

# Im a Mortal Episode 4: Bruce Newbold – Demographics of Life Extension Transcript

**Speakers: Bruce Newbold (Guest), Sufal Deb (Host), Marvin Yan (Host)**

[MUSIC – Im a Mortal Theme]

**Bruce Newbold 0:27**

Hi, I'm Bruce Newbold. I am a professor in the School of Earth, Environment & Society at McMaster University, and I'm essentially a demographer or a population geographer. I study issues that are related to population type questions and that could be the movement of people across space. I do a lot of work around immigration, and then some sub areas as well, population health, for example. I do transportation related work, and more broadly a mobility type of question and just how we move through our environment and how we engage it, how we look at it. Those sorts of questions. But if there's a population piece, I always bring it back to that, where does the population piece fit into the research that I do?

**Marvin Yan 1:17**

Okay, so our podcast is called Im a Mortal, and when we first were looking out for scientists to interview, we were struggling to think how earth science related. But as a demographer, what does the word immortal or immortality mean to you?

**Bruce Newbold 1:30**

Yeah, I've always thought of it as two different ways, really. One would be the literal sense that you live forever or have an extended lifespan of some sort. I think there's another piece to immortality, and that's that after we're gone, people recognize the name, and we can look at historical figures to think of that. That certain people remain immortal. William Shakespeare, for example: long gone, long dead, but we know his name. Albert Einstein, Marie Curie, those are some of the names that always float up, whether it's science or literature, plays, anything like that they always float up. That's another measure of immortality, I think, so we can do it either way.

**Marvin Yan 2:17**

So, as a follow up to that, whether as a person or as a name, what do you think about Newbold being immortal?

**Bruce Newbold 2:26**

Probably after I'm gone, there won't be a lot of people that necessarily remember the name. I think we all want to have that sense that we are immortal and that the name is going to live on and live on in family. But in terms of—certainly not Einstein or anything like that. People won't necessarily go *Oh, yeah. Bruce Newbold, that was his name, I remember, and I know exactly what he did.*

**Marvin Yan 2:53**

Well, at least you'll be on this podcast, this will be floating somewhere in space at some point.

**Bruce Newbold 2:58**

Good, good. Okay. My own little piece of immortality.

**Marvin Yan 3:01**

Yes.

**Sufal Deb 3:02**

Exactly. You'll be immortal on *Im a Mortal*. Talking purely about life extension and longevity technology, do you think it will be a net positive or net negative for society, and why or how so?

**Bruce Newbold 3:12**

Yeah, and that's a really good question and it's one that I've thought about for a while, and not just because of this podcast at all. Because of some of the things that I do and study around population type questions and health, we can think of, well, what would happen, could we extend our lifespan? There's certainly the suggestion or the thinking that with modern medicine and continued advances, that instead of saying, *Oh, we now expect to live to be about 80, that we're going to start easily pushing 100*, and maybe even more than that. There's a good historical precedent for that, because even 100 years ago, our life expectancy was tremendously shorter. We were maybe living 50 years on average. Now, as a Canadian, we tend to live around 80 years. If you go back two to three centuries in time, life expectancy was 20 to 30 years, so an incredibly short period of time. We've really seen this explosion in terms of our own life expectancy over the past few decades and there's this, again, this expectation that it would continue.

In some ways, that's really intriguing that we can live longer because of medicine, because of changes in how we live, personal physical fitness or activity, better diets, better nutrition, for example. The problem that I have is that just because we live longer, does it mean that we will be living better for that period of time, or are more of our older age years going to be spent in poor health? Maybe limited mobility, limited physical abilities, limited mental capacity, or anything like that. That's what I think we have to be thinking about as we move forward. It's one thing to say, *Yes, we can live longer*. But are we living longer in good health, and able to do all the things that we want to do that we do now, for example.

**Sufal Deb 5:28**

Ideally, would you prefer a life extension to occur in our working age range?

