

Numberphile Podcast Transcript  
Episode: Club Automatic - with Alex Bellos  
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Author and puzzle guru Alex Bellos talks about mathematics, writing, reviews, and his early days running a nightclub.

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[gentle piano music]

Brady Haran [BH]: Today's guest is Alex Bellos. Alex is an author, journalist, and something of a puzzle guru. [music continues] He's also been a regular on Numberphile videos over the years, featuring in some of our most popular posts. You may well have seen him cutting cakes, counting cows, and playing pool on an elliptical pool table. [music fades out] We'll get to the books and the puzzles later, but first, so Alex... where were you born?

Alex Bellos [AB]: Oxford.

BH: Oxford?

AB: Yeah.

BH: Oh so you're like, all posh person are you?

AB: Does that make me posh? I don't know, so I was born in Oxford from a Hungarian naturalized French mother and a father who was still a student there whose grandparents were poor immigrants from Ukraine so, did it alright and I guess now I'm posh in the sense that I then studied at Oxford and I write books but I don't think then you'd've called them posh. You'd've called them kind of hard working immigrants.

BH: What occupations do they do, your parents?

AB: So my dad has been an academic all his life, about twenty years ago got a job at Princeton where he's head of the Department of Comparative Literature, which is basically Modern Languages, his specialty is French and now has become translation. So he runs, I think, the Center for Translation Studies, or something like that, at Princeton. He is a translator himself but also the kind of the science, I suppose, of translation and there are certain French authors who is experts on, one being Victor Hugo, the other one being Georges Perec, who writes actually quite kind of mathematical books and Balzac, so when I was a born, I think he was doing is PhD on Balzac. [laughs]

BH: Oh right? What... and did your mother...?

AB: So my mum was born in Hungary, at the final months of the Second World War and being of a Jewish family was one of the only ones to survive so I managed to get out and got to France and then she studied Russian at university and my dad who studied French and Russia at Oxford at that time in the Cold War if you studied Russian at any Western European university when you went to Russia you had to go and stay in one hotel in St. Petersburg so it was kind you

could have made a great sort of American teen movie 'cause it was full of like loads and loads of students all studying Russian from all around Western Europe and on one corridor, my mum and my dad, my dad or my mum asked the other one for a bar of soap for the shower and the rest is history, so then my mum, you know, very romantic story meeting in St. Petersburg, and then my mum sort of came back, they dated and then they married and then my mum moved to Oxford, she had me and my two sisters and she's done lots of different things. She's worked... in computers [in a Scottish accent] we lived in Scotland for a bit and that was at the birth of computing. She worked a bit in computing and the she became a teacher and now she runs a film festival in Scotland.

BH: Right. Nice.

AB: [laughs]

BH: I'm imagining you had quite a bookish upbringing then. Like you were surrounded by books and art?

AB: Yeah lots of books. Yeah, yeah, my dad... I think my dad was young when he had me and he was still right at the beginning of his career and at time, well I think for all academics, when you're an academic starting out, you need to spend a lot of time writing your articles, getting in the journals, writing the books, so it's definitely the case that in my dad's twenties, when I was young, he was most of the time in his study reading and writing, so as a role model he wasn't particularly present I didn't feel in terms of the raising of me but he was an amazing role model in terms of, he's the guy surrounded by books and whose writing books and writing and learning that's really important so I definitely feel that the house was one devoted to learning and that was what's important, the only way to get my dad's attention was to like do well at school, basically.

BH: Did the fact that he was like that make you resistant to that kind of life?

AB: I think that... [sighs] I never [sighs] wanted to become an academic. Part of that might've been insecurity that I didn't think that I was good enough but also for all the amount that I respected my dad for his academic career I thought there's gotta be more out there and I was, you know, couldn't wait to get out into the real world. I think my dad was probably slightly disappointed about why I didn't go into academia, so I think there is maybe a bit of a tension there and now [laughs] when, you know, I'm sort of insecure, freelance writer, I think, oh wouldn't it be nice to have [laughs] job and an institution that's been around for a thousand years. [laughs]

BH: [laughs] What did you wanna be when you were a boy then? So if I met you like, you know, in your early teens and that, what were you into and what would you have said I wanna be when I grow up sort of thing.

AB: In my early teens... I think I... that's really... that's a really good question. I think I didn't want to be anything because I liked the idea that I didn't have to make my mind up. I kind of rebelled against this idea that, oh, that, you know, Jimmy wants to become an architect, Tommy wants to become a doctor, and I just wanted to get out there and see what there was. I was always really interested in journalism and I think that's because I'm a gossip. I always wanted to know what was going on. I always like loved talking about what people were up to and I founded the school magazine and went to Sixth Form and worked for the Sixth Form magazine and I went to university and I worked for the newspaper, so I've always been attracted to writing and finding out about the world and describing the world. It's always what I've wanted to do. I never would have that I could've actually done that professionally because I didn't really, you know, I didn't know anyone who did that. But... so I probably would've said... I don't know what I want to do but did you hear about Mrs. Jones? [laughs]

BH: [laughs] Right. What were you into? Like were you into sport or music or dancing or... you know... what?

AB: Yeah I was totally into music. So I was a... heavy metal, was what I was really into. Age twelve I had a denim jacket with studs and like I knew how to write Led Zeppelin and the ZoFo or whatever it is... ZoSo [laughs].

BH: Right [chuckles]

AB: So I was totally into that and then I had this amazing change when I was about sixteen, I began to like Soul and I used to like the Northern Soul and so I would like wear kind of jean dungarees and [laughs] the kind of big beret type thing and maybe sometimes I kind of, baseball jacket, the kind... Americana, you know, Motown, Funk, I got into that. Yeah. I like music. I played electric guitar. So that's what I liked to do.

BH: Were you good at school?

AB: Yeah so I was lucky that... I was good at maths and the thing about good at maths is that if you can do it you can just do it. So you can do it and you don't really need to do very much work, so I always knew I was gonna have loads of free time because the maths didn't take me anytime at all whereas other people were struggling and I always knew that I was gonna be near the top of class because just the grades of your maths, if you do the maths, the physics and the chemistry is not that like difficult, also 'cause my mum was French, I spoke fluent French, so yeah I was always quite good at school and I kind of enjoyed it, you know, I had a dad who was by that time a university lecturer and I think what I remember about my school days is that I was always really small. I was always a really short kid. Also I moved up like a year or maybe even two years so even in my own age range I was short, but I was with kids who were one or two years older than me, so I always had this kind of size, I guess, insecurity, so I became, I dunno... like the nice guy. The friendly guy, you know, I think what I spent a lot of my time socializing and trying to be liked.

