

***Guns, Germs, and Steel* - Transcript**

Episode 3: Into the Tropics

Sunrise over African landscape, African mountains and landscapes

Jared in Zambian hospital, with sick children

Voiceover: Africa. It's been called the birthplace of humanity, the land where our ancestors took their first steps. Yet only recently revealed as the home of a vast tropical civilization. Cities and kingdoms once spread across the continent, then vanished, leaving barely a trace. What happened to this great achievement? Professor Jared Diamond has set out to explore the great patterns of human history. It's a journey that has taken him from the jungles of New Guinea to the snow-capped peaks of Peru. His quest, to understand why one people, Europeans, have conquered so much of the world.

Diamond argues that the roots of European triumph stretch back thousands of years, and rest in the power of geography. Geography gave Europeans the most productive crops and animals on the planet, and these allowed them to develop guns, germs and steel - three great forces of conquest that have shaped human history. Now, Diamond is setting out on the last stage of his quest to discover what happened when guns, germs and steel came to Africa. And to ask what role these forces still play. But Diamond's journey will test much more than theories. It will also test the man himself.

Titles: Episode 3: Into The Tropics

Steam train

Voiceover: A Class 19D South African Railways steam locomotive. Built Glasgow, Scotland, 1932. It is a testament to technology and human achievement. A tool built to carve a path across a continent. A lasting symbol of the triumph of European guns, germs and steel.

Jared aboard steam train

Voiceover: This engine and its tracks of steel will carry Jared Diamond through the story of Africa. It is a tale with its roots in ambition and greed, peoples of Europe reaching out beyond their native lands in a quest for global conquest.

Jared Diamond: As Europeans expanded around the world, they conquered other people, they built railroads, they developed rich societies modeled on Europe, they had done this successfully in North America and South America, in Australia, and then they arrived in Africa, and it looked as if the same thing were starting all over again.

Voiceover: But Africa would be different. A place of dangers and secrets, hidden from these foreign invaders. The first European settlers arrived in Southern Africa in the mid 1600s. They landed here, in the Cape of Good Hope, at the southernmost tip of the continent. They quickly established themselves in this new land, laying out farms, planting wheat and barley, ranching

cattle and sheep.

African landscape with train

Jared Diamond: This may sound strange but it's from ordinary agriculture like this that my theory of guns, germs and steel arose. My quest began more than 30 years ago, on a trip to Papua New Guinea, when I began to try to understand why the people there lived so differently from Europeans and Americans. The beginnings of the answer, I realized, depended on farming. New Guineans had only a few native crops that they could grow, and no native farm animals, while my ancestors, even 10,000 years ago, had been blessed with an abundance of domestic plants and animals. Over the centuries this had given them a huge advantage that let them develop cities, nations and even colonies abroad.

Voiceover: But Southern Africa is 5,000 miles from Europe. How was it possible for the settlers to import European crops and animals to such a distant part of the world? As much as skill, it came down to good fortune. Geography had dealt the settlers an immensely lucky hand. They had stumbled across one of the few parts of the southern hemisphere that feels just like Europe. Because the Cape and Europe lie at a similar latitude, or distance from the equator, and this means that the temperature and climate of these widely separated regions are almost exactly the same. The Europeans were able to establish prosperous farms and settlements, properties now owned by their descendants – people like Hempies Du Toit.

Jared Diamond: So your family has been here for centuries on this land. How do you feel about the land yourself then?

Hempies Du Toit, Annandale Farm, South Africa: Well I've always loved the land since childhood days and it comes, agriculture's been in our family for so many generations.

Jared Diamond: Tell me about the history of this farm.

Hempies Du Toit: Well the, the land was occupied in 1683, I mean that was only a couple of years after the first settlers came to the Cape.

Voiceover: But settlers like the Du Toit knew that this was not an empty land. Even today their farms turn up evidence of the Cape's original inhabitants, a people known as the Koysan.

Hempies Du Toit: Oh this is interesting. This is a, this is from the Stone Age. Prior to the occupation of this land in 1683 by the settlers, this land was most probably occupied by Koysan people. These were the tools they used to, to scrape the skins when they tanned the skins.

Jared Diamond: Beautiful.

Hempies Du Toit: And you can see how easily, how nicely it fits into your hand.

Jared Diamond: Yeah.

Voiceover: With the arrival of Europeans, these native peoples were driven from their land. But they also faced an invisible and even more devastating agent of conquest. A force Diamond has identified as one of the greatest in human history – germs.