**Bruce Newbold 5:32**

I think right now, not necessarily a life extension in our working age, we probably have enough of that.

**Sufal Deb 5:39**

Fair enough.

**Bruce Newbold 5:40**

It's that life extension beyond the time period where we work and in better health. That also raises other questions that we can get into. Things like, if we live longer after we've finished working, do we have the income to support that? The savings to support that? Living is costly.

We have to be able to do that. There's another problem, that even now, you take a look at the insurance industry, for example, and the old rules were, *Yeah, you live to 80, so you make enough savings, you save enough to get to 80*. Now, we're talking about savings until you're—assume that you're going to live to 100, and make sure that you save enough for that. That changes the equation in terms of how much we put away and how quickly we put it away to save for those days.

**Marvin Yan 6:36**

Okay, related to this question, then. Aside from the obvious, I think everyone says, *I retire at 65*. What other factors contribute to when people decide to settle down and start saving for their eventual 80 or 100 years?

**Bruce Newbold 6:51**

It depends on what you mean, by settling down. Is settling down—because certainly, if you ask some people, they'd say, *Oh, that's when I got married and had a family and that sort of thing, when I became an adult*, maybe. Now the rule is that you need to start saving as soon as you can and with that expectation. We know how accounting or how savings work; the longer you can save and compound it, the better off you are. You don't win by starting late in life. The other thing that you alluded to there was that maybe we don't retire at 65, that we work beyond that and more and more Canadians do that. More and more of us are planning or will work beyond age 65. Some because they need to, and some because they want to; they just love what they do.

**Marvin Yan 7:43**

Okay, I was going to say working longer and longer sounds like equivalents of—equivalent to torture, so I don't know if I'm for that. But moving on to your area of expertise, especially— one thing I've seen you've written a lot about in literature was migration. Before we go into the questions about futures—what happens in the future in terms of migration. What are the main reasons people now move, whether locally or to a different country or whatnot, what are the main reasons that someone decides to get up and move?

**Bruce Newbold 8:10**

Yeah, and in part, the answer to that question depends upon the geographic scale. People will move locally short distances, typically because of housing needs, and changing housing needs. Maybe their family is, or their household unit, it's getting bigger or shrinking. So, that means that they have different space needs. Longer distance, whether it's across the country or internationally, the number one reason that people relocate is for jobs: to go to a better job to improve their economic situation. It's income, it's a job that they prefer or they want, it's economic peace that's really driving that relocation.

**Sufal Deb 8:54**

With different geographical locations, for example, if you live in downtown Toronto, you're in an urban area, it's very unlikely that you're going for hikes in downtown Toronto. How do different geographical landscapes affect the physical activity that we partake in? Is there a certain equation or is it quite random?

**Bruce Newbold 9:10**

Certainly not as specific as an equation. We can't quite put it down to that, but we can talk about human preferences. It is much easier to go for that hike when you have the accessibility of green space as compared to being in downtown Toronto or Vancouver where that green space is more limited. It's harder to get to. It's more that the physical environment that you are in helps to facilitate that movement, that physical activity. It's not to say it's impossible, of course, but there are places that it's easier to engage in those sorts of things.

**Sufal Deb 9:51**

Just a follow up question for my own interest. Do you think that, for example, living in downtown Toronto often necessitates that you don't need a car, you can just walk around to places? Could that offset the physical activity that they're missing by living in an urban area?

**Bruce Newbold 10:04**

Yeah, and that's certainly something that we do see. That if people have really good transit options—public transit options—they're probably not going to buy a car or use a car on a regular basis, because they can walk to get groceries. There's something we call a 15 minute city, and that's 15 minutes walking from where you live, you've got everything at your disposal. Your entertainment, your shopping, and that's—your daily grocery needs, for example, as well as some of the higher end goods that you're going to buy and if we could create that sort of 15 minutes city all around, that would be great. We can't, or it's very difficult to do that, and so where you're more likely to find those 15 minutes cities are in older, well-developed neighborhoods or areas of cities where you have those sorts of amenities. You're using public transit, you're walking places, your physical fitness, or activity is probably going to be higher.

