is burned which heats water which powers motors to do things. Cut to 1804. The first steam locomotive hauled iron in Wales, and then by the 1830s they were like, "Well, shoot! Let's stuff some people in these ding-dang cars!" Then in the late 1800s, other power sources started cropping up, like electric diesel engines. 1920s, 1930s, diesel starts to take over. It's cleaner and more efficient and steam engines begin to decline.

Electric-powered subways and street cars, they work by running on rails and they grab power from the third rail or from wires overhead. Bullet trains like those in Japan and France, which rule, those start cropping up in the late 1960s, 1970s. They have speeds of over 200 kmh. That's almost 140 mph. That is a big deal back then. Then Maglev trains rounded the corner in a blur. If you're like, "What is a Maglev?" Maglev is short for magnetic levitation and that's because it's floating in air, people. Welcome to the future. Magnets levitate the train just a little bit and another set of magnets pull it forward.

The first commercial Maglev train debuted in Shanghai on New Year's Day, 2004, and the latest train speed record was set by a Japanese Maglev bullet train in 2015 that went 603 kmh. That is 375 mph. [*"Pretty good... Pretty, prettyyy, prettyyy, pretty good."*] It's not as good as a Boeing 747, which has a cruising speed of 550 mph, or as fast as an actual bullet, which rolls at 1700 mph. But personally, I'd rather ride the rails than deal with flight delays, or (I guess if we're following this comparison) a very fast a gunshot. So way to go, Maglev.

What's next? A lot of folks are working to make Elon Musk's Hyperloop fever dreams a reality. This would be modular passenger pods that speed, they hope, at 700 mph in a vacuum-chambered tube propelled by Maglev. Tests are happening in Nevada deserts and all over the world. They're trying to figure this out. I, for one, am ready for this miracle of speed to happen to my travel butt. But I guess it would mean less epically-long train journeys.

Alie: What's the longest train trip you've ever taken?

Matt: I've taken several trips from this part of the country out to Washington DC, so not a long distance, not going over the whole country, but it's a nice overnight trip. You don't get too cramped in the train and you wake up, you're refreshed, and you know you've gotten there. And you've traveled when you otherwise would have been sleeping, so it's not as though you lose any time on an overnight train trip like that.

Aside: I was going to do a helpful aside here about how if you do overnights, get the sleeper car blah blah blah. It's worth it. But the real news is that I found out that a lot of trains have a hopper system for the toilets which means they just dump it out raw on the tracks like, "Berbye." I found that out from a site called toiletguru.com where this one random dude just answers everyone's questions about toilets.

On that site I also learned that Hitler's toilet resides in a very grimy auto repair shop in Florence, New Jersey, where it was actively casually in use for years. That's very weird and also fitting for someone who has a legacy of being the world's biggest turd. Anyway, let's get into some nuts and bolts of interesting terminology. Train language. Trainlage, if you will. Shall we?

Alie: Can you give me a little bit of an overview of what a train is because I learned recently that the train and the locomotive are two different things. Train enthusiasts are like, "How dare you not know that?" Can you give me the parts-of-a-train anatomy?

Matt: Yes. Nothing drives a ferroequinologist more crazy than people calling locomotives 'trains'. But yes, the locomotive is just the engine, whether it's a diesel, electric, or a steam locomotive. That in itself is not a train. It's not until you couple cars to it that you have a train. So it's the locomotive and the freight cars, the passenger cars, whatever it might be. All of those together form a train.

Alie: And now what's that caboose doing? Is it whatever the last car is a caboose or does a caboose have to be red and cute?

Matt: Caboosees tend to be red and cute just because red was a fairly inexpensive paint color and it was highly visible, and the point is to make the end of the train visible to following trains and in case of some kind of an emergency stop or something. But yes, the caboose is much lamented. Those started to fade away by the late '70s, early '80s. Now they're all but extinct except for local trains or maybe moving through rail yards or something. But yes, every time I see a train go by without a caboose, it feels like reading a sentence without the period at the end. [*Alie laughs*] It's just not complete.

Alie: It's like texting grammar.

Matt: Yeah, that's right. [*laughs*]

Aside: Whaaat?! Okay, I never knew that. Also, I just looked it up. The word 'caboose' was lifted from ship talk, (that was the little room that sailors would cook in) probably from some Dutch word, and it's used in train-language because the caboose was the hangout car for the crew. Isn't that cute? They're like, "I'll be in the back! Gonna go kick it in the last car!"

Also, in Ronks, Pennsylvania, there is a place called The Red Caboose Motel that began when a guy in the 1960s, on a dare, bid on 19 cabooses in an auction, and to his shock learned that he won them. So he was like, "Uhhh." He turned them into a hotel at which you can still stay. It's \$116 a night. They also have a Honeymoon Suite Caboose with a Jacuzzi tub. Just saying. I think you should spend your wedding night there. You don't have to take the suggestion, but maybe you should. But really, check the Yelp reviews first because I don't want to ruin anything.