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Jared Diamond: Realizing the importance of farming led me to the next big surprising discovery of guns, germs and steel. Domesticated animals had given Europeans one advantage of which they were completely unaware. By living in close proximity to their livestock, they had become infected with viruses and germs of those animals, which evolved into diseases of humans. Through exposure over centuries, Europeans had developed some resistance to those diseases. But as Europeans spread around the world, they encountered peoples who didn't have that same resistance, and who then fell victim to devastating outbreaks of infection, especially of smallpox. In the Americas, millions of native people died from this one disease, and here in the Cape it wrought the same havoc on the Khoisan peoples.

Voiceover: Through their farming and their germs, Europeans had established a firm foothold in the southern tip of Africa. Now, they looked to expand.

Jared Diamond: In the 1830s there was a burst of the pioneer spirit such as had been seen in the European expansion across North America and Australia. This time it was Dutch settlers, and these pioneers moved into the interior like the pioneers moving across North America and Australia.

Voiceover: Over the course of the 1830s, thousands of Dutch farmers with their families and possessions loaded into wagons left the Cape in search of new land to settle. They called themselves the voertrekkers, and these pioneers all wielded another agent of European conquest – the gun.

Paul Garner, Battlefield Historian: This is a muzzle-loading rifle, typical of the weapon that every Voortrekker would have had in his wagon. The Boers were particularly adept at using this weapon.

Voiceover: They could reload it and fire from horseback. These muzzle-loading rifles are still much admired by the voertrekkers' descendants.

Derek Engelbrecht, Settler Descendant: Every single man that was in, in good health had at least two or three of these particular rifles.

Posselt Lawrens, Settler Descendant: In those days it must have been the person's life, you know. Everything depended on that, you know.

Derek Engelbrecht: They hunted with them, they protected themselves with them.

Posselt Lawrens: It was part of him, you know, if you didn't handle a gun in that day there was something wrong with you. Yeah.

Man firing gun and Jared watching and firing it himself

Jared Diamond: Guns and the steel from which they're made were the last two of the great advantages that Europeans carried with them around the globe.

Sword smith working as Jared watches

Jared Diamond: Guns are the result of thousands of years of complex technological developments, which began outside Europe but which Europeans perfected.

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And that was all because of the head start that their farming had given them thousands of years previously.

Derek Engelbrecht: You know, the flintlock rifle, it was, you know, I shouldn't really say this but it was nearly like as important as a cellphone is today. You can't go without your cellphone; in those days you couldn't go without your flintlock rifle.

Fire, with settlers tending it and in encampment at night

Voiceover: Armed as they were, the European settlers must have been confident they could overcome any obstacle as they pushed further into the African interior. By February 17th 1838, the voertrekkers had reached 800 miles inland from the Cape. But they were entering an alien and unexplored land.

Zulus approaching settlers' encampment and attacking it, leaving camp burning

Voiceover: Suddenly out of the darkness swept a native African army. Their victims barely had time to fire a single shot from their rifles before they were completely overwhelmed. Within hours, nearly 300 voertrekkers lay dead.

Child crying in camp at morning as settlers lie dead

Voiceover: Their enemy had struck without mercy. Killing men, women and children alike. Who could have committed such a ruthless and calculated assault, stopping the Europeans in their tracks? In fact, the voertrekkers had trespassed across the border of a mighty African kingdom. Inhabited by people very different from the Khoisan of the Cape. They had encountered the Zulus.

Paul Garner: When they ran into the Zulus, they ran into a group of people who were very different to anybody else they'd been up to, up against up until that point in time. This was an organized group of people.

Archive: B&W still – Zulu warriors

Voiceover: The Zulus were the authors of a unique and highly developed African state. Their military skills had allowed them to overwhelm their native African neighbors. They held more than 30,000 square miles of land, and had established a sophisticated economy and society. The ferocity of the Zulu defense of their land was something the voertrekkers had simply not expected.

Paul Garner: It was more than the voers could handle. They, they, they were not prepared for the attack from the Zulus. They were up against a king who could mobilize an army of 10-15,000 men without any problem at all. It could take on almost anybody, they were absolutely fearless.

Voiceover: The voertrekkers were stunned and devastated. Had they, and the power of guns, germs and steel met their match in Africa? The voertrekkers showed little interest in who the Zulus were, or how they'd developed such a sophisticated state. They wanted a showdown. They gathered their scattered forces behind a great circle of wagons, and readied themselves for battle. At dawn on 16th December 1838, more than 10,000 Zulus stormed across the horizon, charging in to destroy the outnumbered settlers. But this time, the Europeans were able to use their technology to maximum effect. To increase the rate of fire from their muzzle-loading rifles, some would shoot while others would reload.

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Derek Engelbrecht: They would shoot, hand the gun over, take the next gun, fire, hand the gun over. So every five or six seconds you could fire a shot. See that, that was the important thing.

Voiceover: This time, not a single Zulu could get within ten paces of the encampment. It was a massacre.

Paul Garner: The voertrekkers had probably killed an estimated 3-3,500 Zulus. The Boers themselves suffered only three injuries.

Voiceover: The conflict became known as the Battle of Blood River. The Zulus had been broken. Guns, germs and steel had prevailed.

Steam train being stoked, Jared studying on train

Jared Diamond: The victorious European settlers pushed on beyond Zulu lands, while new developments in their technology let them increase the pace of conquest. Railroads were key. With railroads one could transport lots of people and their supplies over vast areas. And so in Africa, Europeans started to build railroads, move into the interior and transport themselves and their supplies.

Voiceover: This was the era of the industrial revolution, a revolution that introduced one further weapon to the colonization of Africa. A weapon that put the same devastating firepower seen at Blood River into the hands of just a single man.

Paul Garner: This is a Maxim gun. What made this weapon such a great weapon, as opposed to the old single-shot weapons that had been used in years before, is this gun could fire continuously for up to 500 rounds a minute. It had the equivalent firepower of probably 100 men in a company with single shot weapons.

Voiceover: As they drove further into Africa, Europeans encountered new tribes, some just as hostile to invasion as the Zulus had been. But for peoples like the Matabele, there was simply no answer to the world's first fully-automatic weapon. The Matabele conflict of October 1893 lasted a matter of hours.

Paul Garner: The settlers mowed down those Matabele warriors until there were only a few of them left. It was a real case of ancient technology up against the latest and greatest as far as European inventions were concerned.

Jared Diamond: It seems like the birth of a new age. Europeans carving the path into the interior of Africa. Conquering tribe after tribe, settling where they pleased. Guns, germs and steel triumphant. Except now, those settlers would find themselves facing an entirely new enemy – one that had once been their greatest ally. Geography.

Voiceover: As they moved north, settlers cleared land for farms, confident they could build a prosperous life in Africa. But with little warning, things began to go awry. The land became impossible to plough. Their crops refused to grow. Their shoes fell apart in the mud. And that was only the start.

Jared Diamond: The second big problem that Europeans encountered was their animals died. Their horses and oxen had been a big part of the European advantage elsewhere in the world – oxen as draught animals, and horses as their military animals, but here their animals were dying.

Voiceover: For thousands of years, these domesticated animals and crops had sustained European civilization. Without them, there would have been no guns, germs and steel; no history of conquest and colonization. And now the settlers themselves began to fall ill with terrible fevers, while all around them they could see native Africans farming, herding cattle, healthy and alive. How was this possible? What were the secrets of this strange new land?

Jared Diamond: The ideas behind guns, germs and steel all spring from an understanding of geography. And geography explains why Europeans were now failing.

Voiceover: European crops had grown well in the Cape, because the Cape was a mirror of the European world, lying on a similar latitude. But as the settlers progressed into the African interior, they'd been moving north, closer and closer to the Equator. At about 23 degrees south, near the River Limpopo, they passed a major geographical boundary known as the Tropic of Capricorn. They were leaving behind their familiar European climate and entering a totally different world. They had entered the Tropics. Compared to the European or temperate zones, the Tropics operate by entirely different rules. Instead of the four seasons of Europe, North America and the Cape, here there are just two – the dry season, and the rainy. Wheat and barley, the crops that had sustained European civilization for centuries, had not evolved to survive in this tropical climate. Yet the native Africans, the Zulus, the Matabele, all the tribes that the settlers had encountered, depended on agriculture just as much as the Europeans. How were they succeeding as the Europeans failed? Even today, the continent of Africa is composed of thousands of different tribal groupings. Each is subtly distinct from the next, in custom and language.

Children singing in classroom as Jared watches

Jared Diamond: Such diversity means that most Africans have to master more than one language, and they acquire those skills at a very young age.