**Marvin Yan 11:03**

I have a follow up question to this. My friend was telling me about a documentary they watched on how Canada developed, or a lot of countries, and one thing you pointed out was how cars were so crucial to how we structured our living spaces, how we structured cities, and then you just mentioned this 15 minute—you can walk to any place you need to. Do you think that with longer lives, do you think that we need to have a different type of transportation possibly, to support this system? Or do you think cars will always be around, always be part of human transportation?

**Bruce Newbold 11:35**

Interesting question. Certainly, as cars came into our daily use—and that was post World War Two era, where they really, really took off. Our cities became structured in a very different way. They were car centered. We still see a lot of that development within our cities, that suburbs are where we shop, where we work, are all very much dependent upon our personal automobile. It's hard to pull back from that, to change it.

There are some new developments, public transit on demand, that will pick you up where you need to be, and drop you off where you want to be. Those are coming now and we're just starting to see that sort of thing happening, and that maybe is a technology and an ability that starts to change what our cities look like, or at least how they function, but it's going to be hard to get there. There's a lot of other investments that will change it. Maybe that digressed a little bit from your actual question, but it's going to be hard and I think we're going to remain dependent upon the automobile in a lot of places for quite some time.

**Sufal Deb 12:54**

Another follow up, I feel like we're jumping on this question over and over. But with aging populations, they tend to lose their ability to see, they can no longer drive, they lose that form of personal transportation. It often includes cycling, and even walking. Is there a form of transportation in urban and rural areas that can benefit older people?

**Bruce Newbold 13:14**

Certainly, something like Uber or Lyft, any sort of ride sharing technology is going to allow that independence for older adults to stay where they are. Most people want to, what's called age in

place, they want to remain where they've lived for some time. That's where you can get ride sharing services that can move people around, and again, there're experiments with that north of Toronto and Innisfil. They've contracted with Uber to provide some of that local transportation for their population, rural area or largely rural area. So, it does provide that connection.

**Marvin Yan 13:55**

You mentioned the word or the phrase aging in place or age in place. We talked about, so far locally but—I don't know what the word is for this, but is there a typical life movement, in terms of when people decide to move to a different city or different country? A pattern throughout someone's life in terms of where they are located geographically.

**Bruce Newbold 14:16**

Not so much located geographically. The one big regularity, which sort of answers your question, is there's something called an age schedule of migration. You're most likely to move short, long, incredibly long distances, in your sort of late teens into your early 20s. But that's— you're going to school, you're leaving school, you're going to your first job, it's easy to move. Then after that, your ability to move declines really quickly.

Where it picks up again is around retirement age. Typically, and it's that at 65, you see a little bit of a bump there. As people get to, *Okay, I'm done work, I can go live where I want to live now*. Then the one other place where you see a big movement is amongst the very old, say, 80 plus. Those are people that are typically moving into retirement homes, long term care or anything like that, because—or maybe with family, because they can't care for themselves or can't live independently anymore.

**Sufal Deb 15:24**

Is there a geographic, in terms of landscape and geography, is there a certain—a set amount or a stereotypical type of landscape that older people tend to move to? For example, do they move to flatter areas, that way there's not a lot of incline hills, or along the thoughts of that?

**Bruce Newbold 15:39**

No, no, nothing like that, that we've ever seen. There are different pieces in the literature. There's this idea of aging in place, for example, that I mentioned a moment ago, where people prefer to stay where they've been and that's probably, where they've raised their own families. They've lived there for an extended period of time, so they want to continue to stay there.

