Hi everyone, welcome to this week's episode of No Such Thing as a Fish, where we were joined at the Soho Theatre by Ella Al-Shamahi. Yes, it is Ella, our explorer friend. She's a paleoanthropologist, she's an evolutionary biologist, a TV presenter, she is absolutely badass, and she came to join us on stage for a really, really fun show. Absolutely certain you're going to really love this one. I just messaged Ella, she's off somewhere around the world, and asked her if she wanted me to plug anything, she said not, but I really think I should probably mention that she does have a book, it's called The Handshake A Gripping History, that's available wherever you get your books. One last thing while I have a little bit of time is if you go to NoSuchThingsAsAFish.com and look for the shop there. I don't think we've mentioned this for a while, we have quite a bit of merch that you can get hold of. There's nerdy t-shirts, there's pin batches, there's all sorts of stuff, there is also the Ultimate Guide. This was like a program that we made for our live shows. It was put together by Alex Bell, it's got interviews, it's got photos, it's got tons and tons of facts, Andy did a whole page on moss. Basically, if you love the show, you will definitely, definitely love it. So yeah, go to NoSuchThingAsAsAFish.com and look for the shop and you'll find the details there. But anyway, let's just get on with the show live from the Soho Theatre in London with Ella Al-Shamahi. Okay, on with the podcast. Hello and welcome to another episode of NoSuchThingAsAsAFish, a weekly podcast this week coming to

you live from the Soho Theatre. My name is Dan Schreiber, I am sitting here with James Harkin, Andrew Hunter Murray and Ella Al-Shamahi and once again, we have gathered around the microphones

with our four favorite facts from the last seven days and in no particular order, here we go. Starting with fact number one and that is Ella. Wales don't have tear ducts because there's no point in crying in the ocean. I feel like I must have at some point cried in the ocean and felt a bit better for it, you know. That's true. No one can see you crying in the ocean is the point, right? And this was salty when I got here. Can you not see people crying in the ocean? With your heads under water. No, hold on seriously, okay, if you're actually properly balling, would you be able to tell? You'd certainly be able to tell the facial expression of someone who's crying, for sure. Okay, so that I think that's what's really amazing to me about this fact is that when I think about Wales, I think about their songs, right? And how emotive they are, how they move people, like there's been congressional hearings in the US where people haven't actually given testimony, they've just played whale song. Wow. And to think that those beautiful creatures who sit there like communicating in this way that's just like moves us, can't cry is really bad. But they cry vocally, don't they? Yeah. That's what we know about. Would they do that, right? How is your CD selling, Dan? Dan's song. Shriver's whale song, yeah. Shopping centers, don't you? You're dropping to sleep, it's very calm. But they do do that, right? Yes, so 100% they express emotion, etc, etc. I've got a guestion. So if, because obviously they live in water, if you cry, there's your water is coming out of your eyes, would it be a pressure problem? As in, would it be harder to push a tear out of your eye? Probably not. I don't know. See, apparently they just don't have tear ducts. So they just don't have the duct full stop. They can, they've still got the ability to secrete and clean their eyeballs. Yeah, so they've got like a useful tear basically. Like a windscreen water. Yeah, exactly. Can I, can I, I just want to test a misconception that I definitely had before researching this, and I wonder if anyone else in the room had it. Right. I have had tear ducts wrong my whole life.

I thought that tear ducts take the tears from wherever they're made to your eye, right? Right. Does anyone else think that? Yeah. Yeah, so I'm okay. So I'm not, I mean, not as many as, not nearly as many as I hoped would have made this error, but no, they carry tears away from the eye.

Oh, I see. The tear duct is the, is the gutter for tears. Right. They get made kind of in your eyes, lacrimal sac, and then they run into the corner and then that collects and then it drains into your nose, which is why when you cry, your nose runs. If you look into the corner of someone's eye, you'll see a little black dot and that's the tear duct where the tears go into. Right, and it's just the gutter. It's not like a sort of, I thought it was a kind of. So how come our nose doesn't run every single time we cry? It does, but it might go down the back of your nose as opposed to another thing that's similar between the nose, the tear ducts and the nose is that in Wales, they have this stuff that they put on their eyes, but it's much more viscous than human tears. Yeah. And it's full of mucans, which basically means it's the same as snot pretty much. Not exactly the same, but it's got the same stuff in and they don't have to do it very often. They only have to do it every couple of hours. They kind of smear their eye with snot and then they don't have to blink again for hours and hours. Is it worth the trade-off of never having to blink, but you have snotty eyes? That's my question. I would go for that. Would you? I would go for that. Yeah. Yeah. Because the ocean would wash it off, right? It does eventually. Yeah. Yeah. Yeah. That's pretty useful. Okay. No, I'm just thinking you just save all that time, you know, constantly. Sorry I'm late. I was blinking. But you miss like a tenth of whatever's happening in the world, don't you? Or maybe a bit less. This is why you need more women on this panel. Oh, should we have snotty eyeballs? Yeah, such lads. Fucking ladjack. Come back to mine, guys. Let's talk about fucking eyelids on Wales. Strip clubs. Fuck that. We're going to talk about the nose problem. I preferred it, Dan, when you were doing whale sound. Shall we do some lads, lads, lads stuff then? Yeah. So what is the one body part of a whale that will be able to tell you what species they are better than any other body part? Oh, well, like what species of whale? Because I know it's a whale already. You'll know it's a whale. You're like, oh, is this a pygmy right whale or is it a whatever whale? Well, the right whale has the biggest testicle in all of the whales species. There we go. There's all of all species on earth, right? It's the biggest. Yeah, yeah, yeah, it's bigger than that. They're big. I would have thought, yeah, I would have thought blue well. Okay, Ella, do you want to have a pitch? Oh, geez, the... That's right, the vagina. Wow. Do you know what? You laugh about this. I was once on camera trying to do a whale necropsy, which is like the autopsy you did give an animal, walking past this huge say whale. And on camera, we're like talking through all the different bits and then I'm about to point at something and be like, so what's that? Because it was so huge. That's amazing. It was quite terrifying. I've never seen one in real life, but I've only gone off what I've read. Okay. But apparently, so there's a woman called Dr. Sarah Messnick who studies whale vaginas and she says that basically they're just a series of flaps, folds, blind alleys, funnels. They said that the first time they open one up, they couldn't work out. Like in a maze, they couldn't work out how to get from the opening to where the sperm is needed to be. They literally couldn't work out the maze. Like most men. But yeah, and because they're so different in all the different species, they're a really, really good way. If you only have one piece of a whale to look at, okay, go for the vagina.

