HISTORY AND TECHNOLOGY, 2015
VOL. 31, NO. 3, 295–323
http://dx.doi.org/10.1080/07341512.2015.1129205

Routledge
Taylor & Francis Group

Guerrilla healthcare innovation: creative resilience in Zimbabwe's *chimurenga*, 1971–1980

Clapperton Chakanetsa Mavhunga

MIT and Center for Indian Studies, University of the Witwatersrand, Johannesburg, South Africa

ABSTRACT

Drawing from the last five years of *chimurenga*, Zimbabwe's war of self-liberation from the early 1960s to 1980s, this paper shows that the most important aspect of technology and innovation in Africa is not the technology and innovation itself, but the African spirit of creative resilience born of the specificities of struggles its people have endured. By creative resilience is meant a phenomenon whereby, *even where death is the outcome, and where the situation is insurmountable, people do not just surrender to fate, but die fighting*. As a site of creative resilience, *chimurenga* is the ultimate site of creative labor and a vast laboratory, not simply a destination for incoming technologies, or a 'user' space but generative of its own insurgent and counter-insurgent innovations. Focusing on the communal war effort involving guerrillas and ordinary Africans in the rear bases of Mozambique and Zambia and on the front inside Zimbabwe, the paper makes its argument through a focus on healthcare innovation.

KEYWORDS

Chimurenga; creative resilience; guerrilla healthcare; spirit mediums; bush doctors; medevac

From 1975 to the end of 1979, Zimbabweans were engaged in *chimurenga*, the war of national self-liberation against the colonial settler state of Rhodesia. An estimated 25,000 people died in this conflict, which resulted in independence on 18 April 1980.

Struggles against colonial rule like *chimurenga* are potentially inspirational. In Zimbabwe, however, the struggle for independence has become merely a tool of propaganda that the ruling political class uses to justify their right to govern even against the people's will. This is despite that everybody (other than the Rhodesian regime and its supporters) fought to liberate themselves and the country. It was a communal effort.

The crisis of *chimurenga* constitutes a failure of narrative to capture and account for the amazing bravery and innovations of all those who took part in it and forced a recalcitrant colonial regime that had sworn there would be no majority 'in a thousand years' to sue for peace. The monopoly of *chimurenga* by a few has robbed Zimbabwe of a nostalgic rallying point that could be mobilized to inspire the nation to deal with its postwar challenges. *Chimurenga* was a time when people eked out survival in spite of the government. They also had to survive the government that had turned against them and become the enemy.

CONTACT Clapperton Chakanetsa Mavhunga mavhunga@mit.edu

The chimurenga spirit could be summoned in times of crisis, when the nation desperately needs a spirit of creative resilience in the face of insurmountable hardship. At the moment it is summoned to label everyone who disagrees with the ruling political elites as puppets of the West and traitors. The burden of *chimurenga* lies in its association with the worst characteristics of the post-independence nationalists who monopolize it.

How then does one rescue *chimurenga* from elite discourse and a discredited brand of African nationalism? The first task is to restore to the narrative the specific creativities and sacrifices of two foot soldiers of *chimurenga* who fought side by side: the guerrillas and the ordinary people. Today they are peripheral to the struggle, while the politicians who were living in the comparative safety of Maputo (Mozambique) and Lusaka (Zambia) monopolize its benefits. That is not to trivialize their political leadership; rather, it is to remind them that *chimurenga* was a collective, communal struggle and its primary theater was in the bush, not the street.

Told from the guerrilla and ordinary people's experience, *chimurenga* becomes a story of innovation under conditions of extreme hardship. It shows that, *even where death is the outcome, and where the situation is insurmountable, people do not just surrender to fate, but die fighting*. It allows us to go beyond the dead bodies, mourning the victims, and feeling outraged about the killers, towards the innovation of survival that sometimes ends in defeat, most often in triumph over adversity. This *spirit of creative resilience*, the refusal to surrender and the creative work that goes into it, is perhaps Africa's most important resource, but remains subdued because analysis ends with the victim. *Creative resilience* pays tribute to the intellection and sacrifice that went into struggling for independence against seemingly insurmountable odds. It involved not only the political leadership or the guerrillas with guns, but also the ordinary people often caught between and victimized by both sides. *Chimurenga* is the ultimate site of creative labor, a vast laboratory.

Very few accounts of the war focus on innovation; where they do, the focus is on the Rhodesians, reinforcing a reduction of innovation to white, to technology, and to commercializable products.[1] A significant literature deals with Rhodesia's use of chemical and biological weapons, with Africans as victims.[2] In 1975 the Rhodesian Army's G Branch produced a *Soldier's Handbook of Shona Customs*, which it distributed to the units. It basically packaged local African culture into an operational strategy against the guerrillas. A decade after the war, the US Army commissioned the RAND Corporation to undertake a study into the valuable lessons to be learned from the Rhodesian counterinsurgency experience, many of whose aspects were based on the handbook.[3] Meanwhile, ex-Rhodesian military personnel and their biographers began publishing about their wartime technological innovations, including the retrofitting of light-skinned vehicles into landmine-proof troop carrier vehicles like the creepy 'Pookie.'[4] In 1994 Australia's Department of Defence began plans to refurbish its fleet of armored vehicles. It subsequently commissioned a study of Rhodesian innovations in the protection of light-skinned vehicles against landmines.[5] It is hard to imagine that the US counterinsurgency strategy since the 1990s and Australia's turn to the Bushmaster Protected Mobility Vehicle post-2000 did not benefit from these lessons.[6]

The Zimbabwe war theater of 1975–1979 was not simply a destination where incoming technologies were used just as the manufacturer's manual said, but also a source of technological innovation for countries traditionally considered its sources. The war suggests that insurgencies are not just a security challenge. They are generative of counterinsurgency and counter-asymmetric warfare innovations that the hegemonic countries (in NATO, Russia,

and China) cannot generate at home. I entirely agree with Helen Tilley's portrait of Africa as *a living laboratory* to the degree that it constitutes a space fecund with experimentation. For her, the experimenter is the European or imperial scientist and the subject is 'how modern science is being applied to African problems.'[7] For me, the experimenter is the African guerrilla and ordinary person not only concerned with applying incoming resources to local problems, but innovating independence from oppression by integrating targeted resources from outside into endogenously generated ones.

Thanks to a cross-section of Zimbabweans alarmed at attempts by a small minority of politicians to monopolize and distort *chimurenga*, who are writing about their struggle experiences, this story of creative resilience can now be told from the rural countryside and the guerrilla bases. We can no longer believe the fable that certain ruling party (ZANU-PF) politicians and senior commanders fought while everybody else just 'sat there!'[8] The evidence permits us to tell the stories of guerrilla foot soldiers and villagers creatively engaged in struggle, thus challenging the Rhodesian portrait of them as 'terrorists' and victims of terror respectively.[9] Which is not to say guerrilla-villager collaborations were always peaceful[10]; whatever they were a result of, the objective here is to analyze such collaborations as processes of innovation. Inter alia, *chimurenga* shows how local actors weave disparate locals across the world into sources of resources that, upon arrival, they strategically and industriously deploy to operationalize their own dreams and yearnings into reality.

'Guerrilla healthcare innovation' is thus an example of the war theater (*chimurenga*) as a laboratory. Practices conventionally done on the bench inside rooms in universities and cities are located in the middle of the forest, on the move, in caves, and other unlikely places. So what becomes of practice when it is unmoored from its conventionalized, formalized spaces into the forests, in the midst of a raging, highly mobile guerrilla war? Among other things, it means that the operating philosophy, procedures, and even instruments change, as discussed in the next section. Whatever Africans learn about medicine abroad becomes in the field mere ingredients in the construction of an integrated healthcare system contingent to the war being fought. This conversation continues in the next two sections. The penultimate section solidifies around a theme already strongly hinted in the preceding ones: the role of ordinary people not only as victims caught between two sides, but active combatants without guns and fellow innovators alongside guerrillas, engaged in their own self-liberation. The essay ends with reflections on the implications of telling stories of innovation from such open laboratories.

Chimurenga as medicine: the bigger picture

Chimurenga must be viewed as bitter medicine that Africans resorted to after the failure of decolonization (peaceful handover of power from white settlers). It was an acknowledgment of the failure of top-down solutions to an African problem and the recourse to self-liberation or self-cure.

The dilemma was whether the colonial settler could simply give up the advantage assured through racist oppression that had enabled his prosperity since 1890. That was the year when the British South Africa Company, armed with a royal charter, occupied the lands between the Zambezi and the Limpopo Rivers. The 'Shona' and Ndebele inhabitants rose in rebellion in 1896–1897 to reclaim their lands, without success.[11] Their leaders were captured, many beheaded, and some had their heads sent to Britain as evidence of capitulation. Africans

were violