

TPWKY - Special Episode - Lindsey Fitzharris & Adrian Teal

EW: Hi, I am Erin Welsh and this is, this podcast Will Kill You. Welcome to another episode of the T-P-W-K-Y Book Club series where I interview authors of popular science and medicine books about their latest exciting work so far. This season, we've gotten to showcase some fascinating books and topics. We still have more to come over the next months. If you'd like to see what books we'll be featuring on upcoming episodes, head over to our website. This podcast will kill you.com. Once you're there, click on the extras tab, then find the link to our bookshop.org affiliate page. On that page, you'll find several T-P-W-K-Y book lists, including the fiction and nonfiction books that we've referenced in our regular season episodes, as well as a list of. All the book Club books, past and Future, I'm always updating these lists, so check back in regularly to see what has changed. I've got a sweet pro tip for you, especially as the holiday season approaches. These lists are a great resource to find gifts for the nerdy book lovers in your life. And if you have any suggestions for books that you'd like to see featured in one of these episodes, or thoughts you'd like to share about past episodes or anything else you'd like to send our way, the best way to get in touch is the contact us form on our website. Okay. Two last things before moving on to the book of the week. First, please rate, review and subscribe if you haven't already, it does help us out. And secondly, you can now find full video versions of most of our newest episodes on YouTube. Make sure you're subscribed to exactly right media's YouTube channel, so you never miss a new episode Drop.

EW: Contrary to popular belief, failure is an option. In fact, sometimes it's an unavoidable outcome, especially when it comes to science and medicine. Your results don't support your initial hypothesis. Your experiment goes horribly awry. The new treatment you were testing didn't lead to any improvement. The inevitability of failure doesn't take the sting away. Make your ego any less bruised. We view these failures as setbacks, keeping science from moving forward. In reality, failure is a fundamental part of progress. When we reflect on the history of science and medicine, we tend to highlight the triumphs, the breakthroughs, the inventions that. Cured diseases and saved lives. We spend a whole lot less time on the ideas or gadgets that didn't quite work out. But those stumbles are just as important to the advancement of science and medicine than the celebrated success stories, and it's about time we acknowledge what they've helped us to achieve, which is not only knowledge, like how to not do something. But also that failure is okay. In this week's episode, we are thrilled to be joined by medical historian and award-winning author, Dr. Lindsey

Fitzharris and Caricaturist and cartoonist Adrian Teal to discuss their latest book. *Dead Ends* Flukes flops and failures that sparked medical Marvels. *Dead Ends* is this Power couple's second book geared to younger audiences, middle school age. But honestly I think that all ages would love it and in it they showcase some of the shocking, strange, and often in humorous ways that medicine. Didn't quite get it right, the first or second or third time stories featuring observations of guillotine heads, terrifying saws to speed up amputations, fad diets, and cow milk transfusions are accompanied by delightful and vivid illustrations of the physicians involved in these outlandish experiments. Blending dark humor with fascinating factoids. Fitzharris and Teal take readers on a frolicking journey that spans the centuries of medical mishaps. But underneath the riveting stories and grotesque illustrations is a powerful lesson. Failure is an essential part of science. It's easy to get frustrated when science doesn't have all the answers. Because of the way science is taught as a set of facts, as a forward march of progress, we don't realize how much we're still figuring things out and that the knowledge that we have today will at some point in the future be replaced. *Dead Ends*. Reminds readers that it's okay to fail. Erin and I have been dying to have Lindsey Fitzharris on this podcast for the longest time. Her other books, *The Butchering Art* and *The Facemaker* geared to adult audiences are some of our all time faves. And so Erin will actually be joining me for this episode, and I am so thrilled to share this with you all. So with only the slightest, bit more ado in the form of an ad break. Let's get right to the interview.

EW: Lindsey and Adrian, welcome to the show. This has been such a long time coming. We are thrilled to have you here.

LF: We are so excited as well and, uh, to share some gory stories of medical history with you guys.

AT: Yeah, great to be.

EAU: We're thrilled. I am a, a huge fan girl. Um, yes. My, one of my professors gave us all of the students in my med school class, the *butchering art*, like before we graduated as a gift. And that was my like introduction and I've just been obsessed ever since. So I am really fangirling right now.

LF: You know, it's, it's, it. Was that your first introduction to medical history as a subject?

EAU: I think so, honestly. Yeah, I mean we had already been doing the podcast so like I knew, you know, from Erin, I had learned a lot of things, but yeah, we

don't learn medical history in med school. And so it was like, and I think that's why he gifted it to everyone 'cause he found it also to be like so important and like such a huge part of what we never actually learned. And I just was amazed.

LF: This is, it's interesting because in the UK where, where I live despite this Chicago accent, I've lived here for 23 years. Um, in Britain though, they, they do. Teach medical history to medical students in the first year, which I think is great because I think it's really important that doctors be able to contextualize where they've come from, where they're going. And I always tell audiences when I talk about the butchering art, which is about Joseph Lister and germ theory, what we know today isn't gonna be what we know tomorrow and we have to keep an open mind. And that's very much what Dead Ends this children's book is about as well.

EW: I loved so much all of the stories of Dead Ends, but I also loved the message. Yeah. And so I'm very curious how you got the initial spark of the idea for this book and then how that evolved eventually into the ultimate message that this, that this book tells.

LF: Yeah, well, I, I'm gonna pull out, see now people who follow me and have followed my brand for a long time, they're, they're so sick of this story, but I'm gonna do it anyway.

AT: That includes me.

LF: I know the lock works saw, so I had, I used to have a YouTube series called Under the Knife. Um, and. The way into the stories was through objects. And so the first one we ever did was on the Clockwork saw, and we created, um, a replica of it. And it was one of my favorite weird objects from medical history 'cause it was a massive failure and it was invented by this guy named WHB Winchester in the 19th century at a time when speed was really important. And so the idea behind it, you always call it the pizza wheel

AT: of D the the pizza cutter of D Yeah, that's right. Yeah.

LF: So it's circular for people who are just listening. It's. Circular saw, and in the middle there would've been a crank and you would crank it, you would release it, and it would continuously spin. And so he thought this was great. He takes it into the operating theater and it ends up it's way too unwieldy, and he ends up taking off his assistant's finger.

EW: Oh. So

LF: this is a bit of a disaster. And in fact it was. So bad that it never made it outta prototype phase. And so there's only one in existence, which is at the Arian Museum in London. Uh, we've recreated it here and I just, I've always loved failure as a concept and I think it's something that we don't talk about enough in science, in medicine.

EW: Right. Um, you

LF: know, and we saw, we were talking earlier, um, with a journalist about the COVID pandemic and how people were really uncomfortable. With the advice changing, but to me that was a comfort that meant that our doctors are learning more about this virus and that they're changing their advice. And that's exactly what you wanna see with the scientific process. So that was, yeah, and that, and

AT: that's part of the scientific method is that you change your theories and you change your approach, your practices as more information comes in. That's how you want the world to be, you know?

EW: Yeah, exactly. And so

AT: this, this book, as much as anything else, it is about that kind of. The evolution of the scientific method and how, you know, the things you could get away with two, 300 years ago as a, as a scientist or doctor, you certainly aren't gonna be getting away with today because things, you know, evolve and change and, and that's how the, how it should be. Yeah. And,

LF: and, and it, it's not just okay to fail. It's essential to fail. Yeah. Um, especially in medicine and science. And we're hoping that that will resonate with kids. You know, everybody in the age of social media is a. Obsessed with perfection, um, you know, presenting a perfect version of ourselves, a perfect version of our own histories. And, you know, if you think. You've made a mistake. Look at, you know, some of these geniuses from the past, a lot of 'em have racked up some pretty big mistakes. So I mean,

AT: he had somebody like Thomas Edison, who's by no means perfect, but he did say, you know, I haven't failed. I've just found 10,000 ways that don't work. You know? Right. Yeah. It's part of the process of getting to where you need to be rather than Yeah. Something to be ashamed of.

LF: So, so we always loved failure, but also. Adrian, who's my husband, he has a very particular set of skills. As a characterist, I have a very particular set of

skills and we were like, how can we combine this into something, uh, that could be useful to people? Because we really, and that's

AT: how, that's how the first book *The Plague* is, was, was born really, wasn't it? Yeah. 'cause we just wanted to work together on something and. And, and Lindsey's great with the history and she's great with getting the stories, you know, structured like I stuff, oh, I know where this is going. What I do is because I'm a man child. I can make it then friendly for kids. So I can then look at it and because Lindsey will be writing something, say, I dunno how to make this, you know, readable. I say, well, don't worry about that. Just write it like you'd write it for an adult and then we can

LF: yeah,

AT: work that out later on, you know? So yeah.

LF: Unsurprisingly it was very difficult to take these complex concepts. Whittle it down. And so that, that was a real challenge, but you brought the humor and the great illustrations and, you know, helped dig up a lot of

AT: these

LF: stories.

AT: We'll let you get a word in a minute, but what I was gonna say, the other thing I was gonna say was, is that, um, with a kid's book, you've only got 20, 25,000 words to play with. So you'd think, oh, well that's easy. You know, it's not a very long book. But actually that means you have to choose every word really carefully. And so if you're trying to explain complicated. Scientific processes, that can be quite tricky. So you, you, you're trying to walk a fine line, aren't you, really?

EAU: Yeah, definitely. I love though that you guys not only managed to squeeze so much information in, but also like use words like *butthole* multiple times. Yes. That

AT: was, well, the editor wanted, the editor was quite keen on the idea of taking that out and I said, no. There's a poetry to the word *butthole* that you just can't, there really

EW: is absolutely,

AT: absolutely the sentence. So we need to keep it in.

LF: Also, I have to add that I, I dedicate, we dedicated this book to our mentors and mine is Dr. Margaret Pel, who's a very serious historian at Oxford, who is my supervisor. And I, I don't know yet how she's going to view this, but, um. You know, she was like, oh, it's great to see medical history being brought to younger and younger people over here in Britain. We have something called horrible histories, which was huge in, in your generation growing up. And, um, so we kind of hope that that's, that's filling a, a slot over in the US with, with this kind of book. So,

AT: yeah,

EW: let's take a quick break and when we get back there's still so much to discuss. Welcome back everyone. We've been chatting with Dr. Lindsey Fitzharris and Adrian Teal about their book, *Dead Ends: Flukes, Flops and Failures That Sparked Medical Marvels*. Let's get back into things.

EAU: In addition to the story that you had already mentioned about that, you know, first failure of a saw, there are so many other incredible stories jam packed in this book. Another favorite, which I think is also in the butchering art, is Liston, 300% case fatality surgery. It's one of my favorites. It's so good. I mean, it's so depressing, but so good. So, yep. Yeah. I'm wondering like where exactly, obviously you are a medical historian, but like where do you come across these stories? Do you have just like a running list that you're like, how many can we jam pack in here? Or how do you keep track of them all? Yeah, I mean.

LF: They're everywhere in, in medical history, I have to say. Um, and, and again, you know, I mean even we, when I was writing the *Facemaker*, which is about Harold Gillies, who was rebuilding soldiers' faces in the First World War, I think I said something like, you know, failure was his constant companion. And again, really important for Gillies and what he was able to achieve. And some of the stories I, we tell in this book are dark and, you know, we, I, I feel. That we should acknowledge the failures of the past and acknowledge the harm that was also done because to hide it feels conspiratorial. And we are living in an age where there is a decline in science literacy. There's a decline in literacy period across the board. And so I think it's important to tell the whole picture, but the balance is making sure that we're always. You know, cheering on science in medicine. Yeah. Because what we've been able to accomplish over these centuries is incredible.

LF: You know, Adrian and I recently, we both went through cancer. I went through breast cancer and he went through prostate cancer and we caught ours very early. We, I always say we're living examples of why early diagnosis is life saving and when people get diagnosed that I know I always say. Today is the best day to be diagnosed with cancer, and tomorrow is going to be even better because the advances we are making are tremendous. You know, my mother had a double mastectomy in 2012, and between that and 2022 when I was diagnosed, even in that short span, the differences in our treatment were palpable. So medical history is littered with failure, um, and there is a comical value. You know, Robert Liston, he's. Six two. He is this really tall guy. Um, he's, he's known as the fastest knife in the west end. He can hold you down with his left arm and take off your leg in 30 seconds, which is exactly what you would want in a pre-anesthetic era. Um, but he does have these sort of comical failures. I mean, I'll say comical to us to, yeah.

AT: Because as we all know, you know, comedy equals tragedy plus time,

LF: right? Yeah. Right.

AT: You know, you can look at it with some distance and, you know,

LF: maybe not so comical, you know, the time the, the assistant whose finger was accidentally cut off and, and he dies of infection and the, the, the, uh, patient dies of infection. And then there's a spectator who he slashes the coat and he dies of fright. And it's jokingly referred to as the only operation with a 300% mortality rate. And it is kind of funny, but you know, when you look at somebody like Liston who had these. Very dramatic failures. If I was transported to a pre-anesthetic era, I would still want Robert Liston to do the amputation. Yeah. Because he still was the best of the best. And I also remind people that as sort of funny as these stories are, because they're so removed from us today, it would've been really frustrating as a doctor to go into that operating theater and to keep losing patient after patient. You are in the. Business of saving lives and you cannot figure out what is killing your patients. Um, and until Joseph Lister comes along with germ theory, it was really demoralizing. I can imagine. So, you know, there's always that element too. You know, imagine being a doctor at this time, and when I talked to plastic surgeons about Harold Gillies, you know, I can tell that they're looking at the photos and thinking, Hmm, I would've done that differently. And then I say. Well, let me point out what you couldn't have done over a hundred years ago. There was no antibiotics, there was no, you know, yada, yada yada. And so it's, it's important to remember always that the people we're talking about we're really trying to help, but they did sometimes inadvertently cause harm.

AT: And that's another point we make is that, you know, even when we are talking about remedies that just seemed completely insane to us now that were happening two, 300 years ago. They were doing the best they could with the science they had available at the time.

LF: Right,

AT: and that's all you can ask of the people that are trying to help you, isn't it really?

LF: I, I always ask people, what do you think, you know, in a hundred years? And for me, I always think it's gonna be chemotherapy. I think we're gonna find better things to replace. A chemotherapy is very harsh on the patient as we know. So eventually we might find something that can replace it right now. It's the most effective, you know, thing we have in our arsenal against many cancers. But, um, it's one of those treatments I'd love to see replaced in the future with something just as effective if not more effective. Yeah,

EW: right. It'll be featured in the sequel to Dead Ends, but a hundred years from now. Can you believe that they did this? They used to just inject us with all of these things. Yeah. I wanna, I wanna talk about the art in Dead Ends because like we talked about, you know, comedy equals tragedy plus time and comedy also equals this incredible art that just is the chef's kiss perfection to all of these incredible stories. And I wanna know more about the process of integrating these illustrations into the stories. Like what? Comes first. How do those stories change? What? How do you decide which snapshot to represent? You know, this particular story

AT: Well, through my most of my career, if I've been doing illustration, it's usually been illustrating somebody else's work. So then the what we, we had a sort of unfair advantage here because if I had a great idea for a cartoon. We could tweak the text to, to make sure that it helped the cartoon along, you know? Um, so that's, that's always, always good. The other thing is that I, I, I think is important about this book and Play Busters is that we are dealing with a lot of historical characters that kids and most adults won't have heard of. So the names won't really mean anything to them, but if you can produce a caricature of them and give them some personality, it brings 'em alive in a way that, you know, a photo from the 19th century of somebody standing, you know, sitting very stiffly in a. In a posed portrait that that won't convey. Well, we have

LF: Poe right back there that he did. Um, you know, he's, he's a great caricaturist and you, you, you were fascinated with faces from the very start.

And he as a little boy, um, over here in Britain, there was a big show called Spitting Image. And they used these caricatured puppets and it was political satire. And your father, who was a pharmacist, didn't know what to do with you, right? And so he called the creators a spitting image. And so Adrian is a little boy, maybe. 10 years old Yeah. Would go to the workshop and he would learn how to sculpt these, these puppets. And so, and

AT: to think, to think three dimensionally. Very helpful. Yeah. And so they,

LF: they brought the show back recently and you can see it now on TikTok and YouTube. And it seems like a time to bring political satire back, let's put it that way.

EW: Yeah.

LF: And, um, you've, you've done 80% of the puppets and it's been really good fun. Yeah. But it's always about first impressions, isn't it? It's

AT: about personality and it's about first impressions and it's about making someone look more like themselves than they. They do themselves, if that makes sense. Yeah. You're

LF: not always, you're not really making fun of them. Well,

AT: I mean, there is an element of that. Of course there is. But it's also about, it's about celebrating what makes that person, that person,

LF: right? Yeah.

AT: And you know that, that's why it's great to do it with historical characters. 'Cause then they, they come along, he,

LF: he has this really great way of zoning in on the thing that makes your face unique.

AT: But the other thing about the illustrations as well is that sometimes it's about not doing an illustration. If we've written a, a good enough. Description of something, if we've painted a, you know, vivid enough word picture and it's. You know, as is often the case and this quite gruesome, you don't really need to, to have an illustration there to, to guild the lily, if you see what I mean. Yeah. Uhhuh. So it's good sometimes just to leave it alone, you know? But I, so you have to be selective.

LF: I have to say too, the publisher, you know, they get very nervous. Adults get more nervous. I think that kids can handle a lot more gruesome stuff than they give the kids credit for. So there's always this push and pull about, you know, how much is too much and what to put in. And the original cover for this book, we tell the story of the guillotine heads during the French Revolution and the doctors who sort of hilariously tried to. Shout at 'em and, and see if there was any kind of level of consciousness left. And, um, so your idea, tell 'em what the cover originally, well, my gonna be, well, original cover.

AT: My original cover was to have the guillotine and then have a severe head at the bottom of the guillotine

LF: cartoon,

AT: the doctor with a stethoscope, listening to the head, see if there are any signs of life, and they said, oh, I can't do that. It's far too gruesome. But now what we've got, which seems to be fine, apparently, is somebody, a corpse being electrocuted. So that's, so it's sometimes hard to see

LF: Yeah. Where, where the

AT: line is. Yeah. Yeah. I mean, even

LF: with Plague Busters, actually, the, or, I really love the, our original concept for the cover, and again, they. They were like, no. And it was, it was basically, it was a plague doctor with the beaked mask and he had a, a crystal ball in front of him and there were floating, uh, so the germs and viruses. Germs. And it was kind of like, what's the next big thing gonna be? Which I thought was a really good nod to, you know, the, the, there will be more pandemics. You know, my grandma would call me during covid. And she'd say, have you ever heard of anything like this? And I was like, yes, grandma. I'm a medical historian. In fact, the the last one happened, you know, and so we would, we would, we were constantly having this conversation. Um, but I, I liked it, but they said, well, um,

AT: crystal balls aren't real, is what they said.

LF: Yeah. So we were, so,

AT: but then the concept did come up with what they did. Like it had dancing plague rats in the background and, you know. Oh again, 'cause dancing

EW: playgrounds are real. Yeah, totally makes sense. Totally makes sense. Definitely a challenge.

EAU: The very first chapter, I think, uh, the, the first image is, you know, ahead on a spike with just blood everywhere. And we, as we were reading it right before bedtime the other night, I turned to that page. My son was like, and I was like, is this gonna be too scary? And he's like, no, keep going. Yeah,

AT: exactly. This is, this is what I would say. Kids are, kids are horrible, but in the best way, you know, I don't think I have

LF: a problem with it. I grew up on a diet of Stephen King, unsurprisingly. So I was, you know, I was definitely, I, I think. You know, again, it is about kind of balancing that off. It, it depends on,

AT: it depends on the child, doesn't it? It does, yeah. You have to, you know, cut the cord.

LF: I think a, a good morbid curiosity is, is a healthy thing for a child. And, you know, I could, I could remember, you know, my, my grandmother partly raised me and. We would go to the cemeteries all the time. And people, a lot of people think that's very creepy, but for me it's when I first became interested in the past and the people who lived in the past and how did they live and how did they die and what was their experiences. So I think cemeteries are these wonderful love filled places because people spend money and thought and time, you know, memorializing somebody's life. But you know, again, it's, it's what you're exposed to. ISI suppose, at a younger age. And, uh, yeah,

AT: I mean, I, I grew up watching and loving Monty Python and, you know, Terry Gilliam's animations on Monty Python stuff. Yeah. So if you grow up weird, you're gonna, you know, stay weird, aren't you? Usually,

LF: yeah. This is, this is it. I was, I was honored by my high school last year, which was fairly hilarious. And we went back. You had the most American experience of your life. Yeah. Going back to this American high school. Yeah. And I got up and said, I guess I'm the proof that the weird kids can thrive after school. And you know, I mean, I'm sure you guys too, you had that, you know, that weirdness in you. You know, you're doctors, but you, you do this great podcast and you have this real passion for science communication and getting those crazy stories out there and, and getting people passionate about, um, you know, this world of, of medicine. And so I, I just, I think the weird kids we do, we survive and, and thrive. Yeah. And thrive eventually,

EW: hopefully. Yeah. Yeah.

EAU: I think the. The weird kids also, uh, we tend to find each other.

EW: Mm-hmm. Yes. Mm-hmm.

EAU: And you guys mentioned that especially as you were starting your first book together, plague Busters and this book that you mostly just like wanted an excuse to work together. So I'm curious, like what is the, what is it like for you guys to work together?

AT: Surprisingly harmonious, isn't it? Yeah,

LF: I think so. I mean, I, it's again, you have a, a skillset that's different and so

AT: Yeah. But it seems to kind of slot together, doesn't it? Yeah. He

LF: also knows that there's this process I go through where everything's bad. I think the book is terrible. It's horrible. We should just tell the publisher We're not gonna do it because I, there's no way I'm gonna put this out there. Like I all, even with my adult nonfiction, like there's always. Like,

AT: yeah, we have a couple of weeks of that. Yeah. And then we get, we push through that, and then you get to the other side and you are usually, okay,

LF: you, you stay calm and you're like, well, maybe you're gonna be fine. Yeah, maybe we can do this or that. And it's just this, it's, you know, I'm, I'm a real perfectionist, which actually being a perfectionist is. Is not a good thing to some extent because you know, that famous, um, quote that art is never completed, just abandoned. Yeah. You know, it's, you have to let go at some point and put it out into the world. And you know, when we put out Plague Busters, it was really funny because that cover to me really signaled this was a kid's book, but there were people who left reviews on Amazon that said, this isn't up to the snuff of Fitz Harris's other books. And I was like, this is a kid's, how are people misunder? Said, I read

AT: it in like two hours and it was really,

LF: yeah, it's a kid's book. Yeah. I dunno what else to say. It was really funny. Like I, I, I said with this one, I think they've done a better job on the Amazon page of saying this is for readers aged age. To 12. Right. But, um, people, yeah, there was a lot of harrumphing. You know, you can imagine the kind of, I'm

sure you get that, you know, online there, the hump rum harrumph, right? Yeah. Mm-hmm. Of a certain age who want to,

AT: I think, I think you'll find. Yeah. If you look carefully

LF: and, and it fits. Harris is writing for the TikTok generation. I'm like, I'm writing for children. I don't know what else to say, like the dancing. Scratch should have been the clue. I don't know. Yeah. But, um, yeah,

EW: the, well actuallys. Yeah. Right. Yeah. Oh yeah.

LF: It's frustrating. Well, actually, yeah. The, well, yeah. Oh, I love the, well, actually, yeah.

EW: Uh, well, I, I absolutely love, you know, going back a little bit to the world, weird kids who somehow ended up making a life of being weird and really thriving in that life. I think it's so incredible when people follow their curiosity, their interests, and turn it into a career path where they really end up getting to create something meaningful and meaningful and true to them. Like the way that both of you have done. And I am wondering what advice you would give your younger selves or someone who maybe has a lot of passion for a particular subject but doesn't quite know what to do with that.

LF: Don't do it. No. You know, we always joke about the, the struggles of being freelancers, but in a weird way, uh, I, this isn't what I do, it's who I am. Mm-hmm. Um, and even when I was an academic and doing my PhD at Oxford, they couldn't really beat that creativity out of me. Mm-hmm. Um, and recently they asked me to come. Speak at Oxford. And I thought, oh dear, you know, this is gonna be interesting. And I, I gave, I got up and I gave a speech, and I started by saying that when I was a little girl, I wrote a letter to Stephen King and I told him I wanted to be a writer just like him. And it turns out I didn't become a novelist. But I do go around horrifying people with medical history and there was a lot of nervous laughs amongst the Oxford Dons. And one of my very, uh, the, the first professor I ever had in, in history of science, um, Robert Fox, who's just a, an intellectual giant. He was there. And afterwards he came up to me and a student came up and said, oh, you're so good at speaking. And, and he said, oh yes, did you learn that at Oxford? And then Adrian said.

AT: No, I think she, she honed her skills on YouTube actually.

LF: And this, this old professor, I mean, he was like, YouTube. It's like

AT: my book,

EW: you know?

LF: I really know what to say that. But you know, I, I, I now call myself a, a, a storyteller first and foremost. And I am a medical historian. I have a PhD and all of that. But it's really the stories and connecting with audiences who have maybe never thought about medical history as a subject, never even realized it was a subject. And that's where my passion is. And you know, I think, I think when you're, you're genuinely passionate, you know, we live in an age of. Brands, you know, kids are obsessed with brands and how to build their own brand. And to some extent I have built a brand as such, but it never started out that way. It was just a blog that I started called The Surgeon's Apprentice. It was supposed to really just be little stories that they wouldn't let me tell in academia that interested me. And also to explain to people in my life what medical historians do. And it turns out that a lot of people really gravitated towards that blog. And so I think that my advice. To anybody who's looking to do that is just always be genuinely passionate. If you are trying to sell something, just because you have an end goal in mind, whether it's fame or a book deal or a, a podcast or a TV show or money, either or money, it, it's never gonna work. And you have to be genuinely interested because audiences they. Smell a fraud.

EAU: Mm.

LF: And you know, this is why your podcast has done so well. You guys are genuinely passionate about this, this, you know, and that's what people gravitate toward. And you can't teach somebody how to do that. And it's, you just have

AT: to, it's about being true to yourself as well. I mean, how often do you hear, you know, comedians or filmmakers or whatever? I mean, going back, we talking about Monty Python briefly earlier on. You know, you ask any of them. They said, when we did that show. We were doing what we thought was funny. Right. And all you can do is pursue that passion and hope that somebody else engages with it. Yeah. And that, that's really all, all that it can do. I mean, that's not to say that for every success story there aren't, you know, 500 people that didn't make it. But you have to be true to yourself. And as Lindsey said, you know, with what I do, we, you know, Lindsey says it's part of who she is. What I do is absolutely part of who I am. And I can't imagine doing anything else. There's no

LF: retiring.

AT: It's not even, it, it sounds pretentious, you know? And, but it, it's not even like I have a choice, right? It's, it's what I, it's who I am and it's what I do. So, I

LF: mean, your, your parents said that they put a pencil in your hand at the age of two and it was like a light 18 months.

AT: Yeah, 18 months. A light

LF: bulb went on. And, and so I think, you know, again. Obviously there are real considerations. You do have to make money, you have to make a living, and those things have to be weighed. But it really, for me, I, you know, when I write my adult nonfiction, I always say, 'cause I just finished my next, my third book, which is gonna be called Sleuth Hound, which is a guy about, a guy named Joseph Bell, who was the real Sherlock Holmes, and it's about Victorian forensics. It's great fun. Um, but so I'm now naturally thinking about what's the fourth book, and so I often live with the ghosts. For a few, few months. I, there's a couple people rattling around in my head who's gonna tell the most compelling story, and that's, that's what it comes down to. You can't, you know, sometimes people pick book subjects because they think it'll make a great movie, or they think it's. You know, going to fit into the, the political times. But if you artificially do that, it's never gonna work. Right. Um, you ha it has to be even with Face Maker. When that came out, the Ukrainian war conflict started and people were naturally asking about the return of trench warfare and we're. Seen plastic surgeons going over there and volunteering to help rebuild people's faces, much like Harold Gilley's did in the First World War. But that wasn't planned. And ultimately people have to make those, those draw those conclusions themselves. Like my job is to tell a really good story. And whatever you do with that story is your business. Whether you think the face maker is a great anti-war book, or whether you think it's a great patriotic book that makes you proud of the people who fought, those are different. You know, agendas that, that the reader is going to bring to it. My job, I think, is to just tell the most compelling story I can.

EW: Right,

LF: right.

EW: Let's take a quick break here. We'll be back before you know it. Welcome back everyone. We are here chatting with the wonderful Dr. Lindsey Fitzharris and Adrian Teal about their book Dead Ends. Let's get into some more questions.

EAU: Back to the like book obviously that we're here to talk about today, Dead Ends. And this kind of keeps coming up. It even came up in, in what you were just talking about, you've, we've touched a lot on this idea and this concept that the book is mainly about, which is this, you know, failure is this stop point on the way to success. But the other big theme I feel like that emerges from this book, and you touched on it a little bit already too, is how the scientific process. Is this, you know, iterative process and sometimes it goes quite fast as we saw during COVID when things were changing so rapidly. But for a lot of history. It went very slowly and you gave, I really loved the example of Galen that you gave in the book, who was, you know, this wise figure had many failures and things that weren't right, but so many that were, that he was like really rarely ever questioned. I know you mentioned, you know, chemotherapy as one of the things that you hope is going to change in the future, but what do you think like more broadly learning about the history of medicine can kind of teach us about the way that we think of medicine and medical advancements today?

LF: I think that's such a great question. And you know, we, we actually just reread this book yesterday, which sounds odd, but you know, we're a couple. I'm, I'm at least one book ahead. Um, because a book takes a long time in production, and so you have to kind of remind yourself of what the book was. And with this book on like my other adult books, there's a lot of stories. It's not just one big narrative story, so I had to kind of remind myself, but the story we, we were discussing between ourselves. Uh, just this afternoon was the story of Phineas Gage, which a lot of Americans know. He was working on the railroad tamping iron, and this iron rod shot through his skull, right through his brain, and he somehow survives and his doctor starts to know changes in his behavior. And what's interesting is that happens in the early 19th century and then in 1884 you have this guy named Daniel Farrier who comes across Gage's story and starts to wonder if. Certain parts of the brain control certain functions, and he creates these brain maps. And the brain map is used to correctly identify a brain tumor in a patient named Henderson in 1884. So that's a long burn and it really hinged on. Farrier finding this kind of strange story that at the time wasn't very well known or very well publicized. And the only reason we we really know about Phineas Gage is because of farrier's brain maps. So I think it's important that kids realize, as you say, that the process can be very slow and not always a straight line. Sometimes there can be all kinds of things that happen in the middle that are wrong, and then we get back on track. And a lot of times it also has to do with. People being resistant to new ideas as well. Yeah.

AT: Being entrenched in a, in a position just because that's what people have always done, you know? Yeah. Like the Galen. You know, he, he had a terrible influence on, he, he, he was a, he was a very clever guy. He did some great stuff with, you know, cataract operations and such like, but he got as much wrong as

he got. Right. And, uh, you know, he, his influence was, was to some extent quite detrimental for a lot of centuries, wasn't it?

LF: And actually, interestingly, with Galen. For humors, a lot of the reasons why people were bled in the past was because this, there was this idea that they were producing too much blood and this even after Harvey, you know, proves the, the role of the heart and circulation long, long after that. There is a photo that I sometimes post on social media from the early 20th century of someone being bled, and what was happening was older patients. Just felt like that's what you went to the doctor for. And so they were still requesting this and sometimes doctors were doing it even though they knew it wasn't useful. Um, and this is what, uh, I think today in the KIN thing would be antibiotics. A lot of people go in and instantly ask for antibiotics. That's not always appropriate. And now we're having antibiotic resistance. So it's not just on the medical community, it's also what we ourselves get used to in America. We're used to seeing a doctor in a white coat over here. I never see doctors in white coats, and I've been treated at the hospitals in London and they say, oh, no, no, no, no, not the white coats. Those sleeves, you know, that can be very dirty. And so there's a whole different culture and, and so it sometimes it takes generations. To change those attitudes. And I always kind of revert back to Lister because he was my first love in, in the butchering art. But like Lister, really the way he changes minds with germ theory is he goes to the younger generation and they become the Listerians.

LF: They become known as the Listerians. They go out and they spread the gospel of Lister. It's very showmanship. Um, there's a, there's a, a processional aspect to what he's doing with the carbolic acid and sanitizing the, the surgical room. And that's how they ultimately change people's minds. But it takes decades for this to happen. So it's really important that in the day and age where we want instant results and also where results in the science and medical community often have to be, uh, justified by how much money it makes. We need to remember that research for the sake of research is really important, and that some of the biggest discoveries we've ever made were not goal oriented in mind.

AT: I, I think another problem that doctors had in the past was you could come up with a paradigm shift, but the problem was getting the word out, wasn't it? I mean, now you've got, you know, journal articles, websites, social media, you can get the message out. But in those days, it was more difficult. I mean, James Lind, who came up with a cure for scurvy, you know, you've worked out lemon juice. He didn't know why lemon juice worked, but he realized it did work. You know, that's fine. But he was just like a small time doctor that he wrote a book about it and a few people read it, but that didn't mean that scurvy

is automatically cured, you know, across the world. So it, it takes time and hard work and dedication to, to keep pummeling away at these problems and, and changing minds and getting the world, the paradigm to actually shift. You know,

LF: and I was really. Looking forward to you finding a way to bring scurvy into the conversation. 'cause I know they, the errands love scurvy as well. Love scurvy. Huge, huge fans of scurvy. He loves scurvy. And I, he had to convince me to put it in play busters because I was like scurvy. Like who cares about scurvy?

AT: Fantastic. Subject. It really is.

EAU: It really is. It really is. It's a really important part of like Busters. I agree.

LF: Oh yeah, I know. Well, he convinced me eventually because I was like, oh yeah, a lot of people really did die of this. It was such a weird, it's, it's such a weird one too, 'cause like your old wounds open up stuff. Yeah, I've been,

EW: I've been reading about, um, a nautical medical history for, we're doing, uh, an episode on necrotizing fasciitis and there was a really interesting Yes, right. There was a really interesting, um, book written, I think in like 18. Oh eight or something like that. And they talk about, like, one of the authors is in the discussion of these ulcers that are just like, you know, spread rapidly and end up killing the, um, the sailor. He's like, you know, and, and Lin was talking about scurvy and how much of a problem he saw back in the day, and I'm amazed that he could find that many sailors with, with scurvy. I see no like, no, no sailors these days with scurvy and I'm just like to see that from. Like that perspective, like he's already looking back like 200 years ago and like, what, what was the concept then? How did they see the, the pattern of, you know, different transitions or these paradigm shifts? And I feel like scurvy, I mean, yeah.

LF: I know that story because I, I talk about it in the butchering art because doesn't it, it, the, the ulcerating, the, it's, it's in a guy's penis, if

EW: I remember, and the number of penis penises falling off. I have read several by this point, not like I've just stumbled upon them. I have not sought them out, and yet they find me. They found you. Now,

AT: I just say that Lindsey is surprisingly squeamish. Like if you're watching a film and there's a gory bitch. Yeah. She, she, oh, I can't wait. For God's sake. You write about people's penises falling off.

LF: I know. Well, it's funny 'cause with the butchering art I had, I went all over the world with it and I had. Three or four men faint. It was always men, by the way, who fainted? Um, while I gave that talk. And I think it was, it wasn't, it was the suggestion. You know, I think when people put themselves on the table or they put themselves in that position, it can get a little bit dicey.

AT: It's not, it's also, I think if you describe it, I think the movie that you have going on in your head is worse than anything you can actually see in front of your face. Right. It's like jaws with the shark. Right. He couldn't show the shark. Yeah, but he made the shark more scary by not showing the shark, you know? Yeah. So,

LF: so with with movies today, yeah. It's always a little bit, you know, there's, there's talk about a adapting, um, face maker and, you know, I said, well here the challenge is you have to show the faces, you have to show the disfigured soldiers because you, we have to look at that and, you know, but it's, it's hard and I think. When you're empathetic too, it can be, when you see it on film, it can be very difficult to sort of watch, but writing it doesn't feel quite as bad. Bad as fascinating. But I do remember the penis falling off and I remember, I remember it because I remember the surgeon then saying like it was a big description and then it said. He died like at the end. Yes. Like of course he died.

EW: He died. And then like the next line is, this is not an uncommon story. And I'm like, what? Yeah,

LF: it's a horrible, it's horrible. Like horrible. You know? You imagine then in these 19th century operating theaters, it was just horrific.

EW: I'm, I'm also very curious about the period of time that you are most interested in. You know, we talked about science being stubborn, and part of that is by design of course. Like we can't, you know, completely change the field or rewrite the textbook based on one paper. We have to build that the. You know, body of evidence for that. But I feel like the 19th century is just ripe with these transformative moments where we have germ theory, we have sort of, vaccines are starting to take off. We're have finally having an understanding. I mean, evolution, all of these things are mixing together at once, and we might be a little bit too close to the 20th century to really see the same patterns. I'm not

sure about that, but I'm wondering what you. Love about the 19th century, uh, medicine.

LF: I, it's, so, this is funny because with Face Maker, it was a 20th century story, and I vowed to never return to the 20th century after writing it because there were things I hadn't anticipated, which I'm, I'm kind of embarrassed to say this as a historian, but I had just never ventured that close to modern times. But one of the problems was patient confidentiality. I had to prove that these men were dead. And in cases where their, their stories have been told by Gillis, uh, with, in relation to their, their names, that was fine. It was part of the public record. But if I went into their patient records and found something that Gillis hadn't publicized, I couldn't put that to the patient's. Name and the story. So there were a lot of challenges to that. And also, as you say, you know, we are very close to it. I will meet people whose, you know, grandfather or great-grandfather was treated by Gillis, which is incredible to think. Actually, doctors are fascinating too because medical history sort of a genealogy. And I'll meet plastic surgeons who say I was trained by somebody. Who was trained by Harold Gillies and you think, oh, that can't be possible. But actually, you

AT: know. Well, it's funny you say that, 'cause my mentor, Roger Law, who created spitting image, he was taught by people who were taught by Henry Tonks.

LF: Yeah. To Henry to explain that. Yeah. Who was the artist? Who was

AT: the artist who did the sketches of the, the soldiers with the injured faces, you know, the medical. For medical purposes, you know, it wasn't just an artistic exercise, it was actually for, to help Harold get his reconstruct faces. So, so

LF: it wasn't that long ago. It's only a

AT: couple of degrees of separation. Yeah,

LF: it wasn't, it wasn't that long ago. And so I always go back sort of the ni, the ni, you know, I'm back into the 19th century with s sleuth hound. It feels like a warm bath. It's a world I know. And as you say, there's a lot of amazing things that are happening. Also, you don't have, you know, some of things aren't in copyright, you know. Uh, you could go into the patient records without any problems if you go back further. Um, the challenges that I find are that because I like to write narrative nonfiction for adults, that means it sort of reads like a novel, like in the, in the style of Eric Larson. I don't have enough records

necessarily to move some of those earlier figures around in a way that fuels. Novelistic. Whereas with Lister, I have his diaries and letters and things like that and so it's much easier. But you know, with the children's book, we do deal a lot with the 19th century. Yeah. Because there are just, you know, it's it with anesthesia, it's Humphrey. Davy starts experimenting with nitrous oxide and laughing gas in this sort of early 19th century, and he does say something. He wonders if this could be useful in surgery, but it's not until 1844 until. A dentist in America picks this up Morton and, and tries to use it to extract the tooth that they, they think, oh, maybe this could be useful. And then you get into Ether being discovered and the guy who uses ether in America tries to patent it because that's the American way and it's sort of backfires on him. And, and so there's all these like weird little failures in the story of anesthesia, but the biggest thing that comes out of anesthesia, which we talk about in *Dead Ends*, is actually. There's this amazing triumph, but surgery becomes much more dangerous immediately after this moment because doctors are more willing to pick up the knife and to go deeper into the body, but they still don't understand germ theory. So as a result, postoperative infection rises. So again, you have this. This, this idea of success, but also can cause other problems.

