

Script

Hook

Most of history has been decided by men in closed-door meetings. You can probably see it in your head now, it's such a trope:

The whiskey, the cigars, the big suits

I want to talk to you about *one* of those meetings that I have been *obsessing* over.

And I've been obsessing because almost nobody has ever heard of this meeting.

It didn't get a book. It didn't get a senate hearing. It didn't get a Christopher Nolan Movie.

But way more people died in the wake of this meeting than after the Manhattan project ¹

And I've spent the last 6 months trying to understand this meeting. I thought I was just gonna spend a day reading the meeting transcript

It turned out to involve the JFK assassination, Vietnam, George Bush. There was even a whole bit about the Catholic Church that I had to cut for time. Because the history of this meeting is basically the history of everything.

But this meeting doesn't even have its own wikipedia page.²

Intro

The meeting I'm talking about was the 8th World Health Assembly.³

150 delegates from almost every major country came to do something monumental: eradicate malaria.

Now I get it, malaria is not a sexy thing to talk about. The YouTube algorithm would probably be preferred if I were reviewing the new iphone right now. Hell, maybe you would too.

¹ See [here](#) for my estimate on the death toll of malaria from 1955-2025. The estimate roughly combines a few different sources and is not very precise, but I can confidently conclude that since 1955, the number of people who have died from malaria is in the 10s of millions.

² "[Malaria Eradication](#)" has a wikipedia page, but there is no separate page for the 1955 World Health Assembly

³ Most discussion of the meeting comes directly from the WHO's own records of the meeting [here](#).

But you wouldn't be alone. Malaria wasn't sexy in 1955 either. This whole meeting only got a tiny corner in a back page of the New York Times sandwiched between two menswear ads.⁴

But it's hard to overstate how insanely audacious this idea was. First of all, the world had never eradicated a disease before.⁵ Second, malaria was then, and still is, arguably the deadliest thing to ever exist.⁶

Not the deadliest disease, the deadliest *thing*. In 1945 malaria killed ten times more people than the atom bomb.⁷ According to one estimate, malaria has killed 5% of all people who've ever lived.⁸

[The malaria parasite and the mosquitos that carried it used to kill people in almost every single place in the world. Whether you lived in America, or England, or Sweden, if you'd been born before this meeting, it might've killed you too.](#)⁹

But you're here. Malaria didn't kill you. And that's in no small part because of these 150 guys. With a couple billion dollars,¹⁰ military-grade insecticide, and the world's best scientists, they decimated malaria in almost every part of the world.

⁴ [This](#) was the only contemporary discussion of the meeting I found in the New York Times, although of course I have to caveat that I can't be 10000% sure other articles didn't exist.

⁵ At the time (1955), the world had not eradicated any disease — Smallpox [was declared eradicated in 1980, and now stands as the only human infectious disease that has ever been eradicated](#).

⁶ At later points in the script I refer to malaria as "the deadliest thing ever," usually when implicitly paraphrasing or quoting other people (e.g., Fred Soper), but to be clear: I can't say with confidence that malaria is THE deadliest thing ever. The claim rests on cumulative death tolls across all of human history, which for malaria and its main rivals — other infectious diseases like tuberculosis and smallpox — are broad estimates built on sparse historical death-record data. Overall malaria is very plausibly the deadliest, but the data aren't strong enough to say so with confidence.

⁷ A [2002 study](#) estimated there were 3.5M deaths from malaria in 1930 and 1.3M deaths from malaria in 1950 (Table 3) suggesting between 1.5M and 2M deaths from malaria in 1945. [A 2020 article from the Bulletin of Atomic Scientists](#) estimates that between 110K and 210K people died as a result of the atomic bombings of Hiroshima and Nagasaki.

⁸ I went back and forth for a long time with my researcher / fact-checker about including this stat. Originally, I was going to cite a [2002 Nature article](#) which claimed that Malaria had killed 50% of all people ever. But there has been considerable debate about this citation, and many researchers today doubt that the number is that high. So I went with the 5% estimate made by Brian Faragher, Emeritus Professor of Medical Statistics at Liverpool School of Tropical Medicine. Importantly, Faragher got to this 5% number from a back-of-the-envelope calculation during an interview with the BBC's Tim Harford, not a rigorous analysis. But since very few experts have attempted to systematically estimate the true number — the historical data barely exist — a rough estimate from a medical statistician at a leading tropical-medicine institution is about as good as anything available. You can listen to Faragher's full interview [here](#).

⁹ Probably worth noting that while [malaria was historically far more widespread than today](#), the risk varied sharply by region and by parasite species. For example, your odds would have been better in Western Europe, where malaria was primarily caused by the slightly-less-lethal *Plasmodium vivax* (America carried *falciparum* malaria).

¹⁰ Randall Packard, "Making of a Tropical Disease" page 157: "In the end, the World Health Assembly passed the resolution, and the Malaria Eradication Programme was launched in 1955. Over the next 14 years, nearly 1.4B dollars was spent on the eradication program."

Almost every part of the world. When these guys got together to save the world, they didn't decide to save the whole world. They decided to save a slightly different world, one that didn't include Africa South of the Sahara desert.¹¹

CHAPTER 1

Question 1: Why'd they call this meeting in the first place? Nobody had ever eradicated a disease before. Why were these guys so confident they could start with the worst one?

Because they'd learned how to destroy it.

Question 2: How do you destroy the deadliest thing in human history?

The same way you destroy anything: The US military.