Jared asking children about the languages they speak

Jared Diamond: I would like to find out how many languages you speak. Who here speaks, knows how to speak Bemba? Aha. Does anybody else know how to understand or speak Lozi? You speak Lozi.

Child: Yes.

Jared Diamond: Do you also speak Bemba?

Child: Yes.

Jared Diamond: Is there another language that you speak also?

Child: Lovak.

Jared Diamond: Lovak. That's four languages. That's good. Most Americans speak only one language. After a little exposure to these different languages, you begin to realise one thing – they all sound remarkably similar. I'm fascinated with languages, and wherever I've been going I'm asking Africans, what's your language and tell me some words in your language, so here's what I found out for the word for sun. In the Neanga language, sun is azuba, in the Bemba language it's haka zuba, in Chiwa it's dzuba, and in the Senga languages, zuba again. Or the word for water. In the Neanga language it's manzi and in Bemba it's amenchi, and in chiwa it's manzi, similar to each other again.

Marketplace with people buying and selling

Jared Diamond: What do these linguistic similarities tell us? That there is a common root for most of the modern languages of tropical Africa. A single ancestral language spoken by a single group of people from which the many languages of today have descended.

Voiceover: Linguistic analysis has isolated a family of languages known as Bantu, which originated in tropical West Africa. About 5,000 years ago, the early Bantu speakers began to spread into new lands, bringing their crops, their animals and their language with them. And over centuries, Bantu culture evolved, diversifying into hundreds of tribes, expanding across the tropical region of Africa. But the truth of this pan-African civilisation was suppressed for many years. Dr Alex Schoeman is trying to overturn the legacy of South Africa's racist past. She has been excavating an archaeological site on the banks of the Limpopo River.

Alex Schoeman, University of the Witwatersrand, South Africa: In the early part of the 20th century, and there were rumors in the white South African community about this place, in their minds linked to the Queen of Sheba or some other early white civilization in Southern Africa, trying to show that the Phoenicians or the Subeyans, basically anybody who was a bit lighter-skinned than Africans, were here first, and they found the opposite, that Africans actually had amazing great history and that they had earlier states running before, way before any white set foot in Africa.

Voiceover: This site, known as Mapungudwe, the place of the jackal, formed the heart of a kingdom similar to the earliest civilizations in Europe.

Alex Schoeman: Mapungudwe was the core, it was the capital of a massive state, and about 5,000 people living around this hill, but then you had several thousand other people living in the valley who produced the agricultural surplus to feed the city or town. They had cattle, they had sheep, they grew sorghum, millet, and they worked iron. It was a massive, amazing development that occurred in Southern Africa.

Voiceover: And this was not an isolated state. It formed part of a much larger economic network that had spread across Southern Africa and beyond.

Alex Schoeman: These are Mapungudwe beads, they're gorgeous blue ones, these are glass beads that came down the Indian Ocean coast, and through them we know that Mapungudwe's part of an international trade network, linking it all the way to the coast. It's an incredible African accomplishment, to set up such a complex trade network that links all the way into Northern Botswana, bringing material from there and taking it all the way to the Indian Ocean coast.

Early African farmers

Jared Diamond: So, Africans had overcome the problems of agriculture that defeated the European settlers. They had developed a unique tropical system of agriculture that had spread across the continent, and become the foundation of complex societies, trading as far afield as India. But there was an even more extraordinary story at the heart of this flourishing tropical civilization.

Voiceover: As soon as they entered the tropics, Europeans and their imported animals had fallen victim to terrible disease. Fevers wracked their population. Yet tropical Africans showed fewer of the same effects. Many of them even survived that most lethal of European weapons; smallpox - the disease that had devastated the native peoples of North and South America and the Khoisan of the African Cape. How was this possible?

Diamond believes it all comes back to geography. Many of the diseases that were killing the settlers and their European livestock were unique to the tropical world. They had never encountered them before. It was a complete reversal of the usual pattern of conquest.