BH: That would inoculate you from being bullied a bit because you were small or...?

AB: Yeah 'cause I think just sort of always felt... made me feel like a bit of an outsider so I was really keen to be like an insider and someone who people would sort of embrace and also so I grew up... well I was born in Oxford, then when I was two I moved to Edinburgh for ten years, and I just got this thick Scottish accent and then at age twelve I moved down south to live in Southampton which where I went to secondary school and then Sixth Form and I could remember the first day that I went to my new school in England, I don't know what I was thinking, I wore a full Scotland National Football kit tracksuit.  
[laughs]

BH: [laughs] Oh, no.

AB: It's so like terrible, obviously my identity has been sort of this Scottish kid. So I was the Scot who was in England. I was the kind of short guy with all these tall people. And also because I was good at maths but I realized quite early on that back then this is the late Seventies, early Eighties, maths... there was no geek cool, there was no nerd cool. If you were the good... the nerdy people, it was uncool, it was, you know, I was also interested in girls so if you wanted to be part of the gang that hung out with the people who liked music and there were girls in that gang, you had to make a real effort to do other things than just the maths. So, I was always quite nerdy but I always made an effort to be the person who was, you know, listening to the right music and going to the right... hanging out with the cool kids basically.

BH: As you came towards the end of high school then, what happened? What are the decisions being made? 'Cause obviously eventually you gotta make decisions don't you?

AB: Um... I think that... so I went to this secondary school in Southampton,

and you're still young, maybe you need to make a decision when you got to Sixth Form, 'cause the Sixth Form, the way it was done then it was completely different to the school...

BH: So for Americans, what do we mean by Sixth Form?

AB: So it's the last two years of compulsory education which is age 17 and 18.

BH: Hm.

AB: So this an institution, like the college, that only has those two years, and it was much more like a university than it was like a school, and they didn't force you to go to lessons. If you didn't want to go to lessons you didn't have to. You could smoke if you wanted to. There was no uniform or anything. So already going to Sixth Form takes kids from a much wider area, you're meeting people who are a bit more like you and I had a good gang. One of them had a car, we would like go to nightclubs and experiment... I really enjoyed my childhood in Southampton. So Southampton, you know, for the Americans, it is a city of maybe... half a million people? Three hundred thousand people. It's far enough from London for it to have it's own energy, but it's quite kind of square... but has... it has good cinemas and it's got a theater and it's got a university, so it's safe enough to experiment in loads of things and for it not to be particularly dangerous. And it's also... 'cause it's a port city, it's very diverse culturally. That when I went to university, when I went to Oxford, all the kids who had grown up in London, were just bored. They're like London's much more interesting than this, where as I was kind of, really excited because it was like going somewhere that was new and a bit different.

BH: What did you go and do at Oxford? And I mean getting into Oxford's kind of a big deal isn't it?

AB: Like, yeah, I mean I went to a state school. So, I didn't go to private... it

was paid by the government, a free school and... one other person from my school may have been two from the college, went there? So it was yeah, it was really unusual and it was tough. [laughs]

BH: What did you do... well first of all you were obviously were getting good marks at school then?

AB: Yeah.

BH: You talk about going out with your friends with the car and experimenting.

AB: Yeah.

BH: But you're obviously hitting your grades?

AB: With math, if you get it, you just get it, so I worked quite hard but I also spent a lot of time socializing and the only thing that I could get in to a good university was maths, because that was what I was good at and I must have had quite a good intuitive sense of maths because to get into Oxford you had to do an exam and I did the exam and, I dunno, two hundred, three hundred people? No must be several thousand people do it, because I think they accept two hundred people and most of the people who go to private schools have special teachers that teach you to try and get at this exam. Sounds like kind of, humble brag I believe is the term, but I was like something like thirtieth or something. So I did really well on the exam, that's basically the best I've ever done in an exam ever in my life.

BH: Hmm.

AB: But because of that Oxford were gonna take me.



BH: Yeah.

AB: No matter what happened in any of my other subjects.

BH: That's not a humble brag by the way, that's just a brag.

AB: What it's a brag? [laughs]

BH: [laughs]

AB: The difference between a humble brag...

BH: It has...

AB: I would have to sort just drop it in the conversation without talking about it?

BH: You would have to...

AB: Like be humble like?

BH: No you would have to be more self deprecating so it would be something like...

AB: Okay.

BH: Oh, I'm, you know, oh I'm such a nerd I'm so embarrassed...

AB: [laughs]

BH: You'd say I was the thirtieth biggest nerd in the whole country.

AB: Right. Okay. [laughs]

BH: [laughs] Do you wanna be a mathematician at this point?

AB: So no, I don't wanna be a mathematician. I wanna go study maths and philosophy and the reason why I'm attracted to maths and philosophy is that I'm beginning to be interested in, you know, philosophy, the ideas of where are we going in the world and also reading Bertrand Russel and getting books on philosophy. I think...

BH: So it sounds like you're interested in philosophy but you're having to use maths as your way to get to the philosophy 'cause you're so good at maths?

AB: Yeah, kind of.

BH: Yeah?

AB: Kind of. I mean, I was interested in maths. So it wasn't but it... it was just one thing I was interested and there were other things that I was maybe more interested in.

BH: Hmm.

AB: Yeah.

BH: Okay, so you're at Oxford doing maths and philosophy.

AB: Yeah.

BH: And then how does that unfold? What is unlocked here? What interests, you know, where does it lead?

AB: So lots of people want to go to Oxford because it's a brilliant university. I actually think my maths education was shockingly bad, and I would never recommend anyone going to Oxford... the college that I went to study maths, and I slightly regret the college that I went to, and that's because I got into this Corpus Christi College, it's a very small college, there was only one or two other people doing maths, and it meant there are only one or two tutors, so you had to do that tutor and maths all of sudden it gets really difficult, and to understand it you need to have a tutor who is like good at teaching and you also need to have lots of other people who are studying who are also struggling and I didn't have anyone to talk to about it and also I was interested in the philosophical side and the specialisms of my two tutors was not in that way at all.

BH: Hmm.

AB: One of them was actually like kind of a graduate student who had no training in or interest in being a teacher at all and I was just baffled so I was kind of down a bit depressed about it because there were lots of the interesting things that I want to find out about but I was finding it a bit too difficult. And I loved the philosophy and I ended up specializing in the philosophy of maths and also I was having like a lot of amazing time socially. I... joined the local paper, the university paper and I edited, it's called Cherwell, I edited the university paper. I also, so this was, I was seventeen when I went to Oxford, so that was in 1988 or '87. Once I'd edited the paper and began my second year, it was the Summer of Love. It was 1988, it was acid house, so I started a nightclub [laughs] so for my next couple of years I was running this nightclub.