Can I pick the whale's head to differentiate the species? Is that allowed? And you're saying

the vaginas would better steer. Well, they all just look like whales, don't they? Yeah, that's true. And that's really not true. But like there are some of the whales like a beluga whale looks really different to a sperm whale, for instance. But a lot of the like closer species do look quite similar, I would say. Do you want to do an effect about whale eyes? This is as they're on tear ducts in Wales. Yeah. Lots of whales can't see blue.

That's another really sad one. It's really sad. And then monochromatic, they just see shades of grey. Yeah, it's lots of whales. So depressing. Yeah, they can't cry. They can't see colours. I don't know what I just feel really moved by. It's not everyone's moved by whales, right? That's like a thing. Yeah. Yeah. So I think my facts like that just make me a bit sad that they don't. But they can see something very cool. This is great. So whales have big big eyes, right? Actually, not that big compared with the size of the whale. They're obviously way bigger than our eyes, but they're not sure. And their pupils are about half as large again as human pupils. So again, not a huge discrepancy, but enough of that means I was reading an article about astronomy. It was a brilliant article, even with that smallish difference in pupil size, they would be able to see twice as many stars in the night sky as we can. But they live underwater. But they do come up. They do come up. Although they have to remember to

which I think is quite amusing. Imagine having to remember to breathe. Yeah, yeah, it's not automatic. That's incredible. Oh, because they can commit suicide, can't they? It's really dark. It's really dark. Join us next week on Sad Facts About Whales. No, they can't. Those are the interstitials between my whale cries on my CD. Whales commit suicide. Anyway, listen, can I steer us away from this incessant lad chat and get us to

something different, which is in Star Trek, as part of the crew, there are whales and dolphins on the actual Starship Enterprise. Yeah, there's, yeah, there's, there's a Citation Navigation Lab, which is always alluded to, which consists of 12 bottlenose dolphins and a couple of whales that are on board. And is it because they can see the stars better? It's their echolocation, and it's the navigation system. Space echolocation. So they're navigating for Captain Picard. They're like, where should we go? Ask the dolphins and whales. Isn't that cool? That's utterly bizarre. Yeah. Surely their echolocation wouldn't work in space.

They're probably space whales, as in they're probably, oh, I assume they're space whales. As in, I think it's the future Star Trek, right? So they must have evolved to. Has the universe evolved to have molecules in between the stars as well? We're going to have to move on in a sec. Oh, no, no, no. What about crying? So many. Yep. Doves don't cry. Doves don't cry. I think most animals don't cry really. That's true. But there's only one song about doves that do cry. It's like Princeton really suckled when worms cry.

No, they do have tear ducts, gutters, and can keep their eyes moist, but they don't do emotional crying. Talking of birds. You know how we always think like the birds song? Talking of birds. Who's the lad now, eh? So you know how we think birdsong is all about communication? Yeah. They've discovered

that actually, no, sometimes birds are just muttering to themselves. It's just so cute. Apparently sometimes they're just like, it's just really not going well today. I read that whales, if there's like predators around and they have the baby whales near them,

they'll whisper like, guys, we've got to be like whales whisper. That's pretty fascinating that they know to lower their tone. So my second crazy whale fact, if I could get it in, is that since

breathe.

the 1960s, blue whales have lowered their their sound. So like the gone more baritone, shifting the equivalent of three white keys on a piano, which ironically used to once be made of whale bone. And it's like, it's really mad how they've completely changed as well the distance that they can communicate in. And part of that might be a good reason. So it might be that they have gone lower in sound because there's more of them since the 1960s because the whaling conventions and whaling and blah, blah, blah. And it's actually worked. But the bad explanation is that the ocean is more acidic and therefore sound travels quicker. And it was like, so it's like, you can pick your explanation, be happy or depressed, basically. Okay, great. Bad place to end. Well, let me quickly tell you about some some new science that's been done. So there were some people who were swimming

next to a whale. And before they knew it, this guy who was writing about it said the water was like chocolate milk. I couldn't see my hand when I held it in front of my face. I had poo in my eyes, mouth, wetsuit, everywhere. And I was soaked in it from head to toe. Okay, but the interesting thing is they reckon this is evidence that perhaps whales will expel feces when they're scared as a defense technique to try and stop people from attacking them. So I have a mate who collects whale poo. She's the Asher Divas. Yeah, she's really intellectual whale poo. Has she ever been covered

in it like this person? I think there's a bit, but not quite to that extent. Well, I read this article in Vice and they said if this punado was newly observed defense mechanism, then the divers have made a great discovery. If not, they just got covered in shit.