There's something called a NORC, a naturally occurring retirement community, and it's just sort of by happenstance, almost, that there's this group of people, they've lived there for some time, and then they grow old together there. Really, it just means that there hasn't been a movement away from that location. Where you see these NORCs are often places that are really amenity rich. They might have the shopping, the facilities, but maybe also the physical environment, it's easy to get out and hike or walk. They have their friends there. They have their community and that sense of community that keeps them there over an extended period of time. Then the only other thing would be, the movement into a retirement type of home, for those that can't or can no longer care for themselves completely or live independently.

**Marvin Yan 17:03**

Okay, this is stepping aside a little bit, but because you mentioned earlier about your interests and your experience studying immigration, one question we had was, does your immigration status—once you immigrate somewhere. Does your immigration status affect your acceptance of technologies, such as life extension? Is there any research on that?

**Bruce Newbold 17:22**

I've never seen anything like that at all. Yeah, I'd have to say no. My sense is that it's not going to have an impact at all, in terms of your willingness to take on these new measures.

**Marvin Yan 17:37**

Okay. All right, then maybe Sufal can jump into our - these are our speculative questions. Pretty much all the questions of, let's say, Life Extension has happened. The first one being, how do you envision—let's say, we live, I don't know, how long you want. Let's say 500 years, right? How do you see the whole global immigration/emigration thing happening in terms of where people are moving to?

**Bruce Newbold 18:00**

Even with a shorter lifespan, I think people will continue to want to go to places where they can be better off economically. But the other big thing will be that people will move and relocate to places where there's amenities, to head to a warm climate where they're on the beach all the time, maybe. That's going to be something.

I think if we can live 500 years, now we can talk about sampling. Moving around to different places and saying, *Oh, well I lived in Toronto for 50 years, but now I want to live in, I don't know, Chile or somewhere else. I'll do that for some 50 years, and then I'm going to go somewhere else.* You could almost imagine this group of people that are moving around and sampling different locations. I think that would be incredibly interesting to be able to do that. To live and experience and really become part of a local community, because so often we, as a tourist, pass through places. You skim the surface of what it's like to be there and it's always that tourist piece that you typically get. But to immerse yourself for an extended period of time—if we've got 500 years, I think that's something that people could really do and be part of. The technology to live and work in those places, we're going to have that, we have it now. It's just that liberation of being able to do that for an extended period. That would be really interesting to do.

**Sufal Deb 19:37**

So, for example, if this global population lives significantly longer from our average 80 to 200, 300, 400 years, can we expect them to migrate to certain areas? For example, I'm somebody who works in a third world country, I save enough money as I'm 200 years old to move to a first world country. Can we expect a lot of migratory patterns such as that?

**Bruce Newbold 19:56**

Yeah, I think it would just be in part that extension of some of the existing patterns that we see, that people will relocate. There's always the question of the rules and the regulations of who can get in and who's kept out. We hear that all the time, but if we were to say that in addition to, we live longer and we have this ability, and we take away the barriers to movement, those rules and regulations around immigration, it's that I want a different location, I want that different experience. If that's what life or immortality is, of getting these different experiences, people will do that.

**Marvin Yan 20:40**

Okay, my question before, because we kind of asked them. But specifically to you, Bruce, I was wondering if you had 50, 100, however many more years, where you would end up going or what you would end up doing. Because on the idea of moving, you said a lot of people move, not just to immerse yourself in different cultures, but also for jobs. I was wondering, you're a demographer, but would you ever, with more years, consider a different profession or moving to a different place?

**Bruce Newbold 21:06**

Yeah, and that's one of the benefits of being a university professor, I've had the ability to live in different places over my career and over my education. That's been incredibly enriching to be able to do that and spend time in different locations. It's something I certainly want to do again, to go and live in a place and be part of it. That's an incredibly rich experience. Privileged? Yes, for sure, to be able to do that. But it's something that I want to do again.

Your next question might be where? Without giving too much away, or committing myself too much, a place that I've never been, or have only sort of touched on. So Asia, Australia, New Zealand. I think to spend an extended period of time there would be, again, really exciting, really interesting. But I'm also—I've had a very limited interaction with South America and find that location really interesting. I could see, wanting to be in, I don't know, Santiago, or Buenos Aires, for example. I think those would be really interesting cities to be part of for a while.

**Sufal Deb 22:35**

Okay, so I'm going to jump into a topic that is a little more dark, to say the least. Under the assumption that life extension technology and therapy may be expensive, because as all new technologies come out, they tend to be expensive. The wealthy tend to get them first. What effect might it have on the current and future segregation of communities based on economy and other discrimination factors that we see today?

**Bruce Newbold 22:58**

Yeah, so that's a really loaded and important question. When we think about that, as you put it, we would see this continued segmentation in society. The haves and the have nots, those that can afford this technology, those that can't. Maybe there's a risk of those that can't afford it becoming second, third class citizens. Those that can be here on this planet for 500 years, they're going to have a very different perspective than those that are here, almost in a transient way, if they're here for the standard 80 years. So, there's a risk of taking advantage, of extending the inequality. Oftentimes what we see is the rich get richer, and the poor get poorer. That could very well just continue that trend.

**Marvin Yan 23:57**

This is not as loaded, but another issue that— if you tell someone about life extension technology, some of the arguments against it— one of them mentioned overpopulation and sustainability. I feel like this technology, it's not a matter of if but when. Do you think that Earth is able to support more people living for extended periods of time, or is there some sort of cap where life extension technology is not going to benefit us in terms of this?

**Bruce Newbold 24:26**

Yeah, and that's a theoretical question that you're asking, in many ways. I think what would happen there is if we see life extension technology—what else is happening as part of that? If we extend our

life, are we also extending the period over which we can reproduce ourselves? Where we can actually have children? Right now it's only, what, 40 years or so of our lifespan, where we can reproduce ourselves? Would that be extended as well? Even if it was extended, I think people would adjust their fertility, their reproductive behavior to fit the new reality that, *I might live 500 years, but my family, the number of children that I have wouldn't necessarily be bigger because of that.* Because I'm going to assume that they're also going to live 500 years, and maybe we don't want to have/care for children or family for that 500 years.

You could get into a debate or question around how well we support our children, and that sort of thing. I don't think necessarily increase in the number of children that we have because we live longer. I base that on, as I said, some of my experiences as a demographer, and watching how things change. The other process that's at work here is that we're probably going to see peak population in the next 30 years or so, after which the global population will decline. I don't think we're in danger necessarily of overpopulation. We might still run out of resources. That's a different question. But we're not necessarily in danger of an overpopulation just from the sheer number of people in the globe.

**Marvin Yan 26:24**

Okay, so pretty much we've reached that 30-year cap or cap within the next 30 years regardless of if life extension technology comes within that period of time, right?

**Bruce Newbold 26:34**

Well, we'll reach peak population under the current circumstances. So, yeah, if all of a sudden, there's a switch that's flicked, and some of us can now live longer, that changes the equation. But I'm going to assume they're too—fairly quickly, it won't happen as quickly. But fairly quickly, people will change their fertility choices as well, the choice around how big their families are. We know that fertility always takes a little bit longer to change. But it does happen, and people will change that to reflect the new reality.

**Sufal Deb 27:14**

Yeah, I feel like—just a comment on my side, but in past history, when people would have children at a young age, 18, have a child and the child would grow up with a relatively similar age to yourself. People tended to live in the same household, so I can see something like that happening with immortality, because eventually when your child is 120, and you're 140, is there really a big difference? It's debatable.

Going to a much lighter topic, one that I love talking about, vacations. Right now, a one-week trip to Cuba, for me is amazing. It's a great—it's actually an extended trip for me. But if we were to live 200, 300 years, how would vacations change? Would vacations become like the concept you mentioned earlier, "sampling"?

**Bruce Newbold 27:55**

I think they very well could do that. If we've got more time on this earth we'll certainly get to—in theory, we can get to a lot more places to do that and spend more time doing it. It depends on, in part, how willing are, wherever we work, to give us the time to do that. We've got more years to vacation. Do we get more vacation each year?