BH: It was your nightclub?

AB: It was my nightclub, Club Automatic, yeah!

BH: Club Automatic. Oh my...

AB: Yeah.

BH: You are definitely the first nightclub owner...

AB: [laughs]

BH: ...that has been on the Numberphile podcast.

AB: Well. I didn't own the venue.

BH: Right.

AB: But we put it on at several different venues. It was me and two friends and I was the... one of the guys was the DJ, one of the guys was like did the posters and one of the guys did like the money and like dealing with these guys...

BH: Yeah?

AB: And that was me.

BH: Club Automatic. You were the money man!

AB: Yeah I was. [laughs]

BH: Wheeler and dealer!

AB: Yeah. I mean it was... yeah.

BH: What was that like? Is it good or was it like fun or did it become stressful? We you like, oh every night's a party or was it like oh what have I done, this is so hard.

AB: It was amazingly fun, but the great thing about university is you get to sort of make all those mistakes early. I mean it's kind of... [sighs] the first night we did, 'cause... you know...

BH: Club Automatic opening night.

AB: [laughs] What we did, it was called Bliss, was the opening night, Club Bliss, and we had these passports which we made and distributed them around the university and you had to bring your passport and we say oh here's a stamp for each different night that you would stamp in your passport so you could see...

BH: Hmm.

AB: ...which one you'd been too. And like far too many people showed up and so we got to the limit, already, and I was out by the door and then there was the guy who actually owned the place who had kind of like tattoos and this kind of guy and he was like look we got to the limit but if you give me some extra money, I'll let you put more people in.

BH: [laughs]

AB: And at that time I'm like, yeah Brit, sounds great!

BH: [laughs]

AB: Sounds great!

BH: [laughs]

AB: I mean just... but it wasn't a particularly good night because when I tried

to get downstairs actually I couldn't go downstairs because there was just like far too many people.

BH: It was packed. Alright.

AB: It was far too packed. So you learn pretty, you know, you wouldn't do that.

BH: So if a fire broke out that night we probably wouldn't be having this conversation. [laughs]

AB: [laughs] No for I would be in jail. Yeah or...

BH: Gosh.

AB: ...kind of trampled on and stoned by my peers. But the great thing about that was that I don't come from a... rich family but I managed to fund everything from the nightclub.

BH: From club...

AB: From Club Automatic.

BH: Club Automatic, you realize, is the podcast title now. I hope you realize that. [laughs]

AB: [laughs]

BH: [laughs] You have no choice in this.

AB: [laughs]

BH: Alright, so after being a nightclub owner and...

AB: [laughs]

BH: Nightclub owner by night, philosopher of mathematics expert by day, did you do well at university? Did you come out with a good degree?

AB: Hmm. [stutters] Not particularly.

BH: No?

AB: I got two one.

BH: Yeah? That's good. That's just...

AB: Which is okay, I mean...

BH: Standard. Solid.

AB: I'd always wanted to be what they call the Alpha Gamma Candidate. So the Alpha Gamma Candidate is the person who gets alphas, which is like the best, and gammas which is like kind of the worst. So someone who, that's interesting, sometimes you're brilliant and sometimes you're terrible. 'Cause it's the idea that maybe even when you're terrible you're actually kind of brilliant.

BH: And unrecognized genius.

AB: Exactly! What you don't want to be is the slightly boring humdrum betas all the way.

BH: Right.

AB: And essentially all through university I was just like betas all the way. And worked really hard just so I can get a beta like wouldn't do much work and still get a beta, I was just like kind of regular and boring and then come my finals I kind of flunked some of the exams and got gammas but the essay or... what to call it the thesis that I wrote on the philosophy of maths I got an alpha, so that kind of balanced so I don't think is that a humble brag or not? But [laughs]

BH: [laughs] That's closer! Yeah.

AB: [laughs] Is it?

BH: That's closer. Yeah, you're getting there. [laughs]

AB: But I love that. And actually I wrote a letter to my... the head of the philosophy of maths saying, I'm kind of surprised by, well this is how I remember it, having got done so well at this but I really enjoyed doing it and if it's really good, is there maybe a future for me carrying on in academia and being doing the philosophy of maths. [sighs] I never heard back.

BH: What!

AB: So it may of...

BH: Didn't even get a reply?

AB: No he might not have got it. There were no emails in those days so maybe...

BH: Couldn't you knock on the door?

AB: [sighs] Yeah but, you only hear the results and you know you're off.



BH: You go on.

AB: You know, you go on, you're out of college.

BH: By this part you must be thinking about like money and stuff so like what are you thinking about a job?

AB: I'd realized at that time that...

BH: Is Club Automatic still running?

AB: [sighs] No, it's not.

BH: No okay.

AB: I still got the posters at home though.

BH: Okay. [laughs]

AB: [laughs]

BH: Alright there's no Club Automatic income so you need another income.

AB: [laughs] Umm. I'd begun to realize how the English establishment network works so, I was in the group of people who did journalism, did newspapers, and I knew at the time that, you know, the person who's the editor of the Guardian then had edited Cherwell. So I had been the editor of Cherwell.

BH: Yeah.

AB: And I could just tell that if you're part of this group, you know the people who are like one year older than you, and they know the people who are one

year older than them.

BH: Yeah. Hmm.

AB: And it's just it's part of a gang and I realized without knowing it or consciously joining this gang, I was like totally in this Oxford journalism gang.

BH: Hmm.

AB: And one day in my final term, one... Alan Rusbridger, who became the editor of Guardian, at that time he was Features Editor, I think, of the Guardian, was invited to Oxford to give a talk and I was the person who, oh you Alex, you're editor of Cherwell, you go and you meet him at the station. So I met Alan, who was... journalist at the time, not particularly well known, walked him to my college, gave the talk, walked him back and kept in touch with him and then, you know, a few weeks after I graduated I just called him and said, do you have any work experience, so he was like yeah sure, so within a few weeks of university I was doing work experience at the Guardian which was the only paper that I would have wanted to work for and I've been linked to the Guardian ever since, last thirty years.

BH: So you started on a path of journalism and writing now, obviously.

AB: It's not just you go from Oxford to the Guardian, I can remember I was asking Alan, I said, well what should I do if I want to become a journalist and he said you need to go to work on a local paper, so I applied to dozens and dozens of local papers and the paper that accepted me was the Brighton Evening Argus, so I left London, I moved to Brighton. Well, first they sent me to Hastings where they had a training course, so I lived in Hastings for six months learning shorthand and local government and libel law and then I moved to Brighton where I worked for the Evening Argus for a couple of years. You know, it's an evening paper, it's really exciting, Brighton, this fantastic place, also great

nightclubs...