Stop the podcast. Stop the podcast. Hi, everybody. Just to let you know, we're not sponsored this week.

We're not sponsored this week. Okay. But on with the podcast. Hold your horses, Dan. We're not sponsored by someone in particular. This week, we are not sponsored by Make My Money Matter. Yeah, Make My Money Matter is raising awareness about something that I think most of us have no idea about. For example, did you know that there are three trillion pounds invested in UK pensions? And without you knowing it, it is being invested into places that are actively harming our planet. That's right. Your pension could have thousands of pounds invested in things like fossil fuels and deforestation. That's the bad news. The good news is that it does not have to be this way. That's right. If you head over to MakeMyMoneyMatter.co.uk, they are going to show you where you can

reinvest your pension money, which is so simple to do. Andy's already done it, haven't you, Andy? I did. It took genuinely, it took me about 10 minutes and that was because I couldn't find my password for a little while. Switching from standard fund to a sustainable fund, it is so easy and it is such a massive lever that you can pull. Make My Money Matter have done some research. They have found that making your pension green could cut your carbon footprint

21 times as much as giving up flying, giving up meat and switching your energy provider combined. And if you want to find out more, all you have to do is go to MakeMyMoneyMatter.co.uk. That's right. So head to MakeMyMoneyMatter.co.uk and find out from pensions to savings, investments

to bank accounts and all the other choices out there of how money should be really invested in the right ways. They will tell you they are the place to go and thank you Make My Money Matter for not sponsoring us today. That's right. Now get out there and spend your trillions of pounds.

Okay. On with the show. On with the podcast.

It is time for fact number two and that is James. Okay. My fact this week is that in the 1950s, Campbell's tried to persuade people to start drinking cocktails made out of beef soup. No? It sounds amazing. It does sound amazing. Do you not fancy that? It was over ice, maybe with a bit of alcohol. Lovely. No? Perfect temperature for beef soup. I see. What was the beef soup made of? Beef. Like beef broth or like... Beef bouillon. What does that mean? It's just like beef soup basically. It was like soup. I don't know what to say. It's like Campbell's so they're like tens of tens of soups basically. Yeah I know but like for any bougie women in the room you know that there's this movement right now with like beef broth and bone marrow. What's that? Bone marrow is like supposed to be really good for your gut health. Right. IBS ladies in the room. Oh yeah. Sorry this is a bit of a laddie podcast. We don't really do that stuff. This is in 1955 and the idea was Campbell's they decided that this was going to be their new marketing campaign. They sent a load of what could just be described as cans of soup and ice buckets and recipe cards to a load of magazine editors and influencers what we would call influencers today and they just said this is the new thing. This is what you have to do. They did adverts in magazines. These soup cocktails actually appeared on menus in Los Angeles and New

York and it was all the way up until the 1970s they were saying that this is something you could do. You could even add bitters. You could add vodka. You could add lemon but the main benefit was soup

over ice. Yeah and it's so disgusting. Did they have a massive surplus or something? Whether they were trying to shift or was it no. It was just how do we find a new market and they as James says it was sent to like the Dodgers the baseball team. They all received it. It was the marketing. These are the this is the wording that they were sending some of the stuff out within in the adverts for a summertime drink. It is low in calories less than 30 calories per generous serving. It is inexpensive. It is especially valuable to athletes and golfers in replacing salt loss through exercise. Best of all it's downright delicious and and they would put they would put the recipes on the side of cans and there was a moment where they almost made it a thing. Yeah there was a guy called Lester Lannan who was an orchestra leader and he introduced a new dance called the soup which you would dance after you've had a few soup cocktails. Oh it's so. It's a lack of foresight really that you didn't think to buy some Campbell's. We should have done. We could have added some vodka. Added some. Because the amazing thing is last year Campbell's did it again. This disappeared in the 70s and then last year the Campbell's website had a page where it could tell you how to make a mushroom truffle daiguiri, a faux mango bourbon sour, a Thai chicken negroni and a pork ramen margarita. Thank you. Some room temperature water please.

It's so fat. It's so grubby. Who would try it? Oh definitely. I'd try it. Who would try it? Yeah. Oh do you lot? Oh really safe aren't you? It was it was a massive thing and one of the other things which I had never read about before but this is a thing like James has said kind of just keeps coming back and this is largely down to people on TikTok sort of reintroducing this as a thing but there's also tomato soup cake. Oh yeah. It's a big thing and people were genuinely in the 50s as well. Yeah in the 50s yeah. It does feel like people thought well it's the nuclear age now. Fuck it. Yeah. That's just nothing matters. Yeah yeah yeah. And now it's 2022 and they're doing the same thing. It's a bad sign. Yeah. I've got a lot of tons of soup left over from Covid. Right

yeah yeah. Don't do something with it. Well enjoy your Thai chicken negroni. Lovely. Can I tell you a hero of soup? Oh yeah. One of the heroes of the soup world. This guy called John Dorrance. Oh John Dorrance became the head of the Campbell soup company through his genius he realized at one

point you know because he I think he was working for Campbell's and he realized my god we're just transporting water you know because that's a huge part of the cost of soup is moving it all around it's just and he invented condensed soup. He created the magic formula and as a result his family are all billionaires now. Yeah. Because he just thought let's just take the water out. That's clever. Well I thought so the Dorrance family there was a list of the richest people in the world the richest families in the world so we're not talking individual billionaires. In 2023 they are listed as the 19th richest family in the world according to this list and above them is basically just a bunch of cocks. It's you've got in at number eight the cocks family who they are the ones that have done cable and broadband cocks communications who else have we've got. Legally I'm feeling quite nervous. I know. Have you got more cocks. Well no it's interesting there's two cocks there's one that's spelt differently there's the buts the but family and there's a bush so within the top 20 four of the richest families are two cocks one but and a bush. What more do you need. Well there's a hunt but it was close.

How much money was put into this marketing campaign. Well they were just sending stuff out they did do a full page advert and live magazine so that would have cost a bit but mostly it was just sending out recipe cards and stuff so not too much. I just find these food trends to be completely bizarre. Like remember that paleo trend that was going on. Yes the diet you mean. Yeah. What was that. You eat like a caveman so you eat raw meat and dinosaurs. Oh god somebody teach them geology. So the dinosaurs. But yeah that's just when you know you just eat beef and you eat a lot of meat and grain and stuff but it was really awkward for those of us that actually studied human evolution because they kept asking us about it and we were like yeah I mean two things

one is they were eating all aspects of the animal so unless you're going to start eating the intestines of an animal and the inside of the intestines of the like squeeze out the inside of the intestines of the animal and eat the eyes of the animal and the tear ducts and then it's not really the paleo diet because that's what our ancestors were doing they were like being quite you know. Know the tale. Yeah like everything. Yeah. But then the other side of it is like I love this whole like oh the original thing was the best thing because I'm like they were all dead by our age so. Oh yeah. They were all killed by dinosaurs. That's for sure. Yeah they were actually. But anyway

yeah oh god. We never talked about bovrule properly. We've talked mentioned that once or twice. All right. What is that exactly? Because it reminds me of your stag do Andy.

Bovrule is just it was originally called it's Johnston's fluid beef and it's just it's ultra that's nice it's ultra condensed very condensed paste which is very beefy and it's a bit can we say it's a bit more mighty it's kind of like you make a drink out of it. It's like a very thick substance you might you turn it into a drink. Yeah it's like very weak beef soup but you drink it like tea. Meat tea. You drink it. Yeah meat meat tea yeah yeah it's a drink. Is this an English thing? Yeah yeah. Oh yeah this is. But bovrule used to it used to be absolutely huge it used to it was invented in about the 1870s and it was again like condensing all the good stuff and the invention of stock and things like that. But in fact the pope appeared in a bovrule advert at the time. Yeah

Like a TV ad. Is that not unethical? A TV ad in 1870s. It was sorry I missed the year. Yeah sorry it was only in 1900 but it was it was a magazine ad and I don't think it had full papal clearance because it showed him drinking bovrule on his papal throne and the slogan was the two infallible powers the pope and bovrule. So it was not it was not strictly on brand I think for him. But have you heard of chevril? Chevril no. Can you ever guess? Is it chicken bovrule? Is it a different country? No it's chev, chev, it's not chevril. Cheval horse. It's horse. And this was not an official drink it was a siege drink during the boe war. The boe, boe.

boe. Is that the one that keeps appearing on my iPhone that tells me to celebrate the day? No that's the battle of the boine. The boine. And so the boe war. Boe war yeah.

How would we say it? The way you sound it it's like a butter war in France.

Boe, boe, boe, boe, boe, boe. Anyway during that conflict

there was the second of those two wars by the way there was a siege there was a place called Lady Smith that was under siege as part of that might have been the first one and the garrison they were so desperate that they made themselves horse bovril because by the end of the siege they were so reduced to eating you eat all the food they'd eat all the stuff that looked a bit like food and then they had to eat the horses but they had a bit of fun with it because they got to you know boil down the horses and make chevril so that just shows the cultural power of bovril. It might seem like I said that quite long thing for no good reason but that's not the case. Okay do people still eat drink bovril? Yeah it's very big. It's massive. You would get it if you go to a football match you would see it. Yes. You've been to a pub at last orders. Yeah everyone have you noticed everyone around you gets a steaming hot mug. That's the final. It keeps you warm on

the walk home. Yeah bovril for your walk sir. Okay I know that's untrue obviously. They bring the bovril down. This is a podcast about facts guys. But okay so you guys have all had bovril? Yeah well not. You've had bovril? Ella it's like everyone has. It's very like and I'm not British but I've yeah. Well after this if anyone wants bovril we'll go together. We've got to wait for last orders and we've got no choice. Well why don't we all go and have the most expensive soup in the world. Do you fancy some of that? Sure. It's called cordyceps soup. Would you like some cordyceps soup? It's a cordyceps me thing. Yeah. Do you like it? It's got chicken so obviously it's veggies. But we can have it without the chicken. Red dates, loganberries and cordyceps which is a mushroom. Yeah. It's that mushroom which goes inside caterpillars and sort of makes them

climb up to the top of a plant and then grows out of their brains and then makes birds eat them. You know that mushroom? Yeah I do yeah. Lovely parasitic mushroom sure. It goes out of the brains and then they explode and all the spores go everywhere. Yeah again I think the room temperature water just feels hungry. Well is that this is the world's most expensive soup. One bowl is \$688 last time I checked and it's made with this stuff and these cordyceps fungi which grow in the insects and caterpillars especially in China in the Tibet area they get it and it's supposed to be you know very good for you. Right. Is it that's the same mechanism as in the TV show and the computer game The Last of Us. Yeah yeah yeah. That's what it's based on. Yeah yeah yeah. If the and like if the zombie apocalypse happens because some people wanted expensive soup that's going to be so. Can you time it as well you know when we go see flowers that we know we're going to bloom once every hundred years and they open can your can your meal arrive as just an intact

bird

and then suddenly it just explodes out. That would be great in the mouth. Yeah. Also you're saying people in the Himalayas are spending \$600 pounds. No so they take them and then they take them to rich Chinese cities. Are those Sherpas they own so much don't they. Yeah honestly those guys. But there was the Chinese national games in Beijing a few years ago and there was two athletes