Malaria used to be a huge problem in America, especially down south.

[Dr. Timothy Winegard]

The survival rates of children born in South Carolina were 16%. You had a 16% chance of living to 14. That's crazy.

[Justin]

That's part of the reason Americans kidnapped and enslaved so many African people. White farmers did not want to work the mosquito-filled fields, so they brought enslaved human beings from another continent to do it for them.¹²

[Dr. Timothy Winegard]

Originally, colonial powers are enslaving Indigenous peoples in the Americas to use as slave labor, but very quickly we lose 95%

¹¹ Some contemporary discussion (e.g., [here](#)) presents the exclusion of sub-Saharan Africa as a decision taken at the 1955 Assembly, but other sources have rightly pointed out that this exclusion was functional, not explicit. [WHA8.30](#) set a global eradication objective without formally excluding Africa. Most sources support the view that tropical Africa was not formally excluded, but that it was not brought into the active eradication campaigns on the same footing as other regions (less funding, fewer resources).

¹² The link between malaria and the geography of American slavery is drawn primarily from Elena Esposito, "The Side Effects of Immunity: Malaria and African Slavery in the United States" (*American Economic Journal: Applied Economics*, 2022; [AEA](#)). Esposito argues that the spread of malaria triggered demand for malaria-resistant labour, driving the concentration of enslaved Africans in the most malaria-infested areas, and that slaves from the most malaria-ridden regions of Africa commanded higher prices.

of Indigenous peoples in the Americas. So then indentured servants are brought over as well from Europe to work. Well, they're suffering the malaria and yellow fever burdens as well. African people seem to be able to withstand the yellow fever and malaria onslaught better.

[Justin]

If you look at a map of the US slave trade, [then you look at a map of American malaria, you'll see pretty clearly they're the same map](#). Places that had more malaria had a much higher demand for slave labor.

So the story of American malaria was a lot like the story of malaria everywhere else. It killed a lot of people, but it mostly killed [poor people](#). It killed [slaves](#). It killed [laborers and low-income](#) families in the rural south.

By the early 1900s there'd been a few big malaria discoveries, but they hadn't helped much. Scientists had learned that malaria was a [parasite](#), for instance. They'd also learned that malaria was carried by [mosquito](#) bites. But know thy enemy only goes so far if you don't know how to kill thine enemy. [So despite all these discoveries, malaria was still one of the leading causes of death in America.](#)¹³

Until the war.

[When the Americans fought the Japanese in the Pacific, they were winning on the battlefield but getting slaughtered by the mosquitos.](#)

[Archival Audio]

When 30, 40, or 50 men out of 100 are knocked flat on their backs by malaria, the military situation is far worse than snafu.

[Justin]

¹³ Nationally, malaria was considered an 'important' cause of death in early-twentieth-century America, although it is arguable whether it constituted a 'leading' cause of death. While malaria remained a serious problem and was responsible for ~0.5% of deaths, it certainly wasn't as deadly as other things by this point — the 1900 US malaria mortality rate was 7.9 per 100,000 ([Mortality Statistics 1931, p. 12, Table Q](#)), compared to pneumonia and influenza, tuberculosis, and gastrointestinal infections — each of which ran into the hundreds per 100,000 ([CDC/Carolina Demography](#)). It's also worth noting that malaria's primary burden in America probably wasn't death, but chronic sickness, debilitation, and economic drag.

If a soldier was lucky, malaria was just two weeks of the worst flu they'd ever had. Chills, fever, sweating through the night.

But the malaria parasite literally eats through your red blood cells. That's how it works. So at any point that flu could turn deadly. The same soldier who was just coughing and watching cartoons could suddenly go into malaria shock: his blood pressure would tank and his circulatory system would completely collapse.¹⁴

Or he could run out of iron, or his lungs could fill with water, or his spleen could just suddenly burst

[Dr. Timothy Winegard]

General MacArthur's quote: "This is going to be a very long war. For every division I have fighting, I have one on leave and one in the hospital with malaria."

So the military needed a solution.

And to get that solution they needed the greatest mind in mosquitos.

CHAPTER 2

Fred Soper. He was a tall, corn-fed Kansas boy from a little salt mining town 'bout an hour north of Wichita.¹⁵

Before Soper, everybody thought that fighting malaria was about fighting the parasite inside the body, with medications like quinine. But Fred Soper thought that was all boring nerd shit. Soper knew the best way to fight malaria wasn't to fight parasites. It was to fight mosquitos. So Fred Soper became the best goddamn mosquito killer there'd ever been.

Soper cut his teeth down in Brazil, where he basically wrote the book on killing mosquitos. They called him into Rio after one of the most dangerous mosquito species accidentally found its way to

¹⁴ While malaria certainly did kill some soldiers in the Pacific theatre, we should emphasise that malaria was primarily a catastrophe of *incapacitation*, not death. For example, according to Beadle & Hoffman (1993) for US Navy and Marine forces in WWII there were around 113,000 cases but only about 90 deaths — a case-fatality rate under 0.1% ([Clinical Infectious Diseases](#)). Deaths stayed rare partly because soldiers had access to suppressive drugs and treatment, and partly because much of the Pacific burden was the relapsing but rarely fatal *Plasmodium vivax* rather than lethal *P. falciparum*.

¹⁵ Most of the description of Fred Soper and much of the biographical detail comes from Malcolm Gladwell's [wonderful reporting in the New Yorker](#).