BH: You weren't tempted to start one yourself?

AB: The competition was too fierce.

BH: Right. [laughs]

AB: But I definitely frequented many of them.

BH: [laughs]

AB: I was always jealous when I was at Oxford 'cause I had a friend at Sussex University and he had a much, you know, he was a much... it was always great fun coming to Briton to visit him. Then after a couple of years at the Evening Argus, I moved to London, freelanced for a bit, and finally got a job at the Guardian. Yeah, but by that time, you know, I always had an identity as a maths person like, I'd never met anyone else in journalism, none of my friends in journalism, none of my friends who were in university journalism, or were national journalism, had science degrees. Definitely not a maths degree, so I always felt it's kind of a bit weird, you know, I was this sort of fish out of water. The mathematician, and I wasn't researching maths or studying maths, but I definitely had a super mathematical way of understanding the world and you could tell so clearly that people just didn't understand basic statistics, like how percentages worked, how probabilities worked, you know you would go to a demonstration and people'd be like, Alex, how many people are here? I'm like well, what you do is that you, you know, [laughs], count the number of people on the horizontal, up this way, and the number of people that way, and then you multiply them together and then that gives you the estimate. People just don't understand this is like basic maths. So I used to always think that the fact that I understood maths really gave me an advantage in a lot of simple news journalism. And also when it came to writing stories I was never particularly

good at writing but when you come to write news reports, they have a structure and it's like learning how to write a proof. You've got to have one thing that follows on from the next thing that follows from the next thing and you've got to have a kind of a beginning and the conclusion and you've got to summarize it in the most efficient concise way, so I quite enjoyed the fact that I had this mathematical brain amongst people who used words. And... it meant that I wasn't as fancy a writer. I was never gonna be a kind of a columnist of political opinions or anything like that. But also, I had certain things that I could do that no one else could do.

BH: Did your mathematical inclinations affect what you were writing about editorial at this stage? Like would you be pitching your editor on, d'y'know what, there's been a really big discovery at the Large Hadron Collider or there's been this proof in mathematics or were you doing regular news coverage?

AB: So at the local paper I was doing totally regular news coverage but then I had my own interests. So I can remember once the Polgár Sisters, I dunno if you kind of remember them, they were the first great female chess players. They were sisters from Hungarian, and they were making an appearance somewhere in the Brighton area. And I was like, I want to interview them! I'm like totally totally excited by speaking to a female chess player and I went and I spoke to them and that was great whereas no one else in the paper could have cared less. So I had that sort of interest. And when I went to the Guardian I can remember that this was right at the beginning of the internet. Right at the beginning of emails and I used to often be given those stories that required some kind of knowledge of how a computer might work, I mean, I can't code, we'd called it programming back then, but I couldn't do that, but I understood the language of it and also I think that what having training as a mathematician or a scientist means is that you can call up people and you speak their language so you can ask them in language that they understand and they can tell it back to you in their own language and then you can translate that language clearly. So...

BH: Translation after all the...

AB: It is translating.

BH: Yeah, yeah.

AB: I'm translating kind of geekery into simple English and I think that... often people say, isn't writing really difficult [sighs] well it sort of is but actually writing's about things making things simple and if you can't write a simple sentence, you can't communicate.

[Gentle chimes]

BH: Okay, so we've placed you at the Guardian at this stage. Give us the short... a bit more short history before we get to some books like, you end up in Brazil at some point, don't you?

AB: Because I was at university at age seventeen and then I started work within days of graduating, I always made a promise to myself when I'm twenty-eight, in the distant future! [laughs] When I am twenty-eight.

BH: Why twenty-eight?

AB: I don't know I just... that was the day, when I'm twenty-eight...

BH: Hmm

AB: ...I'm gonna stop everything and take a year out. So I'd got myself this great job with the Guardian and I was like in the news pool but also writing features [sighs] and I was the youngest reporter for a while on the Guardian which meant that this was when the Spice Girls and Oasis so I was kind of writing about all this great kind of culture and it was really... it felt that I was

kind of part of it because I was writing about it for the paper that has the greatest amount of youth readers and I was like my god it's six months to the date that I've promised self to stop everything... and I thought it's a brave thing to do, don't give something up while it's going badly, give something up when it's going well, that gives you... it feels that it's incredibly empowering because things are going well, you feel you're in control of your life, then to really take control of your life and so I went to the editor and said, I want to take a year off, can you give me a years sabbatical, it was Alan Rusbridger at the time. And he said that sounds like a great idea but I can't give you a year off so you'd have to lose your job and like you might get it again but who knows, and I was like that's not a very good vote of confidence [laughs] in me.

BH: I...

AB: [laughs]

BH: I had that exact same conversation when I left my newspaper.

AB: Really!

BH: Can I have a year off? No, but good luck it's a good thing to do.

AB: Yeah. Yeah. And it was kind of the best thing I ever did.

BH: Hmm.

AB: So I said, well I'm gonna resign and then I thought I wanna go and live abroad and I wanted to live somewhere where, alright so this is number one, I can learn the language to a fluent level in a year, so that eliminated languages with different alphabets or scripts. I didn't want to go to Japan or China because I thought I wouldn't be able to learn that language properly in a year. I already spoke French and I'd done A level German, so I spoke German okay, and so I

thought, Spanish, Portuguese, South America sounds really interesting and a friend of mine had just come back from like a week in Rio and he was like, oh my god, it's amazing! So I said okay I'm going to go to Brazil and I don't think I realized was that I didn't have much money. I had enough money... probably to live like really skint for a year, but not to live particularly well, so I thought, let's go somewhere and try to live cheaply but if I need to earn money, I need to be able to, what can I do? I'm a journalist. I need to be able to write stories, so where is a place in the world that has the most amount of stories for the smallest amount of journalists who were there and at that time, so this was in 1998, there were handful of journalists in Brazil, almost no journalist in Brazil, and then reason why, Brazil had until a few years before that been a dictatorship and so the only stories that you ever heard about Brazil were, deforestation of the Amazon, the workers' movement, massacre of street children, it was very much this kind of anti-dictatorship human rights issues which very important but tended to attract a kind of campaigning sort of journalist writing about inequalities which you want to hear about them but gives you such a one note idea about what the country is like. There was no one writing about Brazilian music, or Brazilian architecture or even the Brazilian economy, it was all these quite depressing social issues. So I thought, well there are obviously these great stories out there but no one's writing them, and Brazil has the other problem that where do you base yourself as journalist? Sao Paolo, Rio, or Brasilia? So they're all sort of kind spread... umm... anyway so I made the decision to go to Rio just because I thought big country, not many journalists there, and my mate had just come from spending a week in Rio and it was fantastic. I was there for five years.

