



TRANSCRIPT

Key Conversations with Phi Beta Kappa

Understanding the Intricacies of Life Expectancy with Professor Mark Hayward

An assumption about life expectancy is that the richer the society, the longer and healthier the individuals in that society will live—but in the case of life expectancy, money can't collectively buy us more time. Sociologist and demographer Mark Hayward has spent the majority of his career studying all-things life expectancy, and in this episode he talks about the devastating societal impacts of inequality and unpacks some of the largest factors to living a long and healthy life: education, social networks, social policies, and brain development.

Fred Lawrence: This podcast episode was generously funded by two anonymous donors. If you would like to support the podcast in similar ways, please contact Hadley Kelly hkelly@pbk.org. Thanks for listening.

Hello, and welcome to Key Conversations with Phi Beta Kappa. I'm Fred Lawrence, Secretary and CEO of the Phi Beta Kappa Society. Since 2018, we've welcomed leading thinkers, visionaries, and artists to our podcast. These individuals have shaped our collective understanding of some of today's most pressing and consequential matters, in addition to sharing stories with us about their scholarly and personal journeys.

Many of our guests are Phi Beta Kappa Visiting Scholars who travel the country to our Phi Beta Kappa chapters where they spend two days on campus and present free, public lectures. We invite you to attend. For more information about Visiting Scholars' lectures, please visit pbk.org.

Today, I'm excited to welcome Professor Mark D. Hayward, Professor of Sociology and Centennial Commission Professor in the Liberal Arts at the University of Texas at Austin. Professor Hayward is a Health Demographer and Population Health Scientist. Currently,

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his work focuses on two issues: upstream institutional levers of United States adult mortality trends and disparities, and early life developmental origins of cognitive aging in the older population.

He is a recipient of the Matilda White Riley Award from the National Institutes of Health for his contributions to behavioral and social scientific knowledge relevant to the mission of the NIH. He has served on numerous scientific advisory boards at the National Academies of Sciences, Engineering, and Medicine, major foundations, and major federal agencies. He is also the current Editor of his field's major journal, *Demography*, and is the 2022-2023 Carl F. Cranor Family Visiting Scholar for the Phi Beta Kappa Society. Welcome, Professor.

Mark Hayward: Thank you so much. I look forward to today's conversation.

Fred Lawrence: I do as well. The issues of life expectancy, of demographic trends in the United States, are ones that I think are very much top of mind for so many of us. Let's start a little further back in your journey, though. Tell me a little bit about your own education, high school or even earlier. How did it lead to an interest in demography?

Mark Hayward: I think there's a lot of serendipity that goes along with the journey here. I've always been interested in health issues, and when I went to college, I started out as a genetics major, believe it or not, not as a sociologist. At the time, it was when dinosaurs roamed the earth and it was the Green Revolution time. It was the time in which we were looking at the genetic factors for corn and wheat, and I was really interested in humans.

I actually was in an Honors College at Washington State University. I had to take a social science course and I thought, "Oh my God, I really don't want to take this sociology course." But it was the only thing that fit in my schedule.

I actually took that course, I walked in there. And when we started talking about populations, health, mortality, I thought, "Well, I have really found my home." Because I was very much interested in human health, but not the clinical side so much. But how do we improve, well, the health of large groups of people? And that's really stayed as my primary focus through much of my career.

Fred Lawrence: Mark, you've made the case for distribution requirements, and Phi Beta Kappa obviously takes those distribution requirements pretty seriously in terms of what we think of as a liberal arts and sciences program. But I'm always thinking of conversations I had when I was the University President during freshman orientation, first year orientation.

Students would say, "I'm definitely going to study this," or, "I'm definitely going to study that." I would usually say to them, "Maybe you will, but why don't you let college happen to you?" It sounds like a young geneticist came to Washington State and it

turned out that a distribution requirement leads you into sociology, which takes you on a path for the rest of your career.

Mark Hayward: Absolutely. I would say that much of what I am today and much of how I think about things was really shaped by my undergraduate experience. Those distributional requirements really forced you to think outside the normal realms. For example, I know Phi Beta Kappa has a language requirement. Well, I was a German minor. And I think working in a different language, you learn not just about that culture, but you learn about your own culture as well and how to think about things. So it's really, how do you step outside yourself?

The other part is that I discovered that I am truly a multidisciplinary junkie. I am a very hard critter to classify now because I am not just a sociologist, my work spans in multiple directions. I literally span down into cellular issues, but I also go right up to politics, policies, and profits when we talk about the implications of macro upstream levers for our mortality trends.

Fred Lawrence: I know you're a Faculty Research Associate of the Population Research Center at UT Austin, and you're Director of the Population Health Initiative at University of Texas. Tell us a little bit about each of those institutions and what each one focuses on.