Brazil. Soper carved the country's entire northeastern region into a grid, then he sent his troops town to town, door-to-door clearing mosquitos. He made them check every cistern, climb along every roof gutter. After they'd check a house he'd make them go back later and check it again. That's the kind of guy Fred Soper was.

So it was no surprise the US military loved him. But the military knew that Soper's ideas weren't enough on their own. The military didn't have time to go door-to-door killing bugs. Remember that this was going on at the same time as the Manhattan Project, so the American military wasn't exactly thinking small. They wanted the atomic bomb, but for mosquitos.

[Archival Audio]

This is the story of a miraculous white powder that is helping to win the war. Its name is Dichloro Diphenyl Trichloroethane.

[Dr. Timothy Winegard]

DDT comes out of the malaria project in the United States that was given the same scope and secrecy as the Manhattan Project.¹⁶

[Justin]

Once they knew it worked, the US government went to chemical factories around the country. They told them to [stop](#) making whatever the [hell](#) they were making and [start making DDT](#).¹⁷

And by the early 40s, the US had their plan. They had Fred Soper's playbook for killing mosquitos and the world's best artillery to do it.

So they boarded up planes with sprayers, scientists, and as much DDT as money could buy, then sent them all off to the Pacific.

¹⁶ More information about DDT's origins: the compound was first synthesised in 1874 by the Austrian chemist Othmar Zeidler, and its insecticidal properties were discovered in 1939 by the Swiss chemist Paul Hermann Müller, working for the J.R. Geigy company in Basel. Müller received the 1948 Nobel Prize in Physiology or Medicine for that discovery, and Geigy first patented DDT in Switzerland in 1940 ([Britannica](#); [Müller, Nobel Prize 1948](#)). The United States' wartime contribution was to mass-produce the compound and deploy it at scale to protect troops in malarial theatres. Also, it's hard to quantitatively compare "scope" or "secrecy," so it was difficult to fact-check Dr. Winegard's comparison to the Manhattan Project's "scope and secrecy," so out of an abundance of caution I might advise you to read this comparison as illustrative rather than a documented equivalence.

¹⁷ DDT was put into large-scale production during the war and production reached roughly three million pounds a month by the time it was added to Army supply lists in May 1943 and Navy lists in January 1944. Essentially all of this was allocated to the armed forces, with only a small amount kept back for research ([Gladstone, "DDT and Silent Spring."](#) *JMVH*; [DDT, Wikipedia](#))

Turned out to be a great fucking plan. By 1945 they'd basically beaten malaria in the Pacific Theater. Disease rates fell [70%](#) in Japan. [83% in Burma](#).¹⁸ Unsurprisingly, the war very quickly started to turn in the American's favor.

So back home, the rest of the government started getting excited too.

If they could clear malaria from military bases in the middle of the Pacific Ocean, why the hell couldn't they do the same thing in America"

So that's what they did. They went back home and followed the same playbook: They took Fred Soper's best students and gave them as much DDT as money could buy.

In just a few years the US government sprayed [6.5 million homes](#), [drained millions of acres of swamp](#), and completely eradicated malaria in the country.

But that was the first time any country had eradicated malaria, or any disease,¹⁹ on that kind of scale, in a place where it'd been killing tens of thousands of people. In the war against malaria and disease, this was the first sign that we could do the impossible.²⁰

Everyone was incredibly excited. Could you imagine being the Americans? Could you imagine being Fred Soper? You just defeated the deadliest thing in human history. You must feel like God. It was no surprise, then, that Fred Soper wanted to go bigger. His ambitions were way beyond America. He wanted to eradicate malaria in every corner of the world. Africa, Asia, South America. I mean,

¹⁸ This claim comes from [Medicine and the Culture of Command: the Case of Malaria Control in the British Army during the two World Wars](#) (1996) by Mark Harrison, which states: "Admissions to hospital from malaria among British soldiers in Burma decreased from a high of 60 per cent of total strength in 1943 to around 10 per cent in 1945. The death rate was also greatly reduced, and from May 1944 to November 1945 it is claimed that there were only 6 deaths out of almost 14,000 cases." - p. 448. While the article makes clear that DDT "figured prominently in malaria control in Burma", of course there was other stuff going on, so this decline could also be partially attributed to other factors like increased awareness about malaria prevention measures.

¹⁹ I now think there is at least one possible exception to this. In the 19th century smallpox was still killing thousands of people across Europe. National elimination of smallpox in some European countries predated the US malaria work: for example, the Soviet Union eliminated smallpox morbidity by 1936 ([Our World in Data](#); [WHO](#); [EBSCO](#)). So, although the malaria campaign was a major achievement, this was not the first time a country had eradicated a deadly disease on a large scale.

²⁰ While the success of elimination of malaria from the US was an important milestone, I should also note that efforts to malaria back at scale had already demonstrated success elsewhere at the same time — most strikingly in Venezuela, where Arnoldo Gabaldón's national DDT campaign, begun in the 1940s, was significantly reducing malaria, and whose early success helped inspire the global eradication effort itself ([Emerging Infectious Diseases](#); [Lancet Global Health. 2021](#)). The Rockefeller Foundation's campaign in Sardinia (1946–51) eliminated malaria from the island over the same years and also had an influence on global efforts ([Emerging Infectious Diseases](#)).

he was ready to kill mosquitoes in the North Pole if he could find them.