**Marvin Yan 28:24**



Oh, good question.

**Bruce Newbold 28:25**

Maybe not. Do you see? Do you see what I mean? We're still limited or may still be limited just in terms of the number of days that we can take each year. If we're living to 500 years and 400 of those we've got to work? That's a scary thing. To think—I think extending that lifespan, we've got to be extending the period over which we work as well. Right now you say, *Oh, geez, I've got to work for—it's another 350 years until I retire*. That's enough to scare a lot of people and say, *Yeah, I'm going to pass on this one*.

**Sufal Deb 29:05**

Okay, so before we get to some of our concluding questions, I had a little bit of a question regarding willingness to move. I think we discussed it a little bit earlier. But as of now, I know a lot of people aren't willing to relocate. Even if they were offered a job that pays better in a different country. They wouldn't be willing to because they're comfortable where they are. How can you see this changing or getting worse with the introduction of space travel?

**Bruce Newbold 29:29**

I think space travel will add a whole—if we're able to do that, it adds a whole new dimension. But in part, it's going to be like moving to the frontier. If you think of colonial settlement of the Canadian prairies or the US Great Plains... and even now, to an extent—well, I won't muddy the waters. That early settlement of a new space, like we had saw in North America, those were, in a very literal sense, pioneers. They were going into a place that they had very limited support, very removed. This is a technology piece, of course, from their families, from their support networks, but the same thing would be happening if we go to colonize Mars.

Assuming current technology, you're still months away from any help from Earth. Or if you break some equipment on Mars, you're months away from being able to replace it. That's assuming that it's Mars is where we go, maybe it's further afield, but it would change. You would see that whoever goes, moves, under those circumstances, they are going to be the ones that are really taking chance and cutting some of the other more earthly ties that they have here, because of the relative remoteness of those locations.

**Sufal Deb 31:00**

Would it be correct to assume that— Because now, traveling to Mars is a commitment, you're not coming back, you're living there till the day you die. If we were able to extend lives to, again, 500 years, wherever the number is, and we were able to—Okay, your commitment to Mars traveling is only 100 years live there and come back. Would you expect to see more people going there and coming back?

**Bruce Newbold 31:19**

Yeah, I think that's a reasonable assumption that you've got that ability, and then it's all it's just six months or whatever to get there, that makes it doable, and it's only a fraction of your overall lifespan. Then it goes back to the earlier comments around the sampling piece of how you can pick and choose where you live, where you work, and when. It certainly opens up doors and opportunities with that.

**Marvin Yan 31:48**

Okay, I have one follow up question, which is actually very related, because you talked about chance, right? I remember, it's something about like, some people think driving is dangerous, but there's some statistic like you have to drive X number of years. There's hundreds or thousands of years before you will get into a serious accident. But if you do live a long time, the more stuff you do, the more times you drive, the more times you go to Mars, that's a risk. Would you really want—my question is, would people really want to risk their now, not really finite life, possibly, if aging somehow is no longer a thing? Would they really want to risk these things to have some sort of experience? Or would they be really, really protective of the life they have, because now it's something that can be taken away—death is not guaranteed in that case.

**Bruce Newbold 32:33**

I think, and I'm guessing here... my sense is that people would be more willing to... well...

**Marvin Yan 32:43**

I stumped him.

**Bruce Newbold 32:46**

Yeah, it's a really interesting question. I think you'll see some people and they will jump at the opportunity to do something, and explore, try something different. Then there'll be others that say, *Yeah, there's no way you're going to get me on that ship or plane, anything like that. I'm just not going. I'm going to stay here.* But that's the way it's always worked. I think in part, unless you're forced to move, you do it by personal choice.