Alie: Now what happens when train enthusiasts or fellow ferroequinologists get together? What are those parties like?

Matt: They're pretty fun. There's a lot of slide showing, and nowadays you share your pictures on the computer or what have you, to show, "Look at this train I rode," or "Look at this great photo, the composition of the image that I captured. I waited in the rain for three hours to get this shot." That's what they do. Or there's talk about the history of railroads. A lot of them are model railroaders, so they talk about what they've been doing out there or show you the latest improvements to the model railroad. Or you dream a little bit about things you'd like to do or like to see. Our railroads in China were still using steam until very recently. People will travel to those places just to have that experience.

Aside: What about model trains? Do people like the hands-on experience? Maybe we all love playing God a little?

Matt: Yes. The model railroad allows you to play trains, to live out that fantasy that you've always had. As a kid I had model trains. I didn't do much more than just run them around as fast as I could for fun. But some of these modelers, they get seriously into it in that they actually run freight on their model railroad and they dispatch the trains and they switch out the cars. Heaven forbid you touch a car, pick it up by hand. You've got to move it just like the real railroad with a locomotive. So that's pretty serious stuff. It's still play, but at a far more advanced level than what we were doing as kids.

Aside: The Henry Ford Museum has this whole area of model trains, overseen by (at least when I last went) some kind, white-haired gents who were eager as all get out to answer questions. My main question was, "Do you ever get on the tables and stomp on these like Godzilla?" But I wanted to preserve the mystery, so I didn't ask.

Alie: When you are taking care of the locomotives here, which you have known personally since you were, like, six, what does that involve? Because the locomotives that you have at The Ford are massive. What do you have to do to keep those up? Do you have to dust them? Do

you have to make sure that squirrels don't live in them? Do you have to oil them? What happens?

Matt: We're lucky in that a lot of our signature locomotives, particularly the Allegheny, that massive one we have on the floor, that has always been inside for as long as we've had it, and that's one of the real challenges with rail preservation. These things are just so big and you leave them outside, they get exposed to weather and over time they're going to degrade. So we're lucky there's not too much we have to do with the Allegheny other than maybe dust it off a little bit, or because the cab is open and kids can climb up there, we've got to make sure that there's no damage. We have replaced all the controls with replicas, so if something gets broken, it's not damaging an original piece.

It's a different story for our operating steam railroad out in Greenfield Village. There we do have a crew of a locomotive specialists who are out there working on those [*start steam-engine chugging*] locomotives every day, maintaining them, oiling them, cleaning them, cleaning out the ash, doing regular maintenance with them. We like to say out there, "We're not just preserving the equipment, we're preserving the skills." [*chugging ends*] I mean there's nowhere else in the country other than a railroad museum where people are doing that kind of work every day.

Alie: That's a good point.

Aside: So, hot tip ferroequiphiles. To work in a ding-dang museum, dig into your scrapbooks. I feel like an employer can't turn you down if you have a picture of yourself as a human puppy sitting on their exhibit. Like, legally they can't say no!

Alie: How many trains and locomotives do you have here at the museum? Do you have a favorite?

Matt: Yes. My favorite would be the sentimental one, the Allegheny, which I think a lot of people would pick as their favorite just because it's so massive. But we have a large collection here. We've got, off the top of my head, we have about seven or so locomotives. Closer to ten when you count the diesel-electrics. A few of them operate. Most of them are just static displays. And then we have several cars beyond that. Passenger cars, freight cars, boxcars. We have two cabooses for example. And they run the gamut from a replica of an 1860s Civil War-era passenger coach, up to Henry Ford's private rail car that he used, which was the equivalent of the Leer jet of the 19 teens and 1920s.

Alie: Wait. You could have your own private railcar where you're just like, "Hey, I'm going to roll up with my rail car to take me over here." It's like your second home?

Matt: Yes. If you had sufficient means you could buy your own rail car. I think he paid something like \$150,000 for it which sounds like a bargain today, but of course, in 1915-16, that would have been big money.

Alie: Oh my god!

Aside: FYI: I asked a website and by today's standards, that would be equivalent to a train car costing [*echoing*] \$3.7 million dollars, which is like the cost of a small, private jet.

Alie: That's Oprah money.

Matt: Yes, exactly. They would just put it onto the back of a regularly scheduled train and you could ride in privacy off to New York or Washington, wherever you might be going.

Alie: Oh, that's the way to live. I mean, it is funny that a dude who pretty much invented the automotive industry was like, "I'm just going to hop a train. We do them both." Where do you guys get these locomotives? Do you buy them on Craigslist? Where do they come from?

Matt: We've gotten them from a variety of places. The Allegheny, again as an example, we got from the C&O railway itself, the company that bought that locomotive. It's a great story with that engine because the C&O hauled coal, so they were resistant to adopt diesel-electric locomotives. They stuck with steam because some loyalty to their primary business there. The Allegheny was built in 1941. We got it in 1956, so that's 15 years of operation, which is not long at all for a locomotive. Typically they'll run for decades not just 15 years.