Wang Xiongxia and Chu Xiongxia and they beat the world records in the 10,000 meters of 3000 meters

and the 1500 meters and the newspapers all said it was down to this stuff this cordyceps soup that they were drinking. Were they getting close to the finish line and then something just erupted out of their head and pushed them over. It seems looking bad that it might have been due to steak sanctioned doping but who knows. Who knows. Who knows. Probably just that delicious mushroom soup. Do you know Webster in America. Dictionary. Yeah. Yeah. So when he was putting the dictionary together he kind of just changed certain words to what he thought was the better pronunciation the better the better wording rather the better letters to be used in the word. So yeah. So like the reason. Sorry. I just I don't have his book on me to have looked that up. But so the word center he changed to ER. Okay. That's why Americans do it. He's responsible color. There's no you in color in America because of him. But there were words that he tried to use but were kind of rejected by others soup and soup was one. So soup was meant to be spelled S-O-O-P according to Webster. So the Americans might have had soup. Yeah. Gosh. Imagine having that kind of power that you can just literally change words. Exactly. An island he tried to change as well. So island he was going to get rid of the S. So is I L A and so island and is he was going to get rid of the S and put it as is. Oh yeah. Sorry. I need to move us on to our next fact. So. Okay. Do you want to cry? Well there was a cry. You can't tell because I'm crying into the ducts. No. I was going to ask if you wanted to talk about portable soup pocket soup. No. It is time for fact number three. Well it's also known as veal glue. I mean there are a few different names but it's basically it's basically just solid soup. And again it was it was invented in the 17th century. It's something to carry around something to take away to see with you like a proto bovril really. It's just condensing. You boil it down. You boil it down. You boil it down to eventually have this gelatinous chunk of soup and then you just rehydrate it. And so Lewis and Clark when they did their expedition they took 193 pounds of solid soup. So that would have made that would have fed them for ages but they only ate it when food when things were really death. I think that's because it was disgusting. Yeah. Yeah. We had a fact also from a listener about Lewis and Clark which is part of the reason I mentioned this. Oh yeah. When they went on their

amazing trans-American voyage they took 150 pounds of semen with them which was their dog. He

called semen. Lovely. All right. I'm out. Okay. It is time for fact number three and that is my fact. My fact this week is that in 2003 there were 4096 fraudulent votes in the Belgian election. The culprit it was later discovered was the universe.

So what happened is the universe. It's always panto season at the Soho Theatre.

The universe accidentally voted in the Belgian election and it was down to cosmic rays. So basically this is 2003. There was a lady who was running for a unionist party and she was called Maria

Vin Falkle. Apologies for the pronunciation. And it was national election day and there was a precinct where they were having the votes counted. And as they were counting it it sort of registered 4096 which seemed impossible because that was more than there was possible to have in that area. So they thought something dodgy is going on. They had every single person in computers in the area look at the machine try to work it out. What the hell is going on? Nothing. Why are you guys laughing? Have you tried turning that off and on again? They tried that. Sorry. It's a computer people game. You're in computers. So they looked at it. They looked at it. And they looked at it and they saw that 4096 was a very computer-y number. Yes. Isn't it? Is it genuinely? It is genuinely. Some people here will have worked it out. Two to the twelve. Two to the twelve. It's two to the twelve. So in binary it's one, zero, zero, zero, zero, zero, twelve times. And so one of the zeros must have turned into a one. Yeah. So that's... Oh, okay. Exactly. I didn't get that but sure. Like a mad tiny glitch. A mad tiny glitch suddenly and they couldn't work at what was. And then a while later there was a conference of the American Association for the Advancement of Science. This was happening in Boston and it was during a talk called Cloudy with a Chance of Solar Flares that it was revealed that they believed that it was the cosmic rays of the universe that had hit it at this precise moment which happens a lot on our planet. I think somebody should call Trump up or his lawyers and be like, yo, we've got you a better excuse for that whole election. This man is just sitting here ruining democracy by like telling everybody, well, here's another excuse we can use in court. It's actually solar flares and that one over there is giving you mathematical formulas. I'm like, no part in any of this but carry on. No. I like the way that it was solar flares that changed this election. So that old newspaper headline which was The Sun What Won It literally was true. Super. That's very good. Yeah. Should

say what a cosmic ray is? Yeah. So it sounds like a ray but actually it's not, it's their particles, their pieces of atoms. They're obviously incredibly tiny and they are passing through all of us right now. Even in this basement, we're not safe. They're not harmful, that's the good news, but at sea level, roughly where we are, every square centimeter of the planet gets hit by one muon every minute and they're going at 90 muon. It's what you make borrow from. It was discovery and what was that war again? A muon. A muon. Yeah. All right. And but all of us now, all of us are being like just bang, bang, bang, muons passing right through us. Right. All of us now are being, is no one concerned even slightly? I'm concerned. But you said it doesn't harm us. It doesn't harm us at all. I'm not concerned. That's exactly what the muon lobby would say. Yeah. Here's the thing. We say it doesn't harm us. It absolutely does harm