AT: It's kind of two steps forward. One back, isn't it often? Yeah.

LF: Mm-hmm. And I think that's proven today. I'm sure you know, here's, here's another thing I just wanna make clear, is that, you know, we're very pro science, pro medicine, and one of the challenges with telling the story was to make sure we. Scaring kids away from medicine and science and, you know, one of the things we tried to do in the book was to remind them that we do now have regulations. We have the FDA, we have, you know, institutes that regulate this stuff. So it's a lot safer. You don't have Edward Jenner coming at you with the smallpox, you know, and, and hoping that this is gonna work. Um, so it's, it's different in that sense and we should celebrate those institutes that keep us safe and hopefully will continue to do that. Um, and that, that's a big part of the story. Yeah, definitely. So it's, again, it's about not hiding our history and acknowledging the harm that was done, because I think also if we don't do that, it's not right to the people who were harmed by some of these experiments, but equally, you know, celebrating the triumphs and then seeing how we become better at what we do and safer at what we do and how this is, this is, is a better world because of what has happened.

EAU: Yeah. Mm-hmm. Yeah. I feel like you highlight in the book too, a lot of how there has always been this misinformation in everything that is kind of everywhere as it is today. And so much of what drives misinformation and the spread of misinformation today is just this. Lack of a fundamental

understanding in how science is actually done. And I feel like one of the things that's so great about the book is how you highlight that this is normal for things to change. How science is this work in process. We have to change our minds when we have conflicting evidence. What are some of the ways that you think today that for ourselves, our kids, our families, our friends, how can we like inoculate ourselves against this rise of medical misinformation?

LF: That's such a great question. And also I, I just wanna say that we don't just have medical misinformation. We now also have medical disinformation, which is different. Yes. And purposely spread. To misinform the public. And so it's a very scary thing. Um, having gone through breast cancer recently, there are, you know, some high profile people who are just plainly saying things that are just not true about how you should be treating your breast cancer. And it can be very dangerous because people read this stuff, they're influenced by it. We live in the age of TikTok and influencers and it can be very dangerous. Um, misinformation, you know, this is, this is the. Issue is to go back to the COVID uh, pandemic. Was that it wasn't misinformation all the time when if, if we revised the advice.

LF: And so I think that's the problem is that people will sometimes look at it and think that, well, they were wrong. Well, they were wrong. But again, this is, this is about the process of learning about the virus when the virus was brand new. You know, there was different advice to two years later. Um, and I, I think it is sort of a. A disconnect with the scientific process, the decline of science literacy, again, that we're seeing across the world. I don't know what the anecdote is though, because it's, it's scary the way we consume information. One of the things we were talking about in a, a previous interview was that we did an event with Play Busters and all the kids were sitting there reading and they, they didn't care what we had to say, which was great to see. Yeah. And I think the thing to take away was that kids actually are hungry. For that kind of thoughtful content. They don't need to just be fed this through 32nd clips online. Um, and in adults too, they want the deep dives. You know, I'm still one of the dinosaurs on Instagram who are doing, you know, big level Instagram posts and, um, people come to it and they wanna read it and they wanna understand more. And so I think that there's. A value in books. There's a value in deep dives and we need to keep pushing that. Um, you know, because that's the only way we're gonna get over this sort of age of misinformation and disinformation. We have to be more literate and scientifically literate. Certainly.

AT: Yeah. And, and, you know, book's great because it gives you the space to do that, to make an argument really.

LF: Yeah. Mm-hmm.

AT: I suppose what, what we're trying to do, isn't it?

LF: And make it fun for the kids, you know? Right. You got the butthole in there, you got

AT: gotta get the,

LF: you gotta, you got the butthole there, you got the, the fun illustrations. And it's just, it's been a joy to see kids pick this book up. And I just hope that we can find ways, um, to make science and medicine really fun for kids and, uh, and, and find new ways to engage with them on, on these really interesting topics.

EW: I think that Dead Ends is, it's such an incredible book. It's, it is something that as a kid I would've loved. And I know that there are tons of nerdy kids out there and non nerdy kids who are just gonna love this book. And I just, you know, Lindsey and Adrian, it has been such a joy to chat with you. It's been a long time coming. I feel like there's like a parasocial relationship thing going on where I'm like. I know you. This is amazing. We're like,

EAU: we're friends already. We're friends.

LF: So I was just so happy that we could finally connect up and chat about this. And I know that we'll be talking about sleuth, hound, and face maker and whatever else you guys wanna talk about. Um, because it's

EW: all all the things. Yeah. All the things. Yeah. So

LF: fun. Um, so thank you for, for amplifying our book in this extraordinary way as well.

AT: Thank you.

EW: A big thank you again to Lindsey and Adrian for taking the time to chat with us. I am so glad that we finally got to have you all on the pod. What a delight. If you enjoyed today's episode and would like to learn more, check out our website. This podcast will kill you.com, where I'll post a link to where you can find Dead Ends: Flukes, Flops and Failures That Sparked Medical Marvels, as well as links to Lindsey's website and Adrian's. Site where you can find their other incredible work. And don't forget, you can check out our website for all sorts of other cool things, including but not limited to transcripts, quarantining,

and placebora Recipes show notes and references for all of our episodes. Links to merch. Our bookshop.org affiliate page are good. Reads list a firsthand account form and music by blood mobile. Speaking of which, thank you to Blood Mobile for providing the music for this episode and all of our episodes. Thank you to Lianna Squillache and Tom Breyfogle for our audio mixing. And thanks to you listeners for listening. I hope you liked this episode and our loving being part of the T-P-W-K-Y Book Club, and a special thank you as always to our fantastic patrons. We appreciate your support so very much. Well, until next time, keep washing those hands.