



How Researchers Changed the World Episode 12

Colonel DPK Pillay: From soldier to scholar: fostering peace through food security in India

DPK: I was a young platoon commander and had just finished my course and I was tracked to, tasked to hunt down some insurgents who were planning to blow up a radio tower and a bridge that was allowing the army to induct into those areas. And luckily for him, my training was much better than those guys, they were also good fighters. But I tracked them down and I surprised them in a particular village and again, with the grace of God, without which nothing can move in our lives, actually it was the right home, where they were, the right hut where they were hiding. And I intervened in the hut and had to kick the door open when I got shot, with a burst of AK47 and a grenade that came and took a portion of my leg away but nonetheless we had a solid encounter for about an hour and a half.

And finally we, my life was ebbing away because I'd lost a lot of blood and so I decided that I'm going to use the rocket launcher and probably blow up the house because I wanted to get the mission accomplished. And I warned them that I'm going to do this. And that's when two children who were wounded in the house, they came out and those guys surrendered. And once they surrendered we treated them as a person who surrenders his arms should be under the Geneva Conventions, under the laws of war, under the laws of you know, the humanitarian law, not of war, it was not a war that we had.

KR: You'd be excused for thinking you'd tuned in to the wrong podcast this week. But let me assure you, this is in fact How Researchers Changed the World. We join Colonel DPK Pillay, a career soldier and researcher bleeding out following a gun battle with insurgents. Although the battle is over, Colonel Pillay is fighting for his life miles from the nearest hospital. There's another problem, two young children hiding in the house have been seriously wounded also.

DPK: Under humanitarian law anyone who surrenders, it is like if you read Rousseau's Social Contract, you know, people are not enemies by nature, they are enemies by belonging to different sides and I had no enmity with him. So, when he surrendered, we treated him humanely, we gave him a cup of tea.

The helicopter came to evacuate me because it was already reported so when I saw those two young children who were shot in this crossfire, I realized that as a soldier I was here to protect them. And I shouldn't be a factor in them dying, there was no way the children would have survived the six hour journey that they had to undertake. And by the virtue of me wearing a uniform I'm here to protect my people. I'm not here, like I have a liability, firstly I'm trained to kill and use my weapon. I can shoot. I can kill people but also, I have I have the same liability that I can also be shot and killed. So it's something that I can't transfer my liability of being killed in doing my duty, to the young children. That's why I asked the pilot, who happened to be my coursemate, that please take them. He said "don't play Mother Teresa, Pillay. I need to... what'll I tell your mum?" and I said, "just tell her that I saved two children."

And anyway, he just flew them off and came back for me immediately. He took the two kids to the battalion headquarters, which was about five minutes away. He dropped the kids there and handed over the kids to my commanding officer who heard the thing on the radio, and they came back for me. And he took me and I had to fly down to a distant base hospital which was quite, about 40 minutes away from where I was wounded.



KR: In this episode we'll start and end with a remarkable story about a remarkable person – and hear how he turned personal tragedy into real social and political change by asking important questions and turning research into action.

[How Researchers Changed the World introductory music]

KR: Welcome to How Researchers Changed the World: a podcast series which will demonstrate the real-world relevance, value, and impact of academic research, and highlight the people and stories behind the research.

My name is Dr Kaitlyn Regehr. I'm an academic researcher, an author, and scholar of digital and modern culture – and I'm interested in how new technologies can broaden the reach and real-world impact of academic research.

In today's episode, we're speaking with Colonel Divakaran Padma Kumar Pillay, soldier turned researcher. He's also a social and political activist. We'll be discussing his research piece: 'Food security in India: Evolution, efforts and problems' and finding out more about how this research is helping to change the lives and fortunes of millions of people.

We interviewed Colonel Pillay over Skype in India, so you might notice some slight gaps and echoes in the audio in this interview. We apologize for this - but rest assured, it doesn't take away from his incredible story.