us because it harms the things that we use. It harms communications. It harms, if you're, there's examples of airplanes literally dropping hundreds of feet because they've been hit by a cosmic ray and the system has rebooted and freaked out and those. It's rare. It's really rare. It's really, really rare. So the problem, one of the problems that there is going forward is that these particles have energy and they can change, they can flip transistors, basically. A transistor is a little switch in an electrical thing. Now, the smaller a transistor is, the less energy you need to flip it and the more you have, the more susceptible you are. And as time goes on, we have way more transistors in everything and they're way, way smaller. So in theory, it could be worse as time goes on. It's bad. Yeah. It is bad. You said it didn't harm us. You know what has happened? Yeah. Do we know if people were scared, were suspicious, thought

there was some kind of fraud going on? Yeah, no, absolutely. I mean, fortunately, because it was so obviously fraudulent that it was called immediately even by the party that they just knew. They were small party, right? So it wasn't. Yeah. And they know because in the Belgium elections, these machines, they do multiple different counts in different ways. And if any of the counts are different, they know there's something off. That's clever, basically. Did she end up winning, by the way? I don't think so. No, no, she didn't. Oh, that's sad. Yeah. She never was going to, which hence why it was sort of, she saw the numbers and she was like, my God, the revolution is here. This is the way that they do the elections in this part of Belgium. So the voters are given a magnetic card with a magnetic strip on it. They feed that into a computer. Then they use a light pen to point at a television screen. And that information then goes back onto the card. They take the card out, they put it into an urn. People go into the urn, they pick the cards out, they put it into another computer. That information is sent on the internet to another computer, which is in the polling station. That information is then put on a 3.5 inch floppy disk. This was in 2003, this was happening. Right. And then it was sent to the head office in the area where they would then put it into another computer, which added up all the numbers. Wow. I think there's a lot more than solar flares going on. That's amazing. Yeah. You think after that, I mean, I just imagine, if it had been a serious election, the mood would have been, like democracy would have been at stake. I'm sure the people of Belgium thought it was a serious election. Belgium's quite chaotic. They had no government for about five years, didn't they? Yeah. And it was fine. Yeah. We could just get by.

Yeah, because if you've seen how long it takes to vote, it's fine, you'll do. Stay where you are. We need to be more like Makassar Indonesia, which in 2018, there was one guy running completely unopposed from mayor, and he's still lost the election to none of the above.

Do you say Indonesia? Yeah. They have almost the, I would say the opposite system to the Belgium 2003 system. It's entirely dictatorship. Cross it off the touring schedule for 2024. Looking forward to that. They have nail based voting. So you get a ballot form, ballot paper, ballot sheet. Might just call it a ballot. A ballot. You get your ballot and then you punch a hole next to your chosen candidate with a nail and then you hold it loft during the count. You can see where the light shines through the little hole and that is it. And they introduced pens in 2014, but the authorities said you must use the pen as a nail. Just another election thing that I read. Do you know who won the 2020 Nambian election? It was a local Nambian. Sorry. Are you using Webster's dictionary? Sorry, I was looking for the region and I got confused, as I was saying it. So there's a Nambi. If I take it slowly and we all concentrate, it'll be okay. You can do it, you can do it. In 2020, a Nambian politician.

Guys, if I cut out all the other stuff, it sounds like you are all massive fans of Nambia.

Hey, they have great landscapes is all I'm going to say. Beautiful.

No, okay, there's a local politician in Nambia who is...

I'm sorry, where? I'm not weird as well.

In Nambia... Did you say Nambia? I don't know. I don't know what comes out of my mouth. Nambia, there's a candidate. Yeah, in 2020, there's a Nambian candidate who won a local election who is... Can you guess his name? Whatever we guess is going to be closer than whatever you read. It's a former politician, so it's a name that we know. So it's kind of like...

Like Winston Churchill. Kind of like that. Tony Blair. No. Just because lots of children were named Tony Blair in places like Kosovo after the... They were called Tonnebler.

Tonnebler. It was a squashed name. Tonnebler. It was a Christian name. Okay, so a famous politician.

No, that's good. Ming Campbell. Think bigger than England. Bigger. Eric Pickles.

No, you're all close. Maybe George Washington. Really famous politician. Yeah, that's a good one, but no. Adolf Hitler. Yeah, there's a politician there called Adolf Hitler. So Adolf is actually a common name over there. Is it still a common name? I guess it's a generation that are sort of like getting into political power at age. And Adolf Hitler said, and it's Adolf Hitler. That's his first and middle name. And he says, my dad absolutely knew who Hitler was. I don't think he knew who was a bad guy necessarily. He sort of gives his dad a bit of coverage on that. But he says... Wasn't it maybe a German colony or something? It was okay. Exactly it was. So he seems... I mean, I didn't have enough time to go to a deep dive into him, but he seems like quite a cheery, happy guy. Might be restoring the name, I don't know. But he said, they said, are you going to change your name? And he said, it's on all the papers already. I think I'll just leave it, actually. It's fine. So he's just kept it. And he won his election? Yeah, yeah, he won it. It's recognizable. Yeah, exactly.

His Wikipedia says, by the way. It says, not to be confused with Adolf Hitler.

And then on that sidebar, it has occupation, political activist, known for sharing the name as Adolf Hitler. That's got to be the disambiguation on Wikipedia with the biggest difference in article length between the one guy and the other guy. I don't know what he's achieved in Namibia, you know. Very true. Do you know, in... It was 1964, the general election, which Harold Wilson was the victor in. Yes, defeated Alec Douglas Hume. Go on. Well, that's kind of hot.