Aside: This was retired just four years older than my current 2007 Prius.

Matt: They kind of gave up the ghost on coal and decided to move to diesel-electric, so we got that from the railroad. We've got another locomotive which we got from a local energy company here which used it as a switching locomotive in their own yard. We've got other pieces that have come, in some cases, from private collectors. People who bought this equipment and then for whatever reason decided they didn't want it anymore and then gave it to us.

Alie: Have you ever cried about a train?

Matt: I have cried sometimes about just the passing of the railroad in general. Like I talked about those two lines that grew up in my hometown. I had a favorite between the two and of course, the favorite is the one that's abandoned now. So, you know, it's sad to think because I would just love to be able to ride that line again, to go that route, travel that distance. I think it probably is never coming back at this point, so it just exists in memory.

Alie: I wonder if a lot of people do long, transcontinental hikes on abandoned railroads. I know that you said that they were turning them into trails, but if anyone's like, "I'm gonna traverse the country based on the old rail lines."?

Matt: There are people who do that, and rail lines really do make ideal hiking trails because they go off into some very wild areas. You get some beautiful, scenic views that you can't get from the expressway or anywhere else. And also because they're designed for railroads, they tend to be fairly level, too. The grades are not steep. They're very gentle.

Alie: Did you watch *Stand by Me* as a kid?

Matt: I did, yes. I think about that scene when they're on the bridge. They're running from the locomotive. [*clip from Stand by Me: train engine chugging. Gordie, "Traaaain!" Train whistle blows*] Yes, we've all had nightmares like that, I think.

Alie: Have you ever gotten to drive a locomotive?

Matt: I have actually. I got a chance to fire on a steam locomotive once. Hotter than hell if I may say so. Just miserable. In fact, our own crew... It's been in the '90s here in the Detroit area the last couple of days they were talking about. In the cab they measured it at 135-136 degrees, and they're working in those conditions throughout the day. So, a lot of water and a lot of rest breaks. But yes, I got to shovel coal into a locomotive which is far more challenging than you might think. It's not just shoveling coal into the hole and that's it. You've got to get that coal spread evenly inside the firebox, so there's some real skill in it.

And I also got to operate a diesel-electric locomotive which is a lot of fun. The big takeaway for me from that was how quickly those locomotives can get away from you. Even the slightest hill, you pick up speed very quickly and you start to realize what a skill it is to control that much weight. I was just running the locomotive, no cars behind it, so it would've been even more difficult in that situation.

Aside: I got to drive a locomotive once, just like a few hundred feet on a test track, and I just hooted the horn the entire time and I have no regrets.

Alie: How do they test people's ability to drive a locomotive? Because that seems like a thing. Like you can't just go practice at a church parking lot like when you're getting your driver's license. How do you learn how to do that without killing everyone?

Matt: Yes. It's equivalent to an apprentice program. Whether it's on the actual operating business railroads or on a railroad like ours here at Greenfield Village, you learn under the study of someone who knows what they're doing. And you learn by doing, going through the experience, practicing, and eventually you get to the point where you don't need the apprentice supervision anymore and you're off on your own.

Aside: So, you just have to watch over someone's shoulder. It's kind of like learning to be a surgeon, I guess. Also, I had nowhere else in the episode to put this so I'm just going to add it here. [*Hedwig's Theme music begins*] The Hogwarts Express Train is an actual steam locomotive in Scotland. You can ride it! It's called The Jacobite. It even crosses the bridge to Hogwarts which is a 21-arch viaduct, just in case you're like, "Oh no, my bucket list. I have done all of the items." Well, there's a new one, kiddos. Okay let's get to the rapid-fire round. [*Hedwig's Theme music ends*]

Alie: We got a truly staggering number of questions. Spencer Toth wants to know: Why was I told as a child that putting salt on a train track was illegal?

Matt: That's an interesting question. I would say it's probably because putting anything on a train track is illegal. Theoretically, even being near the train track is illegal. It's private property.

Aside: Oh no! Oops, this gets sad.

Matt: The railroad owns that corridor and for obvious reasons. It's very dangerous to walk too close to those when a train is coming, and it's surprising the number of pedestrian fatalities there are. And theoretically anybody in that situation, it's the pedestrian's fault because they shouldn't have been there in the first place. But now we have people who are tuned out of the world listening to their iPhones and so forth. And yes, even for as large as they are, a fast-moving train can sneak up on you much faster than you might think.

Alie: Right. So it's illegal to breathe on a rail.

Matt: It would be theoretically, yes.

Aside: Just in case you're like, "Tempting the Grim Reaper by train sounds relatively unthreatening," just please know that the Federal Rail Administration says that train-related deaths are at a ten-year high. Almost 900 people in the US were killed due to train-related incidents last year. 575 of them trespassers, abundantly in their 20s and 30s walking on active tracks or hopping freight trains.

I went to do a little bit more research which landed me on a Wikipedia page called "List of selfie-related injuries and deaths" and it was really sad. I could not read through it all. Let's just say I did glance and I saw the word 'train' a lot. So, kiddos, playing on trains is statistically 100 times more likely to kill you than a shark, if I may get selachomorphological on you. If you want a selfie with a train, go to a museum. Don't do any trespassing on any tracks. Okay? That's because I care about you! Love, Dad.

Matt: Really the only place you can be is if you're at a crossing. In that case, you shouldn't be stopping, you should be just crossing and going about your business.

Alie: So no salt on train tracks. Also no people on train tracks. Al Martinez wants to know: What's the current thinking on high-speed rail in the US? Both across the country and in high-population states such as California, Florida, and Texas.

Matt: We've got some movement toward high-speed rail here though our high-speed rail is a shadow of what they have in Europe where they're doing 200 mph or better. Here, 120 miles is considered pretty high speed. We've had some success in short corridors. The difficulty is that Amtrak runs on a lot of freight-owned railroads and, of course, the freight operators want to run freight trains on there, too. And high-speed passenger trains and slower-speed freight trains don't mix well as you might imagine.

Aside: Whooooa. That speed difference was news to me. Although thinking of huge bins of coal on a bullet train does seem a little excessive.

Matt: That's why really the northeast corridor between Washington and Boston now is really the showpiece because Amtrak owns most of that right of way so they can run at whatever speeds they want.

Alie: Oh, I never knew that. I've always wondered why California's train game was just so poor.

Matt: They have to share the space. And of course, in a lot of cases those tracks were built, or at least the right of ways, were laid out in the 19th century so they were designed for slower speeds. If you want to run at higher speeds, you need longer, straighter stretches of track, more gentle curves, so a lot of that has to be rebuilt. That's why it's just, in some cases, simpler to build a brand-new track like they're doing with the high-speed rail out in California.

Aside: I figured he was talking about the Hyperloop but duuurh, there's a different high-speed rail. In 2015, workers in Fresno, California, broke ground on an electric California High Speed Rail that will cost maybe \$100 billion dollars. It may be done in 2030. Train expectations are so low in LA that we're just like, "That's fine. We're fine riding motorized Razor scooters in traffic while y'all work it out."

Alie: Pia Foxhall wants to know: Why is there such a huge variation in train tracks sizes and widths all over the world? Why isn't there more standardization essentially?

Matt: That's a great question. That was a problem here in the United States. In fact, it's one of the major factors that's cited for the reason that the South lost the Civil War is that they had a mishmash of different track sizes - some of them 5 ft wide, some of them 6 ft wide, some of them the standard 4 ft 8½ in. Whereas in the north they tended to be the same gauge so you could move a car from one railroad line to another without having to stop and unload everything and reload it.

Around the world, you're right, there are different standards and often it's just based on local preference. I mean, here in the US we have 4 ft 8½ in because a lot of what we learned, we learned from Great Britain where they use 4 ft 8½ in for their gauge. It seems to be, on the whole, sort of the ideal. Anything wider than that gets to be kind of difficult and cumbersome. Anything more narrow than that, you can't carry as much freight. So, for whatever reason, that's what we've gone with.

Alie: Is that a more round number in metric? 4 ft 8½ in is very specific.

Matt: It is. And it's really not any more rounded in metric.

Aside: I never knew that about the Civil War. That's amazing. Also 4 ft 8.5 in rounds to an also nonsensical 143.51 cm. So, okay? He says:

Matt: The story I've heard is that that was the width of... And I think it's just a myth, but the width of the wheels on Roman chariots were about 4 ft 8½ in, and that's the width that accommodates two horses. Who knows?

Aside: Okay. I was curious. Is this accurate and how wide are horse butts? I did a little investigating and found a paper titled "Morphometric measurements and animal-performance indices in a study of racial forms of Brazilian Sport Horses undergoing training for eventing." According to their statistics, 0.55 m was the average width of a horse butt which converts to 1.8 ft., times two horses is 3.6 ft with 14.5 in, or a little over a foot, between the horse butts for tail swishing, I suppose.

Matt: For whatever reason though, that's the number that we settled on. One number is as good as any other, frankly, as long as every track is the same number.

Alie: Wow! I wonder if they have special yardsticks when they're putting that together. Like, how do they make sure?

Matt: They do. We've got on our rail, we've got gauge rods which are just metal pieces that are measured to exactly 4 ft 8½ in. And that's, I should say, measured from the inside surface of the rail not from the center of the rail or something. We can put that out there and check every so often to make sure that our track is in perfect gauge. It's obviously a problem. If the gauge gets a little wide, the wheels are wide enough for compensate, but if it gets too wide, you've got a car on the ground and that can be a big problem.

Alie: Yes, that's a pretty big, heavy problem. What are the railroad ties made out of?

Matt: For the most part they're made out of wood treated with Creosote (usually) to prevent rotting or wear and make them last a little longer. The kind of wood they use varies. It might be oak. It might be pine, just whatever might be available locally. They have, in some cases, moved toward concrete ties, particularly with higher speed railroads just because those last a little longer and they're less prone to stretching and shrinking in the heat.

Alie: There's something about creosote that smells so good. I don't know why.

Matt: It's a classic railroad smell, yes. The coal smoke and the creosote.

Alie: Oh, for sure. Did anyone make a country song about that? [*sings with a drawl*] Coal smoke and creosote.

Matt: [*laughs*] If they haven't, they should.

Aside: There are some good, sad country songs about trains I found out. Like Willie Nelson's "City of New Orleans" about the flagging power of the rail system in America. But in terms of Weepcore, perhaps nothing could beat the George Strait ditty called "Trains Make me Lonesome." [*clip from George Strait song Trains Make Me Lonesome: "...and the next thing*

that we knew, some old train came passin' through. And Daddy got on board, and we ain't seen him no more. I wonder why trains make me lonesome.'] [song ends abruptly with record scratch]

I got so sad for George Strait and then I just started reading about his history. George, what the hell? According to Wikipedia, when George was in the 4th grade, his father and mother were divorced. His mother moved away. George and his brother were raised by their father. Dude! George, you just threw your dad under the bus or the train so hard with that song. In the name of single dads everywhere, I hope at some point George bought his daddy a \$3.7 million train car as just as an apology. All right. Onward. This next question is from your favorite Mars expert from the Aerology episode.

Alie: Jennifer Buz wants to know: Why do the trains go too fast sometimes and derail? Is there not a good way to limit the speed on certain parts of the track?

Matt: This is an issue now that we've been dealing with for the last ten years or so in the US, the adoption of Positive Train Control. And one of the advantages railroads have over any other kind of transportation, frankly, is that they are on a fixed guideway. They're on rails so theoretically there should be some automatic way to stop them without worrying about them swerving and crashing off the side of the road.

What we're trying to do now is pass legislation that will put in automatic control units in a locomotive cab so that if the signal, the equivalent of a stoplight on a highway, is red and the engineer for whatever reason disregards that signal and does not stop, the locomotive will automatically lose power, slow down, and stop. But we're facing some of the same problems that they did when they tried to make all the tracks the same gauge. Every railroad uses a different system, and to try and get everything to work universally is taking a lot of money and a lot of time, more so than we might've anticipated. But it would make us safer, I think, and prevent some of the accidents we've seen in recent years.

Alie: Right. It must. I mean, when you see the news and there was a train derailment that was possibly influenced by texting, you're like, "Oh my god. That was not a problem in the 1800s."

Matt: Yes. It's frightening enough when you hear about people driving and texting, but when you're in a railroad situation, it's abhorrent because you know that the engineer's a professional. You trust the crew to deliver people safely and if somebody in the crew is texting, it is a dereliction of duty. Those kinds of distractions the railroads police very, very thoroughly, and that's a fireable offense. If you're caught doing that, there's no second chance.

Alie: Oh sure. Yes. I imagine you can't even eat a sandwich when you're operating a train.

Matt: Yes. When you're there you've got the one job to do and that's what you better be doing.

Alie: Right? Like smoothies only. No hummus and chip dip. Too involved! Lindsey Loepor wants to know: Why were villains in old movies always trying people to railroad tracks? Was this something people were actually afraid of?

Matt: [*laughing*] That's a great question. Frankly, I'm not aware of any specific incident in history where someone was tied to a railroad track by a villain. It may have happened, but I think it's become kind of a Hollywood trope and it probably comes back to the early silent movies when that was done. Railroads were seen as dangerous, as they are dangerous. If you're trespassing, you're in the wrong place. [*clip from The Rocky and Bullwinkle Show: narrator, "Meanwhile a short distance away, Snidely Whiplash was up to his favorite pastime: tying women to railroad tracks."*]

Aside: Wait! Wait! Wait! According to The Straight Dope, these incidents have happened but the victims tended to be men, and they occurred after this crime was popularized in fiction in dozens of plays, the first of which was an 1863 British production called *The Engineer*. A bunch of historians think this was a way for us to comprehend our own fears just about the power of industry. So getting tied to the tracks with a train barreling at you is kind of like an old-timey *Black Mirror*, but like a sepia-toned looking glass, if you will.

Matt: It seems like a good way, and it builds up the drama, too, in the movie because you see the train in the distance. You see it coming. You see the heroine or whomever it might be struggling to get out. So it's a great trope; one that's been around a long time.

Alie: Never trust a curly mustache. That's your first clue. This guy's got some rope and a curly mustache? You're going to end up on a train track.

Matt: Look out for Snidely Whiplash! [*Alie laughs*]

Alie: Julie Noble wants to know: How is it that people who live near tracks don't hear the trains anymore? Do you think that people get so used to it that it just becomes like part of breathing for them?

Matt: If I may quote one of my favorite movies, *The Blues Brothers*. That scene where they go to Elwood's apartment and he's by the "L" there in Chicago. Jake says, [*perfectly timed with the underlaid clip from The Blues Brothers*] "How often does the train go by?" Elwood says, "So often you won't notice." [*Alie laughs*] I think there's some truth to that, yes.

I myself, I live near the airport, so we have airplanes flying over fairly constantly. At a certain point you just tune them out. They become background noise. We can get used to a lot of different things. It's the same for people who live along the railroad tracks. You get used to it and the sound just eventually fades away, disappears buried into your subconscious.

Aside: For more on this look up 'neural adaptation' or 'sensory adaptation'. The first Google results use "living close to train tracks" as an actual example.

Alie: Right! I live on a busy street and I'm sure there are so many more ambulances than I realized. Julie Noble says, "I live a block and a half from track and will be on the phone, windows closed, and the other person will say, 'Oh my god! Is that a train?' And I seriously don't notice it." All right. Carrie Stuard wants to know: Why do commuter trains like Chicago's Metro have to rent track time from the railroad lines? I guess there's freight interference during rush hour? That's kind of what you were talking about?

Matt: Yes. There's been a big shift. The railroads, as soon as they started losing money on passenger business which really goes back to the 20s if not before, railroads got out of the passenger business, especially after the highway system in the late 1950s through the 60s. Amtrak came on the scene in 1971 and yes, Amtrak basically is a tenant or a guest on the freight railroad. Theoretically the freight railroads are supposed to give preferential treatment to Amtrak, but in the real world it doesn't always work out that way.

Alie: I had no idea that that was shared, like a timeshare on the tracks essentially.

Aside: Am I the only one who thought that Amtrak has been around for like a century?

Alie: John Worster (I love this question) says: Back in the day railroads seemed to become the authority for setting the correct time in history. How did that happen?

Matt: Yes, and that's one of the railroad's legacies that's with us today, standard time and time zones in the United States. Prior to that, every town kind of decided noon was whenever the sun was at the highest point over city hall, the church, whatever it might be. That's fine if you live in a world that's only 15- or 20-mile radius, but not so good when you're on railroads where time, especially in those days before they had electronic signaling, the timetable was absolute.

If a train had to go by at 1:10 PM, then it better be there at that time because other trains are counting on it so they can pass it safely and whatnot. So railroads, very early standardized time. It went nationwide in 1883, somewhere thereabouts. And with that, now railroads could coordinate their schedules more efficiently and more safely, frankly.

Alie: Yes. Like no one wants to be on a platform being like, "Is it noon or two?" [*with a drawl*] "I don't know. My horse got thirsty so it's got to be 11." And you're like, "Whaaat?"

Aside: Sunday, November 18, 1883, all of the US railroads synchronized their clocks. Then way later in 1918, standard time became an official law. But it wasn't until 2005, with the advent of texting when "I'm on my way" became standard language to mean "I haven't yet left the house, so just order without me."

Alie: Do you get as jazzed about subways as you do about locomotives?

Matt: I do. I'm particularly fond of the Washington Metro system, and they opened up the new Silver Line, not quite all the way to Dulles, but I made a point when my wife and I traveled

out there. We simply rode there to the end of the line and back, so I can say I've done that mileage. I have ridden every mile of that subway system. I haven't done every other one, but some people do that. They just travel around the world, traveling different subway systems. It's a good time for them.

Alie: Do you look out the window the whole time, or do you just like read a book and kickback?

Matt: I like to look out the window. You can't really do that when you're underground, but I love it when you're above ground because again, you get a different view on things. Especially fun there when you're running through the median of I-66 to kind of laugh at all the traffic that's stuck there going nowhere. "Ha ha! I'm going by at 35 miles an hour. Have a good time, sucker!"

Alie: So it's a schadenfreude thing? A ferroequinology schadenfreude. Sure. It rolls off the tongue. Brook Buson [ph.] asked this question, which I also like to ask: Do you have a favorite movie that takes place on a train?

Matt: That's a great question. I have a few favorites actually I could talk about. One is maybe the greatest train movie and one of the greatest movies of all time and that's Buster Keaton in *The General* from 1926. One of the highlights of silent cinema. He did some incredible stunts in that movie that OSHA would not allow anybody to try today. Absolutely worth watching.

Alie: Was there any trainspotting in *Trainspotting*?

Matt: I think the trainspotting they were doing was a different sort than actual trainspotting. There were tracks involved, but they were not railroad tracks. We'll leave it at that.

Alie: [laughing] Oh god. I never really got that pun.