DPK: I'm Colonel Pillay, Divakaran Pillay. I'm from the Indian Army. I retired after thirty years of service. I joined the army like my father and my grandfather before him. And I've served in all insurgency in other areas of the world. And I have also served in the Middle East and Jordan. And in the meantime, whilst being in the National Security Council, where I, from where I retired, I did my PhD. I did it on the subject of human security, having understood that national security is not just about defending one's borders and territories but also defending the people who make up your country.

So that's me. A Colonel with a gallantry award, wounded in action and a PhD, and now a research fellow at the Institute of Defence Studies.

KR: Colonel Pillay not only survived this remarkable experience, and we'll return to this experience at the end of the podcast, but he returned to the very village where years earlier he very nearly lost his life.

DPK: So anyway, that story was over. The encounter was over. The militants had surrendered, they went to jail. The children grew up and many years later, a patrol goes to that village and they talk about here what a captain shot. And luckily for me, my own good friend, General George, was the GOC there and he rang me up and said, "Pillay, there's a small little village that remembers you." And I said, "well there's some people who remember me with good you know..." so that's how I went back to the village.

KR: As well as his injuries making return to active duty near impossible, Colonel Pillay was now focused on a new career as an academic researcher. We asked him about this change of direction.



DPK: People tend to believe that soldiers don't have, are not intelligent enough to pursue an academic career. I think one of the most, some of the brightest guys I've met are from the services, whether it's in my country or otherwise. In other countries too, and I find that the quest for knowledge is something that actually keeps a soldier continually understanding and exploring new things. It happened sometime in 2001 that I enrolled for a Masters. I wanted to do it on sustainable development, where I saw so much destruction around us, kind of you know, the exploitation of our resources and we were focusing on you know [inaudible] so that's the reason I chose to do sustainable development with climate change as my specialization. Then after when I got into the National Security Council, I [inaudible] deeply academic research-orientated work that you had to prepare your papers based on well-researched papers and that's the reason why I actually chose to do a PhD.

KR: When we think about the impact such a life-changing, violent situation might have on a young person, it wouldn't be hard to imagine them seeking revenge or retribution. In reality Colonel Pillay turned it into his motivation, his new mission.

DPK: When I chose my topic of my research I decided I wanted to work on what actually truly matters in national security. Whether it's we're merely defending the borders of one's country against an external enemy or defending an ideology or whatever, or whether it's important for us to understand it from the citizens' viewpoint. And that's the reason that I chose human security as my problem because I realized that despite all the attention the world pays to terror or wars between countries, the number of people dying in wars and terror attacks or conflict related things, are much, much less compared to the number of people dying of hunger, disease, starvation, and other issues.

KR: On the 13th of December 2001, Islamic militants attacked the Parliament in New Delhi, attempting to break in and kill ministers inside the building.

DPK: In 2001 when we had the Parliament attack and they had some terrorists coming from across the border. And they stormed the Parliament, and they were foiled. But nonetheless we went to war and that's the time the whole world was at war.

But at the end of war, nothing really changed but we were deployed in places like in Rajasthan, where people were working for on this [inaudible] National Rural Employment Guarantee Act, where they would get about 100 Rupees at the end of the day for a hard day's labor and here we were with the latest weaponry and equipments and so I realized that there is a disconnect. Like when I looked at those people there working in the fields and working in the sun, picking things and getting their daily wages. I was thinking what is the stuff we are actually trying to defend in this country? Is it the Parliament, where it's a symbolic attack? That's the reason why I got motivated to explore and understand what national security really is.

KR: Colonel Pillay became preoccupied with this question. What is national security – and how can we protect the people we're supposed to serve?

DPK: I wanted to understand what should be the core purpose of national security. Should it be... like ... one thing I realized was that it's much more easier, whether it's in the US or in the UK or in India or Germany, it's



more easier to mobilize people when you have national security issues, you throw it up, “oh this country’s in danger or the religion is in danger.” You get more people. But if you tell someone that “ok, these guys need a helping hand, I need ten people to come” you find very less people. So, I think the jingoism that goes along with trying to justify, mobilize and you know, raise passions and fear and panic, is something that we really need to control and understand. That’s the reason why I wanted to study. I think our purpose in a democracy should be to defend these very people and stuff. You know, living like we were here, employed with millions of dollars’ worth of equipment, tanks and mechanized inventory and the artillery and aircrafts and helicopters, and there, there was people struggling for making 100 Rupees a day.