Jared Diamond: In the New World, the germs had been a weapon on the side of the Europeans killing indigenous people. Here it was indigenous germs, to which Europeans had not a history of exposure, and so here we have guns, germs and steel again, but the germs working in the opposite direction, killing Europeans. The settlers and their imported livestock had fallen victim to a host of tropical infections and diseases. But African cattle, over thousands of years, had developed resistance to many of these tropical germs. And these cattle might also explain why tropical Africans had not succumbed to smallpox on the same scale as the Khoisan people of the Cape. The smallpox virus originally crossed over from cattle to man centuries ago, and experts now believe it may have first originated in tropical Africa. Africans were certainly familiar with the disease. They had even developed methods of vaccination that bestowed immunity for life. And there was more. Native Africans had also developed antibodies against one of the most virulent diseases on earth. Malaria. Carried by the humble mosquito, this was the disease that was now overwhelming the European settlers. But tropical Africans were combating malaria with more than just antibodies. Their entire civilisation had evolved to help them avoid infection in the first place. They tended to settle in high or dry locations, away from the wet, humid areas where mosquitoes breed. And by living in relatively small communities, spread out over vast areas, Africans could limit the level of malaria transmission. It was an extraordinary achievement. But the Europeans understood little of the Africans' way of life. They built settlements by the rivers and lakes they used for water, in places infested by mosquitoes. Thousands died.

Jared Diamond: So it seemed that the tropics had defeated European guns, germs and steel. And that Africans had emerged triumphant. They had evolved a complex civilization well suited to the tropical world. A civilization that had spread throughout the continent in a vast cultural Diaspora.

Voiceover: Was this the end of European guns, germs and steel in Africa? What would the future hold for this mighty tropical civilization? The Europeans had failed to settle Africa's land. This would become no North or South America. But Africa still had one great draw for the colonizing powers - vast reserves of natural resources; copper; diamonds; gold. European conquest and the story of guns, germs and steel would now enter a whole new age.

Archive: B&W footage Africans laboring and building

Voiceover: In the late 1800s, in what is now the Democratic Republic of the Congo, the Belgians

drove millions of native Africans from their villages, setting them to work gathering rubber, mining copper and other minerals. Burning their homes behind them. Reducing their 1,000 year old tropical civilization to dust and ashes. Few were as brutal as the Belgians, but across the continent, millions of Africans were compelled to abandon a way of life perfectly adapted to the tropics, and to labor for Europeans. To ferry Africa's natural wealth back to Europe, the colonizers turned again to their technology, building ever greater railroads. After more than half a century and the labor of tens of thousands, tracks of shining steel reached all the way from the Cape into the very heart of the tropics. Constructed for Europeans to extract Africa's wealth. Built on the ruins of African civilization.

Jared Diamond: All this time, I've been uncovering the train of guns, germs and steel across Africa. And even this train and the track it rides on lie at the heart of my story. These tracks are still in use, still fulfilling their original purpose. Trains travel from the southern tip of Africa into modern Congo and Zambia, ferrying back tons of copper and other minerals. But Africa today is no longer a continent of colonies. Its nations are free and independent. What place is there for my theory of guns, germs and steel in modern Africa?

Voiceover: The end of the line for Jared Diamond. Civil war in the neighboring Congo makes it too dangerous to travel the last few miles of this track. But even here, the reality of modern Africa is clear.

Jared Diamond: I'm now in the centre of the African tropics, and I'm in Zambia, one of the poorest countries in Africa and really in the whole world. The average annual income here is a few hundred dollars, and the lifespan, average lifespan of a Zambian is 35 years, so I myself have now lived nearly two average Zambian lifetimes. What goes through my mind here is, what can history and geography and guns, germs and steel tell us that would help us understand the plight of Zambia today? In modern Zambia I see few signs around me of the great native civilizations that once flourished in tropical Africa. What I see instead is a country shaped by colonization. I see towns and cities that grew up next to the mines and railroads established by Europeans, and built on the European model. What about the great forces that originally shaped this continent and its people? The forces behind its conquest by Europeans. Where are guns, germs and steel in modern Africa?

Hospital interior with patients and families

Dr Christine Manyando, Tropical Diseases Research Centre, Zambia: In Zambia, malaria is endemic. It is the number one public health problem, and when you look at the children particularly, when you go to a health facility, up to 45% of the children in the outpatient facility of the hospital will actually be presenting with malaria.

Hospital with patients and their parents

Coffin shop exterior

Voiceover: Germs, one of Diamond's great forces of history, are still shaping the story of modern Zambia. Not just the recent scourge of AIDS, but also that ancient tropical disease that defeated Europeans – malaria. Malaria is now the number one killer of African children under five years old.

Christine Manyando: This old register will just show you the picture of, of the number of deaths that would have occurred within the hospital. Most of them are children below five years, one year

six months, three years, five months, one year, most of them are really below five years.

Voiceover: Tropical Africans once lived in settlements spread out over large areas, which minimised the spread of malaria. But now they're living in modern high-density cities and towns, and the rate of infection has increased dramatically. The burden of germs is one of the greatest problems afflicting the country.

Christine Manyando: Undoubtedly malaria has a very big economic burden on us as a country, because as you may be aware, if so many children would be suffering from malaria, if we just look at the children who are in this ward, these mothers would be working somewhere and being productive, so that's one direct way in which we know productivity's been affected to a large extent.

Professor Nick White, Centre for Tropical Medicine, Oxford University: It's been estimated by eminent economists that the 1% negative growth each year in Africa over the last half a century can be attributed entirely to malaria.

Voiceover: The immunities and antibodies that Africans had developed over thousands of years to protect them from malaria no longer provide sufficient protection. The strains of the disease are mutating, and standard drugs are becoming less effective. In the high malaria season, up to seven children a day die in this hospital.

Jared Diamond: You're used to this. I'm, I'm not. I'm – what is this, what does this scene make you feel about – your work in Zambia?

Christine Manyando: Exactly. To be frank with you, Jared, I wouldn't say I'm used to this, because I don't think there's anyone who can be used to sickness and eventually death, especially of people that you love so very much and are a part of you. It is, it is something that in fact I would say because of the magnitude of the problem, one would wish to do everything they possibly could do.

Children in hospital, and Jared crying

Christine Manyando: Because of the fact that.....

Jared Diamond: There's a difference between understanding something intellectually and experiencing it at first hand. In my book, germs was one of the three main forces of history and it's impersonal, and it's still different and it hits me to be in a place where germs are in action.

Jared on plane/view from plane

Jared Diamond: Thirty years ago I set out on a journey. A quest to understand the origins of inequality in our world. I discovered that this story stretched back to the beginning of civilization, and rested on the geography of our planet. When humans first started farming, one small area in the world was lucky enough to have the best crops and animals, which gave one group of people a unique advantage in history. Europeans perfected guns and steel evolved lethal diseases and germs. They then used these tools to conquer continents and to build extraordinary wealth. I conclude that geography, and guns, germs and steel, have been the strongest forces to shape the history of our world. Here in Zambia, these forces are still shaping the world today. Tropical germs are overwhelming this country and its people, and driving them into poverty. Does that

mean that Zambia will always remain a victim of these great forces of history and geography? And that Africa is condemned to a future as poor as its present? Absolutely not. And I would say that the message is a hopeful one, it's not a deterministic, fatalistic one that says, forget about Africa and underdeveloped areas. It says there are specific reasons why different parts of the world ended up as they did, and with understanding of those reasons, we can use that knowledge to help the places that historically were at a disadvantage.

Voiceover: Malaysia and Singapore are among the richest and most dynamic economies in the world. Like Africa, they are tropical countries, with the same problems of geography and health, the same endemic malaria. But both transformed themselves by understanding their environment. Fifty years ago, these countries realized the burden that geography and germs could be. Through concerted effort, they managed to almost entirely eradicate malaria from their land, transforming their economies and way of life.

The story of Malaysia and Singapore shows what an understanding of geography and history can do.

Jared Diamond: Explanations give you power, they give you the power to change. They tell us what happened in the past and why, and we can use that knowledge to make different things happen in the future.

Voiceover: The government of Zambia agrees. They have set up a nationwide project to try to eliminate malaria from the country, just as in Malaysia and Singapore. New drugs, even a possible vaccine, are giving them an increasing chance of success.

Christine Manyando: The control of malaria will mean an improvement in the welfare of the people, and an improvement in the welfare of the people will mean increased productivity, and increased productivity will mean that we will be a wealthy nation, because that will mean that then people will have sufficient, not only food but sufficient time to do things that make a human being complete and whole and able to lead a fulfilled life.

Voiceover: Jared Diamond's quest has been to understand the great forces of human history. But it is still the very smallest of details, the lives of individual human beings, that lie at the heart of his work.

Jared Diamond: When we talk about history we talk about development, we talk about competition between societies and the wealth of nations, it can sound intellectual, but here in Africa there are human faces on it.

Voiceover: And for Diamond, even after 30 years of thought and enquiry, the questions behind guns, germs and steel remain as important as they ever did. Why is our world divided between rich and poor, and how perhaps can we change it?

Jared Diamond: I feel that whatever I work on for the rest of my life, I can never work on questions as fascinating as the questions of guns, germs and steel, because they're the biggest questions of human history.

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