Mark Hayward: The Population Research Center here is one of the oldest population research centers in the United States, and we're a large group of faculty from many different disciplines. We span everything from statistics to our department of population health, sociology, economics, psychology, genetics. We're really about population problems, and one of the problems that we work on a lot here are health issues, and we do a team science approach. When I was trained as a youngster, we were really about individual contributions. And now, in order to tackle the kinds of problems we work on, we've been forming teams much more.

The classic example of some of my current work is that, in both the work I do on early life origins of dementia and the work of upstream levers of health and mortality trends, the teams that I've gathered together for support to do the work, I'm really drawing on a variety of other fields. And more than that, my collaborators are not just consultants. They're engaged in a collective endeavor where we're all winners and we're all contributing, and we all get something out of it professionally. This is not a consulting agreement. It's a new way to think about doing science, where we're all contributing and reaping the rewards.

I work with my students to help them develop their own voices, but they're also really contributing to a collective scientific endeavor.

Fred Lawrence: I've told every senior team I've worked with, and for that matter, part of my standard first year lecture was, none of us is as smart as all of us.

Mark Hayward: Exactly. That's so true.

Fred Lawrence: We are delighted to have you as a Phi Beta Kappa Visiting Scholar this year, traveling the country for us, in fact, holding the distinguished position of the Carl Cranor Family Visiting Scholar. Let's talk about a couple of the lectures that you're going to be giving, one which particularly caught my eye: why education is fundamentally important in improving our nation's health.

Mark Hayward: I would say that we often see this relationship between education and health in a pretty static way. And to be honest, it's quite dynamic. In the world in which we live, and the way that the world has changed, it means that education has become even more important over time in garnering health advantages. And I'll give you an example. Right now, the only group that is experiencing an increase in life expectancy are college-educated people and above. For every other educational group in the United States, life expectancy has been declining.

Now, it started declining first for people with less than high school education, between 1990 and 2000. Then it started declining for high school graduates a decade later, and then it began to decline for people with some college a decade later. Now, there are a number of factors that underlie this, and I go into this, but basically, right now, the group that has all the resources at their fingertips in this world in which we live are people that are well-educated. The people that are less educated are much more vulnerable, shall we say, to these upstream forces, these institutional changes that are going on.

In the work that we've done, we've really been focusing heavily on the policies that are affecting, how do people put together a quality life? As policies have changed, especially policies that are at the state levels, because the battleground for population health has really shifted from the federal to the states, it's really what's going on in those states that's actually placing residents at risk.

Fred Lawrence: Now, we know that educational levels correlate, not completely, but certainly not randomly, with income and other socioeconomic factors. I assume you have controlled for that and this is not just about income, this is actually about education qua education?

Mark Hayward: I would say that's not true. I would say in the case of cognition, we can have another story, education. It's about education and what happens to the brain. When we talk about education and physical health and mortality, we're really talking about the access to resources, the access to information, how to make decisions, the kinds of social

networks that people are embedded in. I had a buddy, he was a CEO of a company, and he says, "Mark," he said, "my wife has a rare form of cancer." He says, "I know you know people at MD Anderson," which is one of the finest cancer centers. He says, "Could you help me get an appointment with this specialist?"

Now, this network issue, the kinds of people that you know, that was an amazing thing because within two hours, I had it all set up for his wife to have a consulting visit. The plane tickets were bought, the hotel reservations were made. That's the kind of power in which our social networks can really operate, and that's a matter of education. We know the people who can reach in and do things, how to help us, but it's not just that. It is income. It is the ability to avoid risks. It is human agency. It's a variety of things. In fact, probably what's going on is that we see an actual narrowing of mortality experiences as you go up in education.

We are more and more alike. Doesn't matter where we live. We can live in Mississippi or we can live in Alaska, or we can live in Texas, but essentially, well-educated people look alike in terms of the kinds of resources they can bring to bear and garner health advantage. They're outside a lot of these institutional forces that are going on that are, I'd say, wrecking havoc with a large portion of our population.

Fred Lawrence: Do we have a sense of how quickly the education experience applies? In other words, would a first-generation student whose parents not having gone to college would fall into the category of people you'd say would have some more struggles in this? Will they be in the category of people who are better educated and therefore have better health consequences?

Mark Hayward: Yes.

Fred Lawrence: Right away?

Mark Hayward: Right away.

Fred Lawrence: Or does it take several generations?

Mark Hayward: No, it doesn't take multiple generations. It's within the individual. It's within your birth cohort. Now, I will say that well-educated children can help their parents. You can have less educated parents, and we have a whole line of work that shows the health benefits to older parents who are less educated or have well-educated children. But we also show conversely that having less educated children can be a stressor, and can actually be damaging to parents' health. Education becomes not just an individual resource, it becomes a family resource in the context of older people's health.