BH: Five years?

AB: Yeah.

BH: And what kind of journalist where you in that time? Were you writing about Brazilian architecture and...?

AB: Yeah, I was. Yeah.

BH: Yeah?

AB: I met Brazilian architects. I met Oscar Niemeyer who's the guy who, he's dead now but he... built or designed Brasilia. It's an amazing kind of modernist city, kind of concrete with all the kind of curves made out of concrete. I know Brazil probably better than any country in the world, I mean, it's massive, it's almost as big as the continental United States. Umm... it goes from... different climates and ecosystems vary hugely. I would spend every month in Rio, I would spend a week somewhere else, so I traveled really really widely.

BH: Hmm.

AB: And I wrote everything. You know I was actually the South America correspondent, or I became the South America correspondent of the Guardian because when I got there I started writing stories and they're like, okay Alex, you win. [chuckles]

BH: [laughs]

AB: You know, we'll take you back.

BH: Right.

AB: And so yeah I went to Chile to do stuff on Pinochet, I went to Argentina to do stuff on the Falklands, I went to Venezuela to do stuff on Chavez, I went down the Amazon in a small boat to meet uncontacted Indians. I did all this like amazing amazing stuff and two years into that a publisher approached me and said, do you wanna write a book on Brazilian Football? And like I like football but I'm not a sports journalist and my initial response was... no not really. Like football... ask a sports journalist. 'Cause I thought what they were asking was a



book that tells you, you know, the size of Pelé's shoe.

BH: Yeah.

AB: You know, and stuff like that, but they said no, no, no we don't want a sports journalist to do it, we want something more kind about the culture of Brazilian football and then I thought, do you know what, all the things that interest me in Brazil and a lot of it was, you know, I'd gone to Brazil, I didn't know anyone there, I had to discover who I was essentially. It's about me searching for my own identity and Brazil's such a young country that it's still searching for its identity, so I guess I was really interested in like identity and culture and like who you are and I realize that football which like me had come from Europe to Brazil and totally changed, I mean I didn't change Brazil but football changed Brazil, so much so that football is the greatest symbol of Brazilianness, what a great way to tell the story of Brazil, through football.

BH: Hmm

AB: So my book on Brazilian football, which I then accepted to write, is essentially about the anthropology and history and architecture and music about all these things just kind of telling stories that through the lens of football you tell the story of a nation.

BH: Had you ever written a book at that point?

AB: No.

BH: That was your first book?

AB: It was my first book and... I was on my own and I vowed never to write a book after that because it took about eighteen months and I worked on it everyday and writing books... it's hard even if you can do it and I think at that

time I had... you don't know whether you can do it. Brazil is such a big country that there's always more you can do and there's where do you stop.

BH: Why did you leave after five years?

AB: I needed know whether I was gonna be in Brazil forever or whether it was a temporary thing and I thought if it's gonna be a temporary thing, five years is enough, and also I started to dislike the people who live in Rio. The Cariocas. I wouldn't say all Brazilians. Rio was a very difficult place to live as a foreigner if you're going to... unless you totally become Carioca. It's a place where... there's not... no great intellectual culture, people don't really read the newspapers, they're not really bothered about the rest of the world, they're obsessed about body image and how Rio is brilliant and amazing and... I realized that all the friends that I was making there weren't from Rio, they were Brazilians but not from Rio. I just started to get really frustrated with the way... just the way life was. Okay, I mean it's beautiful and climate is amazing and the food is amazing and... it's kind of paradise but I was just becoming grouchy and grumpy and I just thought, you know what? It's time to go.

BH: If I'm going to be grouchy and grumpy...

AB: I'm coming back, I can do that at home.

BH: [laughs] I'm gonna do that in England!

AB: Yeah, and I think that it was part of going away and it's good to go and sort of you know sow your wild oats sort of explore the world but then you sort of thing, it's time to come home.

BH: Alright then, so let's talk about how you've become who you are now. So you've come home, what now, does the Guardian take you back?

AB: No, so I came back hoping that they might and there was nothing there for me but also before I went to Brazil I was writing about, you know, parochial British matters and I went to Brazil and I was writing about big important matters that affected a whole continent, I came back and I just didn't want to do... I could've really campaigned to have my old job back but I sort of didn't really want it. 'Cause I had sort of done it, I wanted to move on to do something else. And I still, I'd left Brazil but a lot of me was still, a lot of my friends, and a lot of my heart was still in Brazil. So for the next few years I tried to write about Brazil, one time I tried to... so I could've maybe been a millionaire.

BH: Hmm?

AB: I came back saying, guys, there's this amazing fruit that is really big in Brazil that you can't get anywhere outside of Brazil. It's called açai. How about I start importing açai?

BH: Yeah.

AB: I found one guy, Ronan, his company is called Sublime Açai, Sublime Foods.

BH: Yeah?

AB: And I met him when he was just starting it because he'd had a family member who'd went to Brazil, told him about it, and he was like a few months, maybe a year, ahead of me, he was doing it. And I was just thinking, yeah maybe I could do this and then I never did and now açai is just like mega.

BH: Everywhere.

AB: It's just absolutely everywhere.

BH: Ah.

AB: Yeah.

BH: I don't know if I've had it. I can't think what it is but...

AB: Oh it's lovely. Oh I love it.

BH: Yeah?

AB: I still order it from Ronan, I've always got it in my freezer.

BH: Yeah?

AB: You mix it in with banana and pulp. Oh it's delicious.

BH: Nice.

[gentle piano music]

BH: Tell me how you become a book writer, 'cause that's what you are now.

AB: Yeah, so, what happened. I was completely failing to do anything, getting bored of writing about Brazil not being in Brazil, failing to do import açai and then someone came to me, in fact a friend who's an agent, who then became my agent, said, Alex, you are a writer, your book on Brazil did really well, but you understand about maths, that's what you need to be doing. And I was like, yeah! [sighs] Maths I gave that up like a decade ago. And she's like, no, no, think about it. Go write a proposal, because the way things work in terms of writing a book for kind of professionals who have already written a book is that you get yourself an agent, and with an agent you work on a proposal about what that book's going to be and maybe the proposal is just a sheet of paper. Normally it would be

about four or five sheets of paper. If you've never written before you might need to have write a chapter or two, so that's like thirty, forty sheets of paper.

BH: Just to prove you've got a bit of stick-ability and you can write.