So what does a little Kansas boy do? He starts playing politics. Specifically in the World Health Organization. When the previous World Health Organization Director-General stepped down, Soper helped install a new Director-General, a Brazilian named Marcelino Candau, who was much more sympathetic to Soper's mission to eradicate malaria.²¹

[Dr. Jesse Bump]

People are enthusiastic. You think of the national character in the 50s, like, we can do anything. You know, build the tallest building, make the biggest bridges, build the world's largest road network.

[Dr. Jesse Bump]

So in 1955, when the World Health Organization met for their annual meeting in Mexico City, the schedule was Fred Soper's. The subject was his dream: a global crusade against malaria. They called it the Global Malaria Eradication Programme.²²

I mean, everyone was fired up. All the delegates in their best summer suits, the Mexico City sun. I mean, they were about to save the goddamn world.

But there was a hiccup.

Ch. 3

But there was a hiccup.

Should Africa be included in the plan? They were nominally asking a question about difficulty: would it be *possible* to eradicate malaria in Africa? Or would it be too large and too rural to get DDT everywhere?²³

²¹ Marcolino Candau's had worked under Soper on the *Anopheles gambiae* eradication campaign in the Brazilian northeast, and Soper later brought him to Washington as his deputy (Assistant Director) at the Pan American Sanitary Bureau, before Candau was elected the WHO's second Director-General in 1953 ([Cueto 2004, "International Health, the Early Cold War and Latin America"; Birn 2014, "Backstage: the relationship between the Rockefeller Foundation and the WHO." *Public Health*](#)). Candau was more sympathetic to eradication than his predecessor, the Canadian psychiatrist Brock Chisholm, who "disliked Soper's personality as well as his "eradicationist" perspective" (Cueto 2004).

²² Soper's central role in the 1955 Mexico City meeting and the launch of the Global Malaria Eradication Programme is drawn from [Gladwell, "The Mosquito Killer" \(*The New Yorker*, 2001\)](#), which describes eradication as Soper's own ambition and reports that in 1955, with Director-General Candau's help, Soper "pushed through a program calling on all member nations to begin a rigorous assault on any malaria within their borders," the programme that became the GMEP.

²³ Nájera, González-Silva & Alonso (2011) discuss this in "Some Lessons for the Future from the Global Malaria Eradication Programme (1955–1969)". According to this source "it was obvious from

But those weren't the only things they were worried about. There was subtext there.

Interlude

It started like this: Starting in the 1400s, European colonists desperately wanted to get into Africa. They wanted to steal: land, resources, people.

But malaria was like this [force field](#) keeping them out. Every time a European mission tried to get into the African interior they got beat back by the continent's particularly lethal strains of the malaria parasite. The Tuckey Congo expedition, for example, lost [two-thirds](#) of its men. The [Mungo Park party lost nearly](#) 75%.²⁴ When the British stationed soldiers in Sierra Leone, almost half were dead by the end of the year.²⁵

So for hundreds of years, Europeans stayed on Africa's coast. The slave trade, for example, was operated from the shoreline, where europeans paid [African middlemen](#) to kidnap people in the interior and bring them to the ocean.

[Dr. Timothy Winegard]

Europeans can't go into the interior and capture slaves because they die. They just die.

[Justin]

This was the paradox: malaria was this terrible deadly disease inside Africa, but it was also keeping this other terribly deadly force-Europeans-out of the continent.

the start that nobody knew how to deal with the problems of tropical Africa," and that this "was one of the main objections to the GMEP in the 1955 WHA" ([PLOS Medicine](#)). More broadly, they record that critics of the programme "doubted the feasibility of eradication in vast areas that had poor communications and adverse environments and that lacked public health systems" — which is the scale-and-rurality difficulty I talk about here.

²⁴ Tuckey (Congo, 1816): Tuckey and many of his company died within months of entering the river ([Wikipedia, Tuckey](#); [Cambridge](#)). This was a very long time ago and sources vary on the exact toll and party size, so we'd treat "two-thirds" as approximate rather than exact; deaths were attributed to "virulent fevers" generally, of which malaria was one. **Mungo Park (Niger, 1805)**: Park set out from the coast with about 40 Europeans; by the time the party reached the Niger at Bamako, only 11 were still alive — the rest lost mainly to fever and dysentery ([Britannica](#)). That is a loss of roughly 70–75% *before even reaching the river*, and ultimately the entire European party perished. In both cases the deaths are best described as from tropical disease broadly (fever, dysentery), not malaria alone.

²⁵ "Although reliable data are not widely available, some paint a devastating picture. For instance, for European troops in Sierra Leone from 1817–1838 average annual mortality was nearly 500 per 1000" - [Colonialism, malaria, and the decolonization of global health](#)

Until the 1870s. That's when Europe started mass producing this bitter white powder called quinine. At the time, quinine was the only thing that could keep you from getting malaria. The story of how they started mass producing quinine is its own epic about alpacas and the Bolivian police, but for now, just know that quinine used to be too expensive for Europeans to launch any real assault inside Africa.²⁶

But then they found a new, better species of the quinine tree, they started mass producing it, and the price of quinine fell 94%.²⁷

Then, faster than anyone knew what was going on, European ships were loaded up with quinine and colonists were suddenly slaughtering their way through the interior. Countless people died from European guns. The Belgians alone killed as many as [10 million people](#) in the Congo, which was about half the country's population.²⁸

And as far as malaria, the Europeans didn't just find a continent full of malaria. In some cases, they created the malaria epidemics.