Oh, Dan, where were you during my university years?

But yeah, so 1964, he says that one of the big reasons he believes that he won the election is because they managed to swing a bunch of the marginal seats that might not have gone to labor, had the turnout not have been as massive, right? So he needed to get the turnout to be massive. And according to him, he managed to do this by persuading the BBC to delay a repeat of Steptoe and Son, the TV series, and moving it to another time. And as a result, no one was glued to the TV, and they went, all right, let's go out and vote instead. And he says that he thinks that that's what helped shift the vote. Harold Wilson said that. Harold Wilson said that, yeah. It's actually a bit more complicated than that, so it's...

OK, I need to move us on to our final fact of the show. It's time for our final fact of the show, and that is Andy. My fact is that the man who just broke the world record for living underwater got a visit from his 80-year-old mother halfway through to keep him cheerful.

Oh, that's nice. It's a sweet story. He's a guy called Joe Ditturi, and he's a brilliant scientist, and he's been studying how extreme pressure affects the human body over long periods of time, and it might be helpful for space missions if humans ever go to Mars. So he moved to the Florida Keys. There's an underwater lab, and you go down about 22 feet, and you're living under there. The pressure is much higher than at the surface, obviously. So it's a dry environment. You're in like a sort of pod capsule thing. And he was doing tests on himself every day. He managed 100 days, which is huge. No one's ever lived that far down for that long before, unless you're in a submarine. Slightly vexed question, never mind. And it's the longest underwater in a fixed structure. Sorry, because otherwise, a lot of our listeners are on submarines, nuclear subs, and we'll get we'll get emails eventually. Yeah, and he just he's an incredible guy. And he got a visit from his mom who sounds like an incredible woman. She scuba dive down to go up

to meet him. It was on his so he did 100 days. And it was a bit it was a bit further than the halfway was 81 days into it. And she scuba dive down with his brother. And there's this great photo of them just sitting in this underwater, you know, house. It is quite cool. It's quite, you know, Ele, you're an explorer. And it's good that people go down this and do all this thing. But it is a commercial hotel that you stayed in. So like any of us, if we could afford it, could just go and live there ourselves. Yeah, yeah. The problem is, there's so many people doing these, I'm going to stay down here the longest attempts that the booking is like, have you got anything in August? Nothing? Yeah, it's nothing. One guy. It's like, they don't have someone coming by and cleaning the room every day. Do they scuba diving down with a mint that they actually do? They will, they will send you down pizza, though. So it's \$800 a night for two people. And there's about it. Well, you know, come on, that's like four. I would have expected that to be much. Yeah, if you can't scuba dive, you also have to pay for a three hour scuba diving class. Okay, but like some premier ends in the center of town on that are busy times. That's, that's not bad. I guess so. It includes a pizza dinner, which they send out. Apparently, I read the TripAdvisor reviews. Apparently, the pizza is sometimes slightly damp. Oh, really? Wow. And yeah, and then you can stay and then you can't fly or dive again for 24 hours afterwards because of the pressure change that you've had. Yeah, you're pressurized, aren't you? Yeah, that's the kind of the point of his science, isn't it? He's like, he thinks that the pressure down there is going to help us live for a million years. 110 at least. So he's 55 years old. And he's saying, I believe that if I was living down here, that would be, I'd be at the halfway mark on my life expectancy. So I can make it. It's really, it's really interesting. It is interesting. So like, there's two things that come to mind. One is that this, yeah, you kind of touched on it, which is like this, forgive the words, I'm about to use the interface between extreme adventure and science is becoming really weird and actually happened guite recently with Ocean X, right? Like, it's just this idea that anyone can go on an expedition. Basically, as long as you're willing to pay enough money, like even, even Everest, we're talking about Everest, there's loads of people that now aren't really training for Everest. And they've just got these poor Sherpas, basically, literally hiking them up. And there is, I don't know, it's really weird. I don't know how I feel about all of it. This, you know, deter is a legit. Yeah, I know. But the thing is, it's like a lot of there's now this really weird move in exploration where a lot of really big research vessels are actually also tourist vessels. So you can get on these massive vessels that are basically like for people that are spending like 60,000 pounds for their like trip of a lifetime. And there's a bunch of like actual hardcore scientists in the corner doing all this stuff, but also have to give like, a lecture to like all these people. And it's just, I don't know how I feel about it. To help pay for it. That's a thing. It's a funding issue, isn't it? Ultimately. So it's kind of, yeah, it's kind of a good way of making sure that your expedition happens at all. But I get what you're saying. It turns it in to a tourist proposition. But he's found out a lot of amazing stuff because he was down there. He was monitoring every single bit of his body every day. So one thing that is going to be probably annoying for the next person in is that the toilet gets a lot of usage when you're down there, because your bladder is really squished, right? So he said, you're constantly just going to the toilet. Increased frequency and urgency of urination, is how he put it. And also he says that it's interesting that the your... I'm so glad you're saying this because I put it in my nose and you're working out a delicate way to say it. I'm trying to look for the phrasing. Your semen travels at short... Your dug. Yeah. Seamen travels at shorter

distances when you're down there as well. And so he... His mother's down there. Maybe that's what stopped