Matt: I liked *The Great Locomotive Chase* with Fess Parker. It was a Walt Disney movie made in 1956. Great Civil War adventure story. It's actually based on the same story as *The General*, but it's more by the facts for *The Great Locomotive Chase*. I also love the first Gene Wilder and Richard Pryor joint movie, *Silver Streak*, from 1976, which is like kind of a Hitchcockian story. Speaking of Hitchcock, *North by Northwest* has a great railroad scene in it, too, on the 20th Century Limited. Lots of great train movies out there.

Alie: Wooh! Did you see *Murder on the Orient Express* recently?

Matt: I did, yes. Strictly to see the trains. I'm not particularly an Agatha Christie fan, but, you know, got to go see some trains in the movie. Not enough of them anymore.

Alie: You're not a Johnny Depp fan? He looked busted in that I got to say.

Matt: That he did.

Aside: I would feel bad saying this, but I don't.

Alie: Elizabeth Bassett wants to know: How do trains stack up in terms of efficiency and cost against semi-trucks?

Matt: There's really no more efficient method of overland travel than the railroad, and you can't beat that. The downside, of course, is when it comes to delivering that freight. You've got to take things off the train and load it onto a semi-truck for that last mile, so to speak. Whereas with a semi-truck, you just leave it on the truck and take it right to the door.

There's been a lot of intermodal transportation now in the last few decades where items will come, say, from Asia, and they'll travel by ship in these large 40-foot containers. Then that container gets moved by a giant crane onto a flat car. It gets moved by rail to some point in the middle of the country, and then that container gets moved off the flat car, put onto a semi-trailer and then can be delivered. So you're not unpacking the objects, you're just moving the actual trailer, for lack of a better term, the container.

Alie: It's kind of like a LEGO goes from this thing to that thing to that thing?

Matt: Yes, very much like that.

Alie: Which is pretty cool. It's like, "Oh, that's a good idea."

Matt: It's pretty slick.

Alie: And then when you're done, you can take the shipping container and make a coffee shop in Brooklyn out of it.

Matt: You can, yes. Or a small house or something for someone.

Aside: I looked and you can buy a 400 ft² house made out of a shipping container on Amazon. It'll cost you \$36,000 and the reviews are very bad. Said it was overpriced. Then I found one for 15 grand on Etsy, but really, these shipping containers are like \$2,000 used if you just want to Pinterest it up and put a little elbow grease into some DIY living in a metal box.

This next question is what when I was a journalist at the *LA Times* I learned was called... I'm just going to bleep this because this is one of the very few, non-sweary episodes because I work with The Henry Ford on a children's show. This question is the [bleep] question. It's the great question you save for the end of the interview just in case it [bleep] up your rapport to all [bleep] and they tell you to go to [bleep]. Dain Goding asked the awkward and wonderful question:

Alie: What was Henry Ford's role in trains in America? Is that ever weird for you to be working at The Henry Ford when Ford was much more of an automotive proponent than perhaps locomotive?

Matt: Henry Ford is nothing if not a study in contrast. This is another example: I think he would have counted himself a ferroequinologist. He used to talk about when he grew up here in Dearborn, running down to the Michigan Central track and waving at the engineer as he went by. A lot of the locomotives we have in our collection he personally collected. He built that replica Civil War era coach for the dedication of this museum because he thought he had to have a proper train here for the ceremony.

He actually owned a railroad for a few years. He bought the Detroit Toledo in Ironton, which is a local line here that runs from the Detroit area down to the Ohio River. He invested something like \$15,000,000 improving that railroad. He had all the engineers wear spotless, white uniforms. Maybe not the best color choice in retrospect. *[both laugh]*

Aside: That's like wearing a white jumpsuit on day 27, dude. If you know what I mean.

Matt: He had them polish up the locomotives with shiny brass so they looked their absolute best. He actually loved railroads and I don't think he set out to build the Model T with the intent of killing railroads. He was probably as surprised, like many other people, at how quickly the automobile caught on and how effectively it wiped out other competing transportation methods, but he traveled by private railcar. He enjoyed trains right up to the end of his life.

Aside: There ya go. The King of Cars dug trains.

Alie: What's the coolest train in the world?

Matt: That's a great question. The one that's operating in front of you right now I would say, and I think a lot of ferroequinologists would agree with that.

Alie: Whatever you see rumble by is the coolest.

Matt: Exactly right. Yep.

Alie: Is there any flimflam about trains you'd like to debunk? Any myths that you're like, "Come on, people."?

Matt: Well, the one that we already talked about about 'what is a train versus a locomotive?' is a pretty big one, so I'm glad we got that taken care of.

Alie: Last few questions, always... What's the suckiest thing about your job? What's the hardest or most annoying thing about your job that you're like, "Ughhh"?

Matt: I have a lot of people who will walk up to me and say, "Wow! You must have a dream job." I have to say it's enjoyable. This is not to cut on it, but it's not as though I walk through the museum with a box of popcorn every day looking at the exhibits. It has its bad days, too. One of the challenges is the frustration in not being able to get definitive answers to some things.