Take Swaziland, for instance. Before the British came, Swazis typically lived at higher altitudes where mosquitos were less common. That's how they kept themselves safe from malaria. But the British forcibly moved Swazi people into the lowlands where they made them farm. This turned malaria from a seasonal annoyance to a nonstop epidemic.²⁹

²⁶ Quinine was the only reliable malaria treatment until synthetic anti-malarials arrived in the late 1940s; it is extracted from cinchona bark, which from the 1870s was increasingly cultivated on Dutch plantations in Java. Java bark exports rose more than twenty-fold between 1880 and 1890, and the resulting glut made processed quinine roughly ten times cheaper ([Goss, "Building the World's Supply of Quinine," Endeavour 2014](#)).

²⁷ The figure derives from Nájera, *Malaria Control: Achievements, Problems and Strategies* (WHO), which reports — quoting Russell's *Man's Mastery of Malaria* (1955) — that quinine cost about \$4 or more per ounce in the US Civil War period and had fallen to about 25 cents by 1913 ([Nájera, p. 19](#)). Those endpoints imply a fall of roughly 94%. While quinine would have been substantially cheaper during the partition of Africa than during the Civil War, one caveat is that the 25 cents number marks the bottom of the decline rather than a mid-nineteenth-century price; and some of that decline therefore postdates the main "Scramble for Africa" (largely complete by c. 1900).

²⁸ "As many as 10 million" is a widely-cited upper-end estimate, associated with Adam Hochschild's *King Leopold's Ghost* and reflected in reference works such as Britannica, which describes the Congo's population as possibly halved (from ~20 million to ~10 million) between 1880 and 1920 ([Britannica, Leopold II](#)). But of course, like all figures, this one is contested: estimates range lower (as just one example, according to the Wikipedia article we are citing here, Ndaywel è Nziem gives 5–10 million) and the early population baseline is uncertain ([Atrocities in the Congo Free State, Wikipedia, summarising the historiography](#)). It is likely that the deaths came overwhelmingly from forced labour, famine and disease (compounded by dislocation).

²⁹ The source for this is Randall Packard's study of colonial Swaziland ([Journal of African History, 1984](#)). The specific claim made is an interpretation of Packard that can be found [here](#), but it's worth

I mean, for me, this is the crazy irony. The Europeans got a cure for malaria—quinine—and then they used that cure to make malaria much, much worse for other people.

End of interlude

And then, in Mexico City, the rich countries were deciding Africa's fate again. So when they asked, "Should Africa be included in the plan?", they were asking whether they should invest money to save the people they'd just conquered and murdered.

A lot of rich countries, like England and America, argued that it would be too difficult to eradicate malaria in Africa. And on this specific point, they weren't completely wrong. Eradicating malaria in Africa would have been difficult. I'll grant you that. Africa was much larger and much more rural than somewhere like the southern US.

But there were also a lot of reasons to believe it was possible: [DDT had already shown really good success in certain African countries like Mauritius](#). Now, Mauritius was an island, which made it easier, but had the same type of mosquitos and a similar topography as other parts of Africa, and DDT spraying had basically eradicated malaria there. And besides, wasn't the whole point of this meeting was to do a difficult thing?

The few African delegates that were in Mexico City tried to fight back. But it didn't matter. When they called a vote on whether Africa should be included, the rich countries overwhelmed the poor countries.³⁰ So when everyone walked out of Mexico City, the entire

providing more nuance here than I could fit into a 20 second map animation. Specifically, that pre-colonial Swazis lived mainly in the mid-altitude "middleveld" (for good soil and defensibility), and colonial-era movement into the lower, more malarial lowveld was driven by land shortage — Europeans took the best land — and later by irrigation schemes, which forced farm labor later took place on those lands, but there were a lot of other causes to resettlement besides forced farming. It's also true that the spike in malaria was also largely due to the poverty that the British exposed Swazis to, which might have been even more of a factor than the change in geography. Colonial land and labour policies left many Swazi families impoverished and malnourished, and that vulnerability turned ordinary seasonal malaria into the lethal epidemics of 1932 and 1946.

³⁰ For the sake of storytelling, I've compressed the story a very gradual and boring process into a single voting scene, but history is of course more complicated than that. For one, all the African countries actually did vote on the final WHA8.30 resolution. The African countries made most of their protests in the lead up to the vote, and the question of tropical Africa was, per Nájera, González-Silva & Alonso (2011) "one of the main objections to the GMEP in the 1955 WHA" ([PLOS Medicine](#)). Most of the pre-vote objections came from Liberian delegate at the Assembly Dr Togba, who raised the concern that "the sum to be allocated to the African Region would not be enough to eradicate malaria from one large town." ([WHO Official Records No. 63, pp. 203](#)). The transcript doesn't tell us how we

world had all the funding they needed to fight malaria. Except for Africa. Africa was left to die.

A lot of people died. Hundreds of thousands of African people died of malaria in the the year after the Mexico City conference, mostly children. The same thing the next year, and the year after that, and the year after that.³¹

But then, the tides started to change.

CHAPTER 4

It started with a sexy young senator named John F. Kennedy.

As a senator, JFK was known as one of the most powerful advocates for poor Americans and poor countries. [He tried raising the minimum wage](#), he tried [getting the French out of Vietnam](#), and in 1958, three years after the [meeting](#) in Mexico City, JFK helped commit [over](#) a hundred million new dollars to the malaria eradication effort, or just over a billion dollars today.