it. Don't come in. Don't... Don't scoot when I'm down here. I'm doing an experiment. You can only enter by rising up through the moon pool in the floor as well. So I'm like, go back down. Go back down. Is that going to be a problem for people having children? Yes. He says that maybe we won't be able to continue the species beneath 22 feet under sea level, which is an interesting observation because his point is that as part of the research, and this was happening a lot in the 60s, could we set up underwater bases where people could live for long periods of times? Jacques Cousteau did that. Sylvie or Earl went down. She's an amazing oceanographer. They would go down for 30 days, 40 days, 50 days and so on, trying to work out, can we live down there? That was the big push. Let's build these giant underwater civilizations but we won't be able to ejaculate properly. You've got to go up for that and then you can go back down. There's a lot of teenage boys just going, I'm just going to go for a quick... Just want to see the surface guickly. Just want to see the stars. There's a whale up there. He can show me some cool new constellations. I was thinking a lot about James Cameron recently because again, because of the Ocean Gate thing, when I first heard about what he did in the ocean space, I'll be honest, I didn't really believe it. He went down to the bottom of the Marianas trend. He's been deeper than any person. He's been saying that the guy who directed Avatar 2 has been deeper than anyone else on the planet. Well, he also directed Titanic, so that's closer, right? Well, Avatar 2, The Way of Water is a largely aquatic film, so it's actually a more relevant thing for me to mention at this point. Sure, Andy. Touched a nerve, don't know what that was about, but anyway. Sorry, your CPI movie, exactly, yes. Sorry, I got really, really crossed. And can I say that was not hot, okay? Anything you wanted, the sexiness of earlier. At the Alec Douglas Hume moment earlier. It's so interesting because he gave up his seat in the House of Lords to run as the conservative leader. That's very rare. Are you saying something about... Cameron also went down to see the Titanic. Yes. So the Marianas trench, and that's his oceanography credentials. No, no, no, but that's the thing, that's not just his oceanography credentials. So people think, oh, he, you know, so he's been to like the Titanic more than 30 odd times, and you're like, oh, that's something. But what's actually amazing is that he is legitimately, in his own right, a deep sea explorer, not in any way as a tourist, as an engineer. And there are all these crazy stories. So, for example, Bob Ballard, who find the Titanic. I don't know if you guys are following this, but after the whole catastrophe with that submersible, Ballard and James Cameron came out publicly and were like, look, there was safety concerns. There were always safety concerns. We've tried to highlight this. They were like, et cetera, et cetera, et cetera. And what was really fascinating is watching the interaction between the two of them. Because at one point, Bob Ballard turns around and goes, I mean, yeah, I'll defer to what he said about the mechanics of it. And you're just sitting there going, Bob Ballard is respecting this guy who was one, like, God knows, stay in your lane, stop making us feel bad about ourselves. The guy is like this incredible filmmaker and is also this incredible tech guy and the detail he will go into. And then I did some digging. And apparently, like, this has always been the case, sorry, this is, you can't understand, it made me feel really bad about myself. So apparently at the age of 14, James Cameron turns up to the Royal Ontario Museum, where outside

they had Canada's first permanent submersible. And they had it out there. And then they were

going to put it in the water in later on for like two years. And it's outside the museum. And he writes to the museum at the age of 14, asks for a blueprint for the bloody submersible and the guy, I think his name's Joe McGinnis, who's like a really, really famous oceanographer. He's like, okay, this is insane. Sure, I'll give you it. And he sits there, James Cameron 14, and tries to make it based on this blueprint, puts a mouse in it.

Like tries to make his own one. Yeah, a small one puts a mouse in it and puts it in a lake behind the Niagara Falls where he lives. And apparently the mouse makes it but it's slightly traumatized. And then he's like, oh, I've got a problem with the windows all again at the age of 14, writes to this scientist again and goes, can you help me with the window design? And the guy gives him the address to a company that he can write to to get what's it called the purple glass? What's it called? What's it called? Why can't I pronounce things today? Anyway, I think and and they actually sent him a sample and then he attaches it and does it again and like does this hope the age of 14, you're thinking, oh, this guy's a genius. We're gonna have to move on inside because we want to run away over. So we yeah, we need to we need to get out of here and get our bow rolls. I can tell you a few more things about going underwater. So the word urinator originally meant someone who dived. Okay, that's the first use in English of the word urinator is someone who goes deep sea diving. And then later it became someone who urinates must have been a

crossover period hilarious consequences. It's impossible to fart past 20 meters. A challenge a challenge for the people at Guinness. You're gonna cry and fart underwater.

Deeper underwater simultaneous fart cry one by Andrew Hunter Murray. Wow.

This guy couldn't have farted in the whole time he was there. He couldn't do Dr. Deepsea. Yeah, yeah, yeah. Because what happens is the due to Boyle's law, the volume is much, much smaller of your fats and your body just can't push it through. And so what that means is as you go up, it expands. No, wait, that doesn't happen with the other thing, does it?

At the front. You mean the ejaculation stuff? I do mean the ejaculation stuff.

Actually, you blast your way back to the surface.

Lad's, lad's, lad's, lad's.

Okay, that's it. That is all of our facts. Thank you so much for listening. If you'd like to get in contact with any of us about the things that we have said over the course of this podcast, we can be found on our Twitter accounts. I'm on at Shriverland, James. At James Harkin. Andy. At Andrew Hunter M. And Ella. Ella Alshamahi, underscore Alshamahi. Ella, underscore Alshamahi.

Or you can go to our group account, which is at no such thing, or you can go to our website, nosuchthingasafish.com, all of our previous episodes up there. So do check them out. So, Theodora, guys, thank you so much for being here today. Really appreciate it. Don't tell anyone what happened. But that's it. We'll see you again another time. Thanks so much. Goodbye!