So, and that’s the reason why I chose this topic of understanding what national security or human security should really be. That’s what motivated me, and I worked on it.

KR: So how did this quest translate into a research question, a methodology, and a proposition for change on a continental scale? In a few moments, we’ll find out more about Colonel Pillay’s paper ‘Food Security in India: Evolution, Efforts and Problems’. Join us after the break.

[Advertising break: intro music]

In this podcast we explore the multitude of ways that research impacts the world, from the influence on political discussions, to how it can revolutionize practices within a field such as healthcare, to how it can shape public opinion and worldviews. We believe that every researcher has the power to change the world in some way - and we want to help make that happen for you.

That’s why we’ve worked with the team at leading publisher Taylor & Francis Group, to develop two free 12-week learning programs for researchers.

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[Advertising break: outro music]

KR: Before the break we were listening to Colonel Divakaran Padma Kumar Pillay who was talking about his motivations behind developing a research career focusing on an alternative approach to national security.

DPK: A sixth of the world resides in our country, in India. We are 1.5 billion people. And you know in 1947 there was an acute shortage, not only of money but also of food and we had to, we were living on dole and we were living on imported food. Somewhere down the line some right policies and some great people like Swaminathan and the right policies taken by the government, we actually ushered in a green revolution. First, we got the milk revolution where we became self-sufficient in milk. But yet despite having one of the largest arable lands in the



world, like a fourth of the malnourished people are living in our country and this comes from bad policies. It's not about not being able to produce the right kind of...it produces the largest quantities of oil, of milk. It is the largest producer of milk by the way and also the largest producer in a large number of grains and everything, yet a lot of people are malnourished. And a lot of people are going hungry. A quarter of the world's poorest people live in our country. So that's what I want to understand, what is exactly, and food security is invariably linked to national security. Because a hungry, unhealthy citizen is also a burden on the society. You don't have working hands available. He doesn't report to work and he's not available then your...like you see what's happened in North Korea. You know that they had to reduce their scale of the physical standards to enroll into the army because people are all malnourished.

So, this is something that happens. It also impacts your national security, it impacts your economic security because you have...so food security is a very, very important factor. Food security, food and water insecurities lead to conflict. So the best way to keep people out of conflict is to actually make water, food, and other employment and other parameters which are essential to keep that going, that's what we worked on along...I worked on it with Mr Manoj Kumar. He's an Indian Administrative Service Officer who is heading the food...he's the Joint Secretary for the Ministry of Food in our government of India. So, he's my co-author. And at first, we were discussing this and he was my neighbor, so we started a morning walk and that's where we discussed this paper and produced this.

KR: Colonel Pillay's research piece doesn't just discuss the challenges of the past or look at India's efforts to affect social and political change through improved food security, it makes a critical analysis of India's food security system in light of present-day problems.

DPK: So it identifies various efforts taken from the problem that we have and then how the government has come up with the National Food Security Act, which kind of guarantees a certain calorific intake to all people, and a large number of initiatives that this country has taken along with the ration card scheme, where you know, poor people who are below a particular economic standard of living are they were permitted to buy. But there were a large number of pilferages taking place because fake cards were produced, and people started drawing them. These people are given like say, rice is given three rupees a kilo and, in the market, the same rice would be available for thirty rupees or forty rupees. So, it was a huge...like you, if you...but if you diverted large amounts of this, you made a profit like, you know, ten times the profit. So, this large-scale diversion started taking place. There was pilferage from the food corporation of India where, a fifth of India's meat produce was actually stolen. Those [inaudible] to prevent famines.

KR: Colonel Pillay talks a lot about the need to recognize and reward the work of farmers, who make up over 50% of India's workforce. In addition to this, his policy work has sought to reduce the involvement of 'middlemen' who profiteer and drive prices down for farmers and up for the consumers.