And this new boost of money was one of many [reasons why the US](#) and the World Health Organization were able to start ramping up “pilot” programs in Africa.³² The WHO still officially believed eradication was too hard in Africa, that was still their position. But with this new money, they decided to try spraying DDT in certain places, just a test.

But these “tests” ended up being way more than little experiments. These were at least 24 large, well-organized campaigns in 21 [different African countries](#).³³

went from “African delegates upset about the lack of funding for Africa” to “African delegates voting for the resolution,” but it was clear that the African nations voiced concerns about Africa’s exclusion, and that those concerns were ultimately not addressed.

It’s also worth repeating that the final resolution did not explicitly exclude Africa. So when some later accounts describe the Assembly as having “adopted malaria eradication for all endemic countries except mainland sub-Saharan Africa” ([Lancet, 2019](#)), they are describing a more nuanced process in which Africa was never brought into the active eradication campaigns on the same footing as other regions — a gap that emerged through funding and planning decisions rather than an explicit vote to exclude it.

³¹ Our best source here is Carter & Mendis (2002), whose Table 3 estimates malaria deaths in sub-Saharan Africa at roughly 300,000 in both 1950 and 1970 ([Clinical Microbiology Reviews](#)). Since the figure sits around that level at both ends of the period, I feel confident describing the death toll as in the hundreds of thousands for the year of the conference and the years following.

³² See [page 967 of Graboyes and Alidina 2021](#) for more discussion on the introduction of pilot programs.

³³ The figure comes from [Graboyes and Alidina, "African Studies Keyword: Malaria" \(2021\) p. 967](#), which documents at least 24 official GMEP efforts across at least 21 African countries between 1959

And for the most part, they worked extremely well. Don't get me wrong, there were plenty of difficulties. It could be hard to get sprayers to rural places, there were a thousand implementation issues. But almost everywhere the DDT sprayers showed up, the malaria rates started plummeting.

Zanzibar and Swaziland, for example, got their case counts down to basically zero.³⁴

So by 1960, the world was looking bright. Hundreds of thousands of parents didn't have to bury their children that year. We had proven we could beat malaria.

And then we all lived happily ever after, right? Right?

...Right?

Not everyone was so excited about helping Africa. Especially a guy down in Louisiana, a congressman named Otto Passman. [Passman chaired the house subcommittee on foreign aid. And despite his job title, he hated foreign aid.](#) Now, I'm not saying Otto Passman was a bad guy. I'm not saying that. But he was a hardline segregationist, got successfully sued for sexual discrimination and was later accused of taking bribes from a South Korean businessman. Also he married his secretary right after his wife died. But I'm not saying he was a bad guy.³⁵

Once JFK became president, he cemented his reputation as the pro-Africa politician in US history. He didn't just push through malaria funding, he also started [USAID, launched the peace corps,](#) and now that the French were out of Vietnam [he started pushing for them to get out of Algeria.](#)

But [JFK and Otto constantly fought over foreign aid, and they really came to blows in 1963.](#) JFK proposed a budget that earmarked 4.9 billion dollars for foreign aid. [Importantly to our story, that budget included the funding necessary to renew all the successful malaria programs going on in Africa.](#)

and 1968, drawing on primary WHO records (Executive Board 1958; World Health Assembly proceedings 1966 and 1968).

³⁴ In Zanzibar, the WHO's 1957–1968 campaign cut malaria prevalence from a pre-campaign 52–69% to under 5% — a major control success, though the campaign fell short of fully interrupting transmission ([Graboyes & Meta. Health & Place. 2022](#)). In Swaziland, WHO-supported spraying reduced malaria to the point that it "was no longer perceived as a public health problem" in the 1950s ([Cohen et al., Malaria Journal. 2012](#)). More broadly, Cohen et al.'s systematic review found that DDT campaigns interrupted or sharply reduced transmission across many settings, while also documenting that these gains were frequently reversed when programmes were weakened, most often by funding cuts.

³⁵ This biographical detail about Passman comes from [his Wikipedia page](#).

But even though it wasn't that much money, Otto Passman did [everything he could to stop the bill. And in response, JFK did everything he could to pass it. JFK had his team write letters to 300 newspaper editors. He sent reps to make speeches, TV appearances, and magazine interviews. He got former president Dwight Eisenhower to call congressmen directly to ask them to vote for the bill.](#)

[He even, and this is true, tried to take Otto Passman on a nighttime cruise down the Potomac river to convince him.](#)

But none of it worked. Some congressmen thought aid was frivolous. [Others thought that it was stupid to spend any money in Africa since they weren't at risk of going communist](#)³⁶. In the end, Otto Passman took a [massive bite out of the budget Kennedy asked for](#), and cut more than a third of the foreign aid funding for Africa.³⁷

And then all those "pilots," those shining programs that were actually controlling malaria in Africa, where the WHO was about to actually fulfill its promise...they fell apart.

[First the US pulled millions in funding from the World Health Organization. The pilot programs in Africa started shutting down one by one.](#)

And of course...

[Archival Audio]

Our nation is bereaved. The whole world is poorer because of his loss.

[Justin]

And that became the world in Africa for the next 40 years. Countless people dying of a disease we knew how to prevent.