Fred Lawrence: We're talking descriptively here about correlations of education and health, but of course, it's irresistible to move immediately to the prescriptive and try to figure out

what we could do to deal with issues of health in our society. Is the suggestion that if we're able to either provide higher levels of experience with higher education or push out other kinds of information to people, we might be able to have a positive impact on some of these health issues?

Mark Hayward: Yeah. If you think about the inequality that exists in terms of educational differences let's just say, and in mortality, you can go to places like some of the traditional southern states and you will see an enormous educational gap between mortality, life expectancy of the well-educated, which looks just like well-educated people in California, for example, and life expectancy of people with high school and less. But if you go to California, if you go to Massachusetts and they have strong safety nets, those strong social welfare safety nets can actually raise the floor, so to speak, for the less educated people, and inequality can be reduced.

It's not just simply a matter of giving people more education. That is certainly not a bad thing. It's a good thing because of all the kinds of things it does for an individual in terms of providing them with resources that they can act on. But it's also a matter of, we can actually affect the ways in which education matters, by changing the policies that help people put a quality of life together. I say that because the policies aren't always obvious. I get this constant pushback. It must be health policies. If we only had National Health Insurance, everything would be great. And I said, "No, that's not true." I said, "We have other examples."

We can just turn to the United Kingdom and say, "Well, if you had a National Health Service." Well, they have massive social inequalities in life expectancy and mortality in the UK. Here, it really is an issue about how less educated people can have the resources and have the security and have ways of actually putting together a stable career. Getting a toehold in the labor market. Being able to have strong social relationships. Not worrying about children being raised in poverty. There's just a number of factors.

Fred Lawrence: We've been talking about correlations with income and social networks, and to a certain extent, those sound as if they're going to give us different directions. If you think about access to education over the past 50 to 75 years, there's been a dramatic increase in higher education to populations in this country, beyond what could have been imagined in the period, say, before the Second World War.

If we talk about gaps in income, you talk about a dramatic closing of that gap between the 1930s and the 1960s, '70s, and then a widening of that gap beginning in the '80s to our present time. Which one do I map health, equality or inequality on? And what are we seeing in terms of equality or inequality of access to health services over that time?

Mark Hayward: I'm going to go back and talk about the time period. Social mobility was at its greatest and inequality was at its lowest, and that was in the 1960s and early '70s. The national scene and the national policies that were being put into place in the Great Society, for example, which is the culmination of the New Deal, really established this enormous social contract between the federal government and the people of the United States. In fact, that's actually when we saw the smallest differences between states and their life expectancies, as an example.

In 1960, just to give you a sense, in 1960, Connecticut and Oklahoma had the same life expectancy. Now, there's probably at least a six year difference in life expectancy between Oklahoma and Connecticut, and something really radically changed in the conditions of those states. We have seen, in many ways, the role of states taking on a greater voice in determining overall national trends in life expectancy. We've been stagnating. Our life expectancy is going down. It probably will continue to go down. And in a large part, it's being driven by this massive growth in state inequality of life expectancies.

Fred Lawrence: One of the most startling statistics that I think for most of us who are not experts in this field still are struck by, and that is life expectancy in the United States is lower than that in other high-income countries, Western industrialized countries and liberal democracies. Why is that, Mark?

Mark Hayward: Well, this has been going on for some time. I will say generally, in most of the other democracies and high-income countries, they have had consistent investments. The policies and orientations that they've had have been consistently investing in their population groups, and it's not just health policy. We tend to think in terms of health policy, but I really am talking in a serious way about putting a quality of life together. It is about helping people in the labor market. It is about childcare. It is about education. It is about economic security. It is any number of those things that affect our daily lives, and in the United States, we've just simply gotten more diverse in how we approach those things.

The other high-income countries are not actually suffering in the ways that we are. I will say that the states and the state differences that have emerged over time have driven a lot of what's going on in our nation. I will say, are we one nation or are we 50 nations? Because right now, life expectancy overall places us at the bottom of all high-income countries in terms of our life expectancy. But if you look at some states, we have states that have the life expectancy of Syria. We have some states that have the life expectancy of Sweden, but we're talking about a seven year life expectancy difference between the highest and the lowest performing states. That is an enormous gap.

Fred Lawrence: We've been talking about life expectancy, length of life. This is a quality of life issue, this is the issue of dementia and what the role of all of these factors you've been studying are with respect to dementia. Is any of this hopeful? Does this give us any signs of how we might deal with this?