DPK: What I've done is I've done a small little SWOT analysis at the end of my article where we recognize that self-sufficiency and production of cereals and setting up with a [inaudible] and all that, these are creditable achievements.

You know the National Food Security Act is a very creditable achievement. Then there are weaknesses that are there. The post-harvest. Middlemen still rule the roost. The farmer who produces doesn't get the value for



what he's produced and there's very bad post-harvest storage and transit losses. There are bad Mondays at market that they actually sell them very badly, the minimum support prices are not fixed correctly, and it doesn't cover it doesn't cover all the kind of producers. So you know, and whilst it has prevented us to have famine and starvation, it has not successfully worked on the issues of malnutrition and stunting. And despite having a large number of buffer stocks, people who were hungry still continue to exist in our country.

KR: Colonel Pillay's work, as both an academic and policy adviser has identified loopholes, the inherent problems with existing solutions and sought to suggest credible alternatives to problems of food shortages. Food security is not only important to safeguard society and government from civil unrest, but to prevent famine and widespread malnutrition. This research piece addresses these issues head-on.

DPK: India had suffered a couple of famines in the past and other things. So these are the measures that government has taken, to the last one, that's a National Food Security Act and how it actually inserts to do away with this middleman and do away with this pilferage. You had a director, a beneficiary transfer kind of a system where the money went into a bank account. The bank account can't be opened without verification of your credentials, like your bio-metrics and other...so then it actually went into the accounts, so all the pilferage stopped.

So this is something that, these are measures, how this country, a sixth of the world living in this thing that has actually managed its food security problems. And so it's an article that aims to bring that out.

KR: We asked Colonel Pillay: 'what is the most important and impactful action that policymakers can take to improve food security in India?' Despite his influential political allies, the answer he gave was surprising – and insightful.

DPK: In India the largest employer is the agricultural sector and agriculture is something that is always going to be in demand because unless we have food the human race can't flourish. So, this is a necessity. So not understanding these issues and not implementing them correctly, and those are the issues and people are working on it. I think what most important is to make the farmer feel important again and give him the value for what he does. You know, I think that is the key. The farmer has to occupy the primary space you know. And he shouldn't be the exploited one and I think when you get farming back into a...like, get it very respectable and very profitable, which it is. The whole world needs to eat food. So the farmer should be the one who is benefiting from it the most and I think if anything I can do I'm going to make the farmer feel empowered once again. And I would take measures to make sure that his hard work is rewarded suitably and stop him being at the mercy of the middleman or from the support price to come and decide whether his farm is collected or not. So I think the thing is to put the farmer on the pedestal once again. Where he feels important, where he's empowered and he's the one who's actually benefiting from the hard work. Not someone else who makes a lot of money out of his hard work.

I think if anything I can do is I'm going to find measures to improve the lot of the farmers in whatever way it can be done. That is the key.

KR: His bravery and integrity have afforded Colonel Pillay the respect and love of his nation. His thorough,



considered academic work has influenced public policy, changing the way the Indian government approaches food security. Colonel Pillay's ongoing work aims to safeguard the livelihoods of a sizable proportion of India's half-a-billion strong agricultural community from exploitation and enforced poverty. And there's more. We asked Colonel Pillay what his current area of focus is.

DPK: Health is again another industry that, people are going to fall sick. You know, it's a big industry. And when we think of health, we tend to think only of doctors whereas for every doctor, there are sixteen other people who get employment. There are nurses, there are cleaners, there are you know the kind of infrastructure that are there around a doctor. So that's something that could actually generate a lot of employment in this country, which is running short of employment. We have the largest number of the jobless population is in this country below thirty five. And this demographic curse, sorry the buzz that is there or the blessing people say that having a young population is a blessing, it can actually turn into a curse if they don't find suitable employment.

So I'm working on health to understand firstly, what are the policies that the government needs to implement and how this can... My experiment of getting those girls from that village to probably train as nurses and earn probably twenty times, ten times more than what they would have earned doing menial jobs there, and getting a qualification, getting a... Devi Shetty runs hospitals...in fact a large number of American and European clients come to his hospitals. They are based all over the world. And his hospital chains actually employ people and those people are trained.