And that became the world, especially in Africa, for the next forty years. Countless people dying of a disease we knew how to prevent.³⁸

³⁶ "African nations, for instance, "were not in direct physical contact with the [communist] bloc" and thus "[t]heir immediate security ... was not directly militarily threatened." Smaller projects could be justified, but Clay doubted that aid would buy political support." — [David and Holm, 2016](#)

³⁷ Kennedy's initial FY1964 foreign-aid request was \$4.9 billion, later scaled to ~\$4.5 billion after the Clay Committee report; the House cut it far more steeply, ultimately authorising ~\$3.5 billion — a reduction of roughly a third from the original request ([TIME, 1963](#); [State Dept Office of the Historian](#)).

³⁸ The scale implied here is documented by Carter & Mendis (2002), whose Table 3 estimates annual malaria deaths in sub-Saharan Africa at roughly 300,000 in 1950 and 1970, rising to around 787,000 by 1990 and 990,000 by 1997 ([Clinical Microbiology Reviews](#)). Africa's share of the global toll rose over this period — from about a quarter of malaria deaths in 1950 to the large majority by century's end — as the disease was eliminated or controlled elsewhere but remained rampant in Africa. The withdrawal of US support was a key turning point: US contributions, which represented more than 85% of the WHO Malaria Special Account, were stopped in 1963 ([Nájera, González-Silva & Alonso 2011, PLOS Medicine](#)).

And then, and I promise this is the last time I do this, there was some hope on the horizon.

CHAPTER 5

Okay, so George W. Bush. Talk about a duality, right? So on one hand, you have the Iraq War. [500,000 innocent civilians dead. If you trust other people, it's more like a million.](#)³⁹ On the other hand, you have this campaign in Africa.

In 2005, Bush launched the President's Malaria Initiative – the PMI – [this massive program to fight malaria in sub-Saharan Africa. This was on top of PEPFAR, which he launched in 2003 to fight HIV/AIDS. Researchers at Imperial](#) College London estimated that in its first twelve years, PMI saved around 940,000 lives, most of them kids under five.⁴⁰

That's almost a million people. *George W. Bush.*

And for all the republican talk about how ineffective the government is, PMI was insanely efficient. The whole program cost about five billion dollars, which comes out to about five thousand dollars per life saved. [Charity evaluators like GiveWell – whose whole job is figuring out the cheapest ways to save kids' lives – say the world's most cost effective charities can prevent a child from dying for about 4 or 5 thousand dollars.](#)⁴¹ That would make PMI one of the most effective uses of money ever.

Now, why the hell did he do this? Seriously, why did George W. Bush spend so much money trying to save African children? I actually want you to guess. Take three seconds, come up with a guess.

You got one? It's probably wrong. [He read *Roots*.](#) You know *Roots*? If you don't know, it's a book about a young Gambian kid named Kunta

³⁹ Population-based surveys have attempted to attempt to estimate total or excess deaths of Iraqis during the Iraq War. One of the best-regarded of these seems to be a 2013 *PLOS Medicine* study, which estimated around 461,000 excess deaths through mid-2011 ([Casualties of the Iraq War, Wikipedia](#)). This number includes combatants, but I think these are a minority (~20%). The higher “~1 million” figure comes from a 2007 ORB survey, which I should note has received substantial criticism for its methodology: a peer-reviewed critique in *Survey Research Methods* found the ORB data “not credible,” and concluded it substantially overstated the toll ([Spagat & Dougherty 2010](#); see also [Spagat 2024, PLOS One](#)).

⁴⁰ The ~940,000 lives figure is from Winskill et al., *PLOS Medicine* (2017), which modelled that in its first 12 years PMI prevented ~185 million cases and saved ~940,000 lives (95% CrI: 545,000–1.4 million), 77% in under-fives ([PLOS Medicine](#)). The same study reports PMI had allocated over \$5 billion; dividing spend by lives gives roughly \$5,000 per life. A more recent (2026) analysis by Imperial College and the Malaria Atlas Project, covering 2005–2024, estimates ~1.1 million deaths averted at a similar ~\$6,205 per life saved ([CHAI summary](#)).

⁴¹ GiveWell's own range for its top malaria programmes is roughly \$3,000–\$8,000 per death averted depending on location ([GiveWell/CHAI](#); [Mass Distribution of ITNs - GiveWell](#); [SMC - GiveWell](#)). GiveWell estimated that the average grants they made to these programs between 2022 and 2024 saved a life for every \$4,000 (SMC) and \$5,500 (ITNs) ([How We Produce Impact Estimates, GiveWell](#)).

Kinte who's sold into American slavery. They made it into this big TV show, it was a really big deal at one point. But George W. Bush, and this is all according to *his* autobiography, he was so transfixed by the book he went to the Gambia. Then he started surrounding himself with other evangelical Christians who cared about Africa. His chief speechwriter was Michael Gerson, this deeply religious conservative who said this: ["What definition of pro-life does not include saving millions of lives from preventable disease and death?"](#)

You can't make this shit up.

The PMI spent twenty years rolling out all these incredible and life-saving tools

Bed nets, for example.

It's really simple: If you sleep under a net, you can't get bit by a mosquito. If you don't get bit by a mosquito, you can't get malaria. They cost about two dollars each and they can cut a village's malaria rate by about 50%.⁴²

Then there's seasonal malaria chemoprevention. Fancy name, simple idea. You give kids under five an anti-malaria pill during the rainy season when the mosquitos are at their worst. The pill costs about \$6 per kid⁴³ and reduces their chance of dying by 80%.⁴⁴

The PMI also did insecticide spraying, anti-parasitics, and giant investments in basic infrastructure like doctors offices and diagnostic tests.