AB: Yeah it's just to prove that you can write so...

BH: Yeah.

AB: What I wrote is like an outline and saying look at my previous work, you can see I can write, whereas if you hadn't you'd have to give... no one would take a chance on you if they didn't see any of your writing, and then you give it to a publisher and the publisher decides whether they want it or not. And then they will give you a contract and the contract will be for a certain amount of money and you get normally a quarter of that money on signing of the contract, the next quarter when you've finished the manuscript, the next quarter when the hardback comes out and the next quarter when the paperback comes out.

BH: Right.

AB: That's roughly how it works. So this is my friend, she said, I know there's an interest in maths books... people who can write to write about maths. I just know this, so write me a proposal for a maths book.

BH: She felt the time was write was this, did she or...?

AB: Yeah and she'd had a conversation with someone who was an editor and the editor was moaning, oh I've got my five year old kids just started school and I can't even do their maths homework and so my agent friend was like, uh huh, this is a woman who I need to pitch.

BH: Alright.

AB: This is the book that's gonna explain maths to parents. In fact, the book that Rob Eastaway wrote, Maths for Mums and Dads, was ultimately the book that this editor person did publish.

BH: Okay [laughs]

AB: So [laughs] it's kind of a small world.

BH: Yeah.

AB: I went back and I thought, okay, I'll try and write a proposal, so I went and read loads of sort of maths books. Popular maths books and I can remember being so bored reading them and just often lying on my sofa and falling asleep in the afternoon reading them.

BH: What do you think their weakness was?

AB: Bad writing.

BH: Bad writing.

AB: Bad writing. Maybe I was not the audience for it, maybe... yeah a lot of them were just boring. Just boring. And I can remember thinking you could do a really good movie shot of me depressed walking down thinking, it's just boring, it's all rubbish, it's all boring and then thinking [gasps] wow! This is the breakthrough. Maths is not boring, so the fact that the books that I've read are a bit boring means that there's room for a not boring one.

BH: Right. [chuckles]

AB: So I was like, brilliant and I got really excited and I was like this is the

book that is gonna make math exciting and interesting and so I wrote the proposal and it was originally gonna be called the Book of Numbers and...

BH: [laughs]

AB: ...it ultimately turned into Alex's Adventures in Numberland. And what I tried to do there is to make maths as fun and exciting and as interesting as I could for the non-maths audience.

BH: Hmm.

AB: I realized that the Brazilian book that I wrote was the best possible training to write Alex's Adventures in Numberland. Point of Brazilian book is I spent a year going all around Brazil, interviewing people in Portuguese, synthesizing it in my head, and writing a book for people who've never been Brazil about what Brazil is like. I'm doing exactly the same thing for Numberland. I was like the foreign correspondent in the world of numbers. I went around the world, so I went to India, I went to Japan, I went all across America, I went to Europe, interviewing people whose lives connected to maths in some way, kind of mathsy people and I came back home, synthesized everything and wrote it in information that someone who doesn't like maths would be interested in. So when I'm writing I always have imagine me sitting at a bar talking to my friend, usually it's my friend Bridget, who's not interested in maths, and it's me just saying a sentence or a fact and I imagine how she would respond to that fact. So I was always thinking about the non-mathematician so I wrote this book thinking this is a book that's gonna open up the wonders of maths to non-maths audience. So I wrote it, inevitably the first people who get sent a book on maths are not the non-maths audience, it goes to all the maths writers.

BH: Didn't got to Bridget? [laughs]

AB: Didn't go to Bridget, although she bought has several copies.

BH: [laughs]

AB: And the reviews started coming in of like, you know, positive reviews and even, and I realized that actually the people who are reading, 'cause they're kind of the maths audience, because the maths audience were also really happy to read about maths things that were written in a...

BH: Yeah!

AB: ...slightly different... in a journalistic way. You know, I'm not reinventing the wheel. The material in my books is very similar material you'll find in loads and loads of other books, but I think I'm the only person writing maths, you know, who's done time as a foreign correspondent and as a... local cub reporter on an evening paper. So I know how to... I know how to hook you in.

BH: Hmm.

AB: I know how to tell a story. I know about structure and I've got an eye for a good story and I think that, you might have aced your probability paper at GCSE or A level or even at university, but even so you're gonna be interested in the life of the man who lives in Reno, Nevada, who sets the odds to more than half of the world's slot machines

BH: Hmm.

AB: The probability involved is not complicated but you get to see it through this man's life, how it applies in the world... through a personal story. I think the trick in maths writing is to appeal to the Bridgets of the world but also to the people who know the maths and the way that you do that is that you've got to take the maths slow enough so that the Bridgets understand. So you've got to



provide more than the maths so the people who understand the maths are gonna stick with you and not just think this is boring, and the way you do that is that you bring interesting people in it. 'Cause it's always interesting learning about people.

BH: Were there ever any times during your travels around India and Japan and all the places you went where you began to doubt, like you began to think, is this good enough? Is this actually gonna make a book? Or was it the opposite, was it, oh my goodness I can't believe how much stuff is here? This is gonna be the greatest book ever written.

AB: Well I never thought it would be the greatest book ever written, which obviously it is.

BH: [laughs]

AB: Thank you. Thank you for putting that out there. [laughs]

BH: [laughs] You can't use that!

AB: [laughs]

BH: You can't use that on the cover of your book!

AB: Oh yeah? [laughs]

BH: I didn't say it in that context. [laughs]

AB: No, I... before you write a book you have absolutely no idea how people are going to respond to it. Absolutely no idea, and it's kind of terrifying because by writing a book... I mean it's kind of not for the faint hearted and like I do even now like lose sleep about how a book is gonna be received. You put all your

emotion, all your energy, you really believe in something and once it's out there, people can criticize it as much as they like and they often do and you've gotta have quite a thick skin not to be... not to be hurt by that. And also I think often readers think just by the fact that he's come out with a book, he deserves that criticism. Often we're like weird like talk about celebrities on the telly we just kind of criticize them, actually I'm a writer writing a book, you know, [laughs] I get a bit of need to be philosophical about it, you just gotta take it, people are gonna, you know...

BH: Is there one that sticks in your head? Is there a review or something once said that like still punches in the gut to this day?

AB: Umm... there are a few things that people have said that it's a bit... it's a bit too arcane to mention the actual lines that I've been like, ooh you don't understand, the power you have in that review, you know, I've spent couple of years wiring a book, it's three hundred pages long, there's one line that you've chosen to base your review on, which is something that you don't believe yourself but actually if you bothered to look in the notes at the back, that I kind of, you know, argue against that position and so what you're saying isn't there is actually there, that makes me kind of angry and I think that often young... oh for god of... I was young once. I think that sometimes the mark of a bad reviewer and often happen maybe the first couple of time you review a book, you're desperate to just kind of criticize it to show that you're kind of...

BH: You're clever.

AB: Yeah... umm... exactly and sometimes I think that if you don't like a book, don't review you. That's my... thing. Unless someone... it's so kind of outrageous and someone's trying to be someone that they're not but most books people put such a lot of effort and such a lot of love and such a lot of passion into it, and if it's not your thing, then it's not your thing, it might be someone else's thing.

BH: But can't reviewers sometimes warn people off a book that might be a waste of their time? Like isn't that kind of one of the services of a review as well?

AB: Yeah, probably the best thing to do is just not to review it. I think.

BH: Yeah?

AB: Yeah. I... especially now where it's so difficult for writers to make a living.

BH: Writing a book about mathematics...

AB: Yeah?

BH: Like, you know, I feel like I have the luxury of making videos about mathematics where we can get out a piece of brown paper and pen or we can draw a diagram...

AB: Yeah.

BH: ...and I can use animations. I mean I know you do use pictures and diagrams in your books but do you think writing about mathematics presents extra challenges, because of the lack of visuals or the lack of being able to see things unfold on the page?

AB: Yeah, writing about abstract things is very difficult, but there's other things that make maths very difficult to write about, one is the idea of how fast do you go through the maths, 'cause you don't wanna lose the people who are slower than the people who get it but you don't want to lose the people who get it really fast will think this is really boring so judging that is difficult. The other thing is often in maths you'd be incredibly clear what you're talking about, you

know, you could be like I get this all the time when I'm writing puzzles, that you... you want the puzzle to be nice and short, like one line, such and such is happening, what's the solution? And inevitably you get people that say, oh but what about zero people and then you're like it's obvious, it's self evident, I could have done like I could have done a whole page of clarifications saying, okay it's not zero people, the people aren't aliens, the people are just like normal people by which we understand... you know?

BH: Oh yeah. I can imagine... 'cause I mean we probably won't talk as much as I'd like to about your puzzle writing.

AB: Yeah?

BH: But writing a puzzle, I think must be a nightmare for that because one thing I've learned on the internet is if there is a way for something to be misunderstood, it will be misunderstood.

AB: It's totally, so you need to have the confidence of... you need to write incredibly clearly but totally unambiguously and that's actually quite difficult because if you were to say it totally unambiguously you would have a five pages for each sentence, so you need to...

BH: Yeah.

AB: ...work out what you don't include.

BH: Yeah. [laughs]

AB: And it's true that often people who like puzzle books or like puzzles or like maths are, you know, I count myself maybe among them [chuckles] are super pedantic people.

BH: Yeah.

AB: You know...

BH: Yeah.

AB: That's just the sort of person.

BH: Yeah if you write a puzzle about people eating bananas, there'll always be people going what if I don't like bananas, or something. [groans] [laughs]

AB: Exactly. So I've got this puzzle column in the Guardian and I... find the puzzles, write the puzzles, do the headlines and no one really checks it. For a while I was trying to ask other mathematicians to check it but then it's just too time consuming and also, who checks the checkers, et cetera.

BH: Hmm.

AB: And what I've realized that there are lots of people who every week say, not another badly phrased problem by Alex Bellos.

BH: Right.

AB: You know, the problem with Alex Bellos is some of them are nice puzzles but he just phrases them really badly. To write a good puzzle, it's like you need to stress test it with fifty thousand people reading it because there's always going to be a few people who spot something that no one else has spotted.

BH: Yeah.

AB: And sometimes the only way you get that is by putting it in a column.

BH: Hmm.

AB: And by these people, so what I slightly resent, there's a kind of negatively of [groans] but what about, you know, people don't like bananas. It's actually kind of quite good because it means that, wow now I know the perfect way to phrase that puzzle.

BH: Yeah. Can we skip a few of your books? Alright?

AB: Let's do.

BH: Because we are running out of time. In the notes for this I'm gonna have a like so you can go and look at all of Alex's books, and there's loads of them and they're all fantastics but I wanna talk about your most recent book because if I don't...

AB: [laughs]

BH: You'll be really upset.

AB: [laughs] Yeah I will!

BH: And angry at me. [laughs]

AB: [laughs]

BH: But also I think it's good because I feel like your latest book kind of really does bring the wheel full circle, because we talked at the start of the podcast about how your parents are both, you know, in language and translation and things like that.

AB: Yeah.

BH: And your latest book seems to merge all together really nicely, so go on then.

AB: Yeah, it totally does. So I come from a family where... we speak several different languages. My mum speaks Hungarian and French and Russian and my dad speaks Russian and French and German, English and I studied well I could speak French, well I can speak Portuguese from being in Brazil, which sort of spoke a bit of German, and so I've written a book called the Language Lover's Puzzle Book which is a book of puzzles about language and languages. So in that sense it does bring me back to a house full of languages, but don't be deceived by the title, this is actually a book for mathsy people.

BH: Right?

AB: It's almost all the puzzles are codebreaking puzzles. It's just that rather than that code being something invented by a computer or something invented to show some mathematical idea, the code is a language. So lot of the puzzles are, I give a few words or maybe a piece of text in one language and maybe the translation and then you've got a few other words and then you have to deduce what that might be. I've got puzzles say on Egyptian hieroglyphics, so probably the greatest decipherment in history was the decipherment of hieroglyphics by Champollion in the 19<sup>th</sup> century and he that by using the Rosetta Stone and then the Philae Obelisk. Both of them are bilingual Ancient Greek, hieroglyphics. When he knew that he'd made that decipherment it was because he could use the information in one to deduce something about what the other one said. So I have puzzle which shows you something from the Rosetta Stone and I say this is what means Rosetta Stone and you need to use that, then I show you something from the Philae Obelisk and you need to work out what that one is. So you're actually replicating the original decipherment of Champollion, and that is... it's language because it's hieroglyphics, you know, ancient languages it's just so kind of romantic this idea of trying to do that, but it's purely mathematical puzzles.

You need to look at the patterns and it's pattern recognition and then a bit of insight and then working out how you can apply that knowledge.

BH: Hmm.

AB: And I talk about ancient languages, modern languages, I talk about invented languages, I talk about scientific languages.

BH: You talk about numbers in other languages too.

AB: I talk about, there are some languages that have brilliant words for numbers. Chinese, Japanese. One, two, three, four, five, six, seven, eight, nine, ten. Ten one, ten two, ten three, then four, to two ten, two ten one... it's really really simple.