So health is one sector again which is a great, which is going to be again, like food and education is something that, the market is never going to die down. It's going to be a great employment opportunity. And it's also a necessity because it's the next crisis. Unhealthy people are also a burden on the society. Unhealthy, the workforce, the armed forces, the economy runs on healthy people so it's very important, health security. So, I'm working on health.

KR: We hope to bring you this story in a future episode of How Researchers, but for now, as promised, we return to the village where Colonel Pillay had been shot and injured. He is returning to the village some seventeen years later to meet the children he saved and the man who nearly killed him – they had presumed he had died following the exchange.

DPK: I went and met those guys and I met the children. It was a very tearful reunion when I saw them, because I had forgotten about it, like my scars. They were small memories. When I met them, I realized that nothing had changed in these seventeen years that I had been away. And it was the same, it was like inaccessible, were the same and that's how I wanted. And their love and affection you know, they're a different tribe. They profess a different version of religion, they have different, completely different habits, but the love and affection that the village gave me, the mother, the children, the villager who was shot, the man who shot me and everything, I realized that, you know, we need humanity to flourish. It really doesn't require a common language or doesn't require a common religion, or it doesn't...just your basic human values transcends everything.

KR: Colonel Pillay has since been decorated with India's third highest peacetime gallantry award and been part of a delegation at the United Nations General Assembly. He is also one of only three people to be honored by the Indian Broadcasting Network's Special Achievement Award, for his acts of courage and optimism and bringing about change in the country. His philosophy is clear. It states:



"Peace is not just an absence of violence but a consistent delivery of opportunities to survive and to improve and develop not just as an individual, but also as a community and region. Despite the lack of glamour, peace is a better choice - the right choice. We must choose peace over violence".

Colonel Pillay sees research as a key part of his mission in life: with well-researched evidence having the potential to inform and shape policy decisions at the highest levels.

DPK: A good, well-researched piece is something that catches the eye of...you know when a person looks for a particular article which is on a particular subject and a well-researched piece is like...it's something there for you for the picking, like you actually can choose the ideas. And then you never know, you plant a seed into the idea of the person who is seeking the article, because he's reading the article because he wants to know something more. That's why you produced it. Then if you give them good enough leads and good enough things to build on, that person who is reading the article, whether he's a policymaker or he's an implementer or he's, you know, someone who can actually make a difference.

And it doesn't, everyone doesn't... It's not like a word of command, I say right, and everyone turns right. It's just one person who makes a difference. And I think well-researched pieces really help in that manner because people who look for those articles, know what they want and they know what they can understand from it and they can bring out the chain that probably the article is trying to flag and bring this policy. And so it's just one person out of a million is enough that is there and you never know who could benefit from it.

So I think that's why researchers play a great role in providing something, collecting a lot of material together, putting it and giving your own little flavor to it and then that flavor gets into another person's head and then he understands it differently and he implements it in a manner. So it's very good to have well-researched pieces. I appreciate reading well-researched pieces and I remember some of the key findings and then it actually helps us formulate our thought process. So that, that gets into action later, when you are in a position to do so.

KR: To find out more about this podcast and today's topic, visit howresearchers.com. This is the last episode in the series. It's been an incredible journey. You can listen back to each of the twelve episodes, and if you've enjoyed them, please subscribe and rate us on your preferred podcast provider – it really helps other people discover the podcast.

We would like to take this opportunity to thank all the researchers who took part in this series. We could only include the stories of twelve passionate researchers here, yet we know there are thousands (even hundreds of thousands) that we could have featured.

All over the world, every day, there are researchers making discoveries that have the potential to change our lives. We hope the stories you've listened to have inspired you, shining light on the hugely exciting and diverse work being done in research labs, in the field, in universities, and institutions right now. If you need support and advice to ensure your research gains the recognition and exposure it deserves, look no further than our very special learning program, developed with Taylor & Francis – it will give you unique insights into getting your research out there.

I'm Dr Kaitlyn Regehr. Thanks for listening.