And these investments worked. They worked under Bush and they kept saving hundreds of thousands of lives long after Bush left office: under Obama, under Biden, and even under the first Trump administration.

But if you're picking up on the pattern here, or if you've been watching the news, you'll know that this didn't last.

⁴² The nets referred to are long-lasting insecticide-treated nets (LLINs). [According to the Against Malaria Foundation](#), the cost of a net is around \$2, while the fully-loaded cost of delivering a net to a household — including distribution, logistics and monitoring — is higher: GiveWell estimates roughly \$6 per net delivered (2022–2024 average) ([GiveWell. AMF cost per net delivered](#)). On effectiveness, the Cochrane systematic review of ITN randomised controlled trials found a “4% reduction in the incidence of severe malaria episodes”; the same review reports a 17% reduction in all-cause child mortality ([Pryce, Richardson & Lengeler 2018. updating Lengeler 2004](#)). So “cut a village's malaria rate by about 50%” reflects the reduction in malaria cases, not in deaths.

⁴³ “It is relatively cheap to reach children with SMC. We estimate that it costs Malaria Consortium approximately \$5 to \$6 per year (depending on the location) to reach a child with all their recommended cycles of SMC.” — [Seasonal Malaria Chemoprevention - GiveWell](#).

⁴⁴ “We estimate that SMC reduces malaria cases among children receiving SMC by 79% during the SMC season. We also estimate a 1:1 ratio between reduced malaria cases and reduced malaria deaths, implying that SMC reduces malaria deaths among children receiving SMC by 79% in the SMC season.” — [Seasonal Malaria Chemoprevention - GiveWell](#)

[Last year Trump paused the PMI completely](#). Then he proposed a new budget that cut the [PMI in half](#). A few weeks ago he signed a new new budget that *seemed* to restore PMI's funding but a lot of people doubt they'll be able to do anything with the money without any USAID staff or infrastructure.⁴⁵

At the same time, [The EU has also majorly pulled back its malaria funding](#).

And at the same time the world is doing less, the problem is getting worse. [Malaria cases are rising for the first time in a decade](#).⁴⁶

And this is for a lot of reasons, like climate change, for example. Mosquitos do better in warmer environments. So as the world is warming, mosquitos are carrying malaria in places like [Nepal](#) that used to be too cold for the disease.

So it seems, from all this research and from everyone I've spoken to, that we're at an inflection point. We can either do nothing and watch this problem get *much much* worse. Or we could do something.

CHAPTER 6

I feel like the same thing always happens when you hear stories like this. At least it does for me. The problem feels so big that I just shut down. Like someone says that a child dies every minute and you go, ok that's, the worst thing I've ever heard, I'm gonna go think about literally anything else now.

But malaria is a special kind of problem: We know exactly how to solve it. A lot of problems aren't like this. Like Alzheimers. We have a few treatments to manage symptoms but all we can really do is keep researching and hope for the best. Malaria isn't like that. We know how to prevent malaria. We know how to treat malaria. We know how to keep kids and pregnant women from dying. We knew how in 1955 and we've only gotten smarter since then.

⁴⁵ This is based on a series of interviews with public health experts in America and Africa. [ThinkGlobalHealth](#) has also done very good reporting on the recent funding spats.

⁴⁶ According to data [from the WHO via Our World in Data](#), the rate of malaria cases per 1,000 people at risk declined or remained roughly stable between 2000 and 2019. However, since then cases have risen from 58 cases per 1,000 people at risk to 64 per 1,000 people at risk.

Here's another way malaria is special: By a lot of calculations, spending money on malaria is one of, if not, *the* most cost-effective way to save a human life.⁴⁷

But say you wanted to solve the whole problem, right? I mean, there's something really sexy about eradicating an entire disease. That's the last piece of good news.

Leading malaria authorities agree that with enough money, it's possible to completely eradicate the disease.⁴⁸

I'll end with a confession. This research process wasn't my first time hearing about malaria. Well before I'd ever heard of this meeting in Mexico, before I ever thought about making a youtube channel, I'd been a little obsessed with the malaria issue. It just always seemed crazy to me that a kid could die of some arcane disease just because he was born in the wrong place.

You know, when I was 16 I was working the front desk at a massage parlor. I was making minimum wage and I shit you not I was donating 10% of that money to buy malaria nets.

So I guess, um, I'll end with an invitation. I worked with a nonprofit called Giving What We Can to make a very simple webpage. Uh, it has exactly two things on it. First, it has a bunch of cool links to read more about malaria, and also to fact-check literally everything that I have said. And second, it includes a list of the most cost-effective charities evaluated by places like GiveWell, where you could contribute to ending this thing.

First, it has a bunch of cool links to read more about malaria and fact check literally everything I've said.

And second, it includes the most-effective charities where you could contribute to ending this thing.

Because most of the time problems are too big or too complicated or too far away for normal people to do anything about. But this one isn't. This one is just sitting there, waiting for enough people to give a shit.

Thank you for watching

⁴⁷ All discussions of cost-effectiveness come from GiveWell (see [here](#)).

⁴⁸ Experts agree malaria is biologically eradicable and a goal worth pursuing. For completeness, we should note that they're divided on the short-term feasibility. For example, the Lancet Commission on Malaria Eradication (2019) argued eradication by 2050 is 'bold but attainable,' while other experts think eradication will take longer and have advised against targetting a specific deadline. ([Lancet Commission / IHME](#)).