BH: So systematic and logical and...

AB: Yeah and it mean that children find learning numbers much easier than they do in a country like ours where you go ten, eleven, twelve, thirteen... like what's that about? Twenty rather than... with French it's even worse you've got quatre vingt for eighties. Right, eighty which is four twenties, but of the European language the one that certainly that has the most weird unfathomably bizarre system for counting for one to hundred has got to be Danish. And there's a fantastic puzzle in the Language Lover's Puzzle Book...

BH: Okay.

AB: ...that what I do is that I is that I give you...

BH: What was that called? Was it the Language Lover's Puzzle Book, you say?

AB: I think it was called the Language Lover's Puzzle Book. [laughs]



BH: [laughs] By Alex Bellos? [laughs]

AB: It's true, Lexical Perplexities and Cracking Conundrums from Across the Globe.

BH: Okay. Alright.

AB: You can re-edit that.

BH: Alright. [laughs]

AB: And... what I do is that I give you a bunch of words in Danish and say those represent these numbers and then I give you a few other words in Danish and you need to work out what those numbers are. And you will realize that the word for fifty in Danish... doesn't have the root of the word for five in it anywhere but has the root of half and of three.

BH: Right. Half and a three and you use that to build fifty somehow.

AB: Yes, and it becomes fifty.

BH: Okay, well. [sighs] I'm sure our Danish listeners are thinking that was the easy puzzle you've ever set.

AB: Do you wanna know the answer, a bit?

BH: Go on.

AB: Well it's so essentially it's a... vigesimal system so it counts in their twenties and fifty is basically half three because it's halfway to the third score. So it's half way between forty, which is the second score, and sixty which is the third

score.

BH: Right.

AB: So it's just like half... I think it's called halvtreds, really complicated for people learning Danish. The Danish government once tried to change it to the equivalent of fifty, with the word for five in it and put it on their banknotes but it looks like no one ever used that word.

BH: Alright.

AB: 'Cause once it's kind of ingrained, it's complicated but you just get used to it. And there's lots of other languages that I've got puzzles about.

BH: Yeah.

AB: Number systems of, so Papua New Guinea is unique linguistically around the world because it's the most linguistically diverse place in the world, it has something like five, six hundred languages for a quite a small population. It also is the only place where the number systems are often body tally systems. So, apart from Papua New Guinea, you get bases of five, bases of ten, bases of twenty. That's because we've got five fingers on hand, ten both hands, and twenty with fingers and toes. You get things like base fourteen, base twenty-eight.

BH: In Papua New Guinea?

AB: Papua New Guinea, because what they're doing is that they count, pinky, then you're five fingers.

BH: Your tips.

AB: Then I might go wrist, elbow... what else... yeah elbow, shoulder, nipple, chin, nose...

BH: Okay.

AB: And that's how you do it.

BH: So rather than just counting on fingers like they'll count on all sorts of protuberances.

AB: Yes, they do.

BH Yeah? [laughs]

AB: And some even, you know, penis and testicles.

BH: Really?

AB: Yeah they do. [laughs] They do.

BH: What number are those ones?

AB: [laughs]

BH: [laughs] So let me ask you a final question then. They'll be a links to the books in the notes for this podcast and I'm not gonna recommend the book.

AB: [laughs]

BH: Because I haven't read it yet, but if your past books are anything to go by I'm sure it's really good. But let me ask you this, of all, 'cause you've written numerous books now.

AB: Yeah.

BH: You mention towards the start that you thought maybe your father had deep down had wished you'd gone into academia and things like that. Of all the books you've written, how do you think this one will rank in his standings? 'Cause now you're... you're veering into his wheelhouse now.

AB: Well it's very interesting to say that. This is the first time that I have kind of stepped on to his patch and...

BH: Has he read it?

AB: Yeah he's got a copy but... interestingly we've had less discussion about this book [laughs] than any of the others.

BH: [laughs]

AB: So... yeah.

BH: What do I read into that?

AB: [laughs] But the thing is...

BH: Hang on if he's not reviewing it does that mean he doesn't like it?  
[laughs]

AB: [laughs] Well, it's a book of puzzles...

BH: Hmm.

AB: ...within language.

BH: Hmm.

AB: And I think that... also I think that it is language but you need to have a mathsy brain to solve these puzzles.

BH: Right.

AB: So, I think he would struggle. I think he does struggle there, actually doing the puzzle. Even though he might know about the languages concerned, you know, there's a puzzle in there which is... it's a cross number where all the clues and all the numbers are in Malagasy, okay? So you might be brilliant at... well actually that's a bad example but... you still need to understand about how crosswords, a cross numbers, and like logical deduction, Sudoku, you know, if you're good at crosswords, you're good at Sudoku, this is the book for you.

BH: Okay. Well I'm gettin' into my crosswords at the moment so maybe this is the book for me. This is a good book for a pandemic, isn't it?

AB: It's perfect because it will take you, you know, as the evenings draw cold... well not in Australia, they get warmer...

BH: Yeah.

AB: And you stay in, well just doing puzzles... puzzles are, I spent the last five years essentially writing puzzles in the newspaper and puzzle books and what's wonderful about puzzle books is that well firstly they're entertaining. They're fun doing, sort of satisfying, but they're a way of learning something interesting. So I'm only interested in puzzles that at the end of it, you think, wow I never knew that. So it's a way of getting this kind of thrill of discovery something new but with the pleasure of having worked it out for yourself, so it's kind of this like, you know, amazing thing, rather, you know, you could read a

book about something but you might get bored but if you're... and it wouldn't sink in but if you're actually having to try and work it out by yourself, you know working out... well why do the Babylonians write numbers like that? Why did, you know, why is Esperanto like that? It's much more satisfying I think to not be told but to work it out for yourself and I think that's what a good puzzle does really well. It gives you a bit of fun but also you learn something by yourself.

BH: Thank you so much for your time. This has been great.

AB: Thank you.

BH: I wanna see one of those Club Automatic posters as well.

[music fades in]

AB: Oh yeah, I'll send ya them. [laughs]

BH: Alright. [laughs]

[music fades up]

AB: Definitely [laughs]

[music fades up and continues]

BH: Well that's all for today. Links to Alex's books and other work can be found in the notes for this episode please do and go have a look. [music continues] Our thanks to the Mathematical Sciences Research Institute for supporting this podcast. I'm Brady Haran, and I'll be back soon with another episode. [music continues] You can also check out hundreds of Numberphile videos, on Youtube of course, and support our work yourself by going to [patreon.com/numberphile](https://patreon.com/numberphile).

[music fades up and continues and cuts out]