We're factoring in—as humans, we're factoring in, *Why is my life going to be better? If I move across the country, or if I move across the universe, why is it going to be better?* The one thing with that extended lifespan, where—if I back up a little bit. When we say that people choose to migrate or emigrate, we're making a calculation that they're going to recover the costs of moving because when you move a long distance, there's a physical cost. The dollar cost of moving. You've got to pay the movers; you've got to pay to sell a house and buy a house.

There are also the social costs of moving, of giving up your family, your friends and your location. Then you have to invest and create those new networks in the destination. There's a cost to that but we say it's easier for somebody that's young to relocate and to move because they've got a longer lifespan, longer working career over which they can recover the costs. It's a net benefit to them. I think you can apply the same thing to moving across the universe, that people will continue to make that calculation. Now, if I've got 500 years or 400 years to recover the costs of that, that changes to calculus.

People will say, *Yes there is a risk, there is a cost to it, but I've got a long time in order to recover those costs and it could very well be that it's failed. My relocation fails, and then if I can go back home, great, then I can go back home and there I'll have the support of family and friends and community that will help me get re-established.* If you can do that. I think that's all part of the calculus of when we move and that's going to stay the same later on, just over a different timeframe now that we're talking about how we do that accounting.

**Marvin Yan 35:23**

Okay. I just think it's so funny that after university, not everyone necessarily goes into the workforce. I just imagined maybe a few 100 years from now, people will say, *I think I'm just going to take the century off, you know, like, just really find myself*, right. For like, a century. That's crazy.

**Bruce Newbold 35:37**

Yeah, it's certainly the backpacking around Europe, but now it's the backpacking around the universe, and as long as they have The Hitchhiker's Guide to the Universe, they'll be in good shape. But yeah, if you've got that ability to do that, we're still doing the same things, I think some of the milestones would be the same in terms of leaving school, taking that time off, getting a job, working, retiring, vacations. Those still all figure in here, but it's the timing; now you've got that elongated timescale, timeframe, over which you can do all of those things. Ultimately, then that increases the number of things that you can do. Hopefully, you don't go back—if you live 500 years—hopefully, you're not going back to the same vacation spot, every single year for 500 years, or you better really like it if you're going to do that. When there's a whole world or whole universe out there, take advantage of it. Even in our short lifespans right now, take advantage of it.

**Sufal Deb 36:48**

If there's one thing you want everybody listening to take away from today, what would it be? Tough question.

**Bruce Newbold 36:55**

Carpe Diem, seize the moment, take the day. I've benefited from that ability to go to different places and experience different cultures. To take that move, take the risks of doing that, so that at the end of your career, your life, you're not looking back and saying, *Ah, I wish I had done that*, and maybe that sounds facile. But I think under the current COVID situation right now and the pandemic, it makes us all recognize or realize how small our world can be at times, and this need to be part of a bigger picture and to be interacting in it.

**Marvin Yan 37:42**

Okay, so on the topic of seizing the moment, for people who do want to seize the opportunity to possibly work in this field that you are in, get involved in your type of work, do you have any recommendations for where they can go to or how to become a demographer such as yourself?

**Bruce Newbold 37:56**

Well, it's through university. Take courses on population, and that could be economics, geography, sociology, for example, to get that experience of what populations do and how they act. Just to understand what's going on. There are graduate programs in demography at some schools, not so many in Canada, but certainly in the US and Europe, that can lead you there. But I didn't necessarily set out to be a demographer. When I started my undergrad career, it was something that built along the way and I realized. Studying a population and understanding how it ages, how it moves, how we go about interacting in our environment. That was the real interesting piece for me.

**Marvin Yan 38:45**

Okay, well, I don't know if we have a lot of links, but if there was anything we discussed in this episode, that will be in the description below. Again, thank you, Bruce, for being on the podcast today, listening to *Im a Mortal*, your source for all things immortal, and we really appreciate your time you took the interview with us today.

**Bruce Newbold 38:59**

Yeah. Thank you. This has been great. Appreciate it.

[MUSIC – Im a Mortal Theme]