A lot of these early pieces, not just the locomotives but everything we have in the museum, was collected in the late '20s, early '30s. Record keeping was not what we might have today, so there are certain answers that we'll never be able to find here. That can be frustrating. And it can be difficult to try and tell all the stories that you want to tell because you just don't have the time to go into the detail. There's always some other pressing activity you have to take care of. So those are frustrations, but on the whole it's a lot of fun.

Alie: So a lack of omniscience. We'll just chalk it up to not knowing everything in the known universe and space and time.

Matt: Yes. If I could know that, this job would be pie. [*Alie laughs*]

Alie: What's your favorite thing about trains or your job?

Matt: Well, my favorite thing about trains is I get to work with them in my job. My favorite thing about my job is the trains. But my favorite part of the job, what I really love here is that there are few jobs out there where you can get instant gratification. When I'm up there in the office banging away at the computer or buried in books, I get kind of frustrated. I can walk out into the museum here and I can see people actually enjoying the work that we do and hopefully learning something while they're here, too. That's really rewarding and I think the best part about the job.

The best part about trains? I mentioned the size, but no one will ever beat the magic of a steam locomotive. They are, in a sense, living creatures. They hiss. They roar. They make noises, smells, and sounds that you just don't find anywhere else. We haven't used steam locomotives in any big capacity in this country for more than 60 years now, and yet people still know what they sound like. They still love them, and they still, I think for a lot of people, are the first thing that comes into your head when you think 'train'.

Alie: Oh yes, that [*steam train whistles twice*]. Billowing smoke. Yes, of course. Where can people find you? Do you have any train resources to point to?

Matt: They can find me right here at The Henry Ford in Dearborn, Michigan. They can come out and see some of our stationary locomotives in the museum or they can ride behind a live steam locomotive through Greenfield Village on our track.

Alie: This has been amazing. Thank you so much for doing this. I learned so much!

Matt: My pleasure.

So the next time you see a train feel free to audibly say, [*mimicking locomotive whistle*] "Woot! Woot!" for so many reasons. Also, please, no selfies near trains! And they are not paying me to make this episode, but to see some of their historical artifacts including trains, check out The Henry Ford

on [Instagram](#). *Innovation Nation* is shot there and it's on CBS Saturday mornings, or you can find episodes online. I am in every episode in case you want to have some Alie Ward content that doesn't usually involve the f-word.

Ologies is @ologies on [Instagram](#) and [Twitter](#). I'm Alie Ward. There are more links up at alieward.com/ologies. There is merch is at ologiesmerch.com. Thank you, Shannon Feltus and Boni Dutch for being merch queens. A link to the Camp Ologies September 15th event in Portland is just in the show notes. Thank you to Erin Talbert and Hannah Lipow for being wonderful admins in the [Facebook Ologies Podcast group](#).

I said last week that it's the only reason I really go on Facebook anymore, but I'd like to issue a correction and say this week photos of my brainiac and wonderful cousin Brooke Rennick [ph.] getting married were a highlight. They were definitely a reason to scroll. Congratulations to you and Loren! Congratulations to Steven Ray Morris for being just cool as hell, and to Nick Thorburn for being very good at writing and performing theme songs, such as ours which is titled "Alie at the Museum."

If you stick around though the credits you know I tell you a secret and this one, I feel I like I'm gonna hear a lot of feedback on this one, but I'm going to tell you. I have never seen any of the Harry Potter movies. Ever. Not even one minute of them. I have never admitted that to anyone. I feel like I should see them and I want to, but I feel like I should watch them all in one night, and it depends on the mood or the occasion. Do I have snacks? Like, should I never even see them? I read a little bit of one of the books and I got so hungry because they just kept talking about treacle puddings and stuff. I was like, "God dammit. I just need a snack." I've never watched the movies. But tell me if I should watch the Harry Potter movies and if so, how? Thank you. Okay. You're the best. Berbye.

Transcribed by Kelli Brockington

Some links which you might find useful:

[*The great ol' Allegheny*](#)

[*Steamy-train love stories*](#)

[*This train has not left the station*](#)

[*Get yourself a penny necklace I guess*](#)

[*Charles Carrol of Carrolton*](#)

[*More about Chucky C*](#)

[*Rails to Trails is dang pretty*](#)

[A Brief But Very Detailed and Long History of Rail Travel](#)

[A hopper toilet sounds cuter than it is](#)

[Hitler's toilet is in a gross mechanic shop in Jersey](#)

[Please define "caboose"](#)

[The Red Caboose Motel](#)

[Hogwarts Express train but IRL](#)

[Deaths due to trespassing SO DON'T TRESPASS](#)

[Chariot wheel distances](#)

[Horse butt widths](#)

[RIP George Strait's dad](#)

[Why do villains tie people to tracks?](#)

[Snidely Whiplash was a jerk](#)

[I can't hear trains anymore aka neural adaptation](#)

[How standard time became the standard](#)

[\\$36K house with 1-star reviews](#)

[Etsy container house](#)

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