Mark Hayward: Right. Dementia is the most feared condition that's associated with aging that Americans confront. This kind of perspective has led to this notion that dementia's inevitable, or if I get old enough, I'm going to have dementia. What people have forgotten is how malleable the brain is and how malleable dementia is, and how much inequality exists in the risk of experiencing dementia. Earlier, you and I talked about the ways in which education plays into this and increasingly, my team has been focusing on education in a somewhat different way, I think, than is often thought about in terms of physical health.

We're actually thinking about it in terms of a much more causal association, which you alluded to earlier. Is it about education, or is it about the things that education buys you, or the access to other resources that it gives you? And in the case, in our work, we're seeing a heavy, heavy role. It looks like the role of education is quite causal in terms of how the brain develops and the kinds of learning that occurs, and this scaffolding that goes on with people's thinking that as a lifelong factor, that even if you were to do an autopsy on an older person, they might have plaques and tangles, but they would've never shown the signs of having dementia or Alzheimer's disease in particular.

The idea is, most people out there in the world probably think it's related to aging or it's genetic, or it's this or it's that. But in reality, it is one of the most socially patterned conditions of aging that I can even imagine. I was on a National Academy of Science Committee and we were looking at the trends in dementia, and I showed them to my colleagues. It was a dementia committee. We brought a report on thinking about the future of dementia research. They're all epidemiologists in this room, of course, or MDs or psychiatrists or whatever, and they go, "Oh, Mark, that has to be due to changes in smoking behavior. That has to be due to changes in controlled hypertension. That has to be due to all sorts of things." Really, what it was due to, it was only one factor. It was all due to education.

When we controlled for other early life conditions, when we looked at hypertension, when we looked at smoking, when we looked at other risk factors that are behind dementia risk, this trend that we were looking at was really being driven a lot by education. The thing to think about with dementia is, it's truly a life course that influences disease outcome. There is a role in terms of early life development. There's brain development at the exuberant period between ages one to three, the pruning that goes on after that. So stimulation and the kinds of ways in which we put our challenges

that we give to our kids matter. It also matters in terms of when they continue to enter school and what goes on within schooling.

Even our newest work is showing that it matters even when you go into advanced education. You continue to reduce the risks. The effects of this kind of exposure are felt all the way through the distribution of education, all the way through. There's no threshold effect here. It is just more and more of it, and it shows the malleability, I think, of this condition.

Fred Lawrence: Mark, our listeners always like to get book recommendations. This is Phi Beta Kappa after all. Could you give us a couple of suggestions for someone new to the field who's listened to this and says, "This is interesting and I want to learn more," as well as somebody with a little bit of background who would like something to take them up to the next level?

Mark Hayward: I would go back to the work that we're doing on these institutional factors that have been such major drivers in American mortality experiences in equality. The first book I would recommend is a book called *Democracy in Chains*. It's written by Nancy MacLean. Nancy is a historian in the Duke University Sanford School of Public Policy. The other person I would recommend is this book by Jake Grumbach. I think he is one of the finest political scientists of this generation. It is this issue, it's called *Laboratories Against Democracy*. That book I also think is another one of those thought provokers, and it makes us think in ways that we haven't thought before.

Fred Lawrence: Thinking, since you've been talking with me, about the motto of Phi Beta Kappa, which actually goes back to our founding night, December 5th, 1776, the founders, among other things, did come up with the motto in Greek, Φιλοσοφία Βίου Κυβερνήτης, which is where the name Phi Beta Kappa comes from, which we usually translate as love of learning is the guide of life.

It sounds as if what you're saying is, love of learning is also going to be the extender of life, and the protector of life, and the enhancer of life. I'd like to think that that is what we would call a friendly amendment to our motto and enhances our understanding of the role of education.

Mark Hayward: I agree with you 100%.

Fred Lawrence: Thank you so much for being a Visiting Scholar this year. I know those who have been able to participate in your classes and your lectures have benefited enormously. Thank you for representing the values of Phi Beta Kappa so well, and thank you for joining me today on Key Conversations.

Mark Hayward: Thank you. I really appreciate it.

Fred Lawrence: This podcast is produced by LWC. Kojin Tashiro is lead producer. Paulina Velasco is managing producer. This episode was mixed by Trent Lightburn. Hadley Kelly is the Phi Beta Kappa producer on our show. Our theme song is Back to Back by Yan Perchuk. To learn more about the work of the Phi Beta Kappa Society and our Visiting Scholar Program, please visit pbk.org. Thanks for listening. I'm Fred Lawrence. Until next time.

CITATION:

Lawrence, Fred, host. "Understanding the Intricacies of Life Expectancy with Professor Mark Hayward" *Key Conversations with Phi Beta Kappa*, The Phi Beta Kappa Society, May 1, 2023. www.pbk.org.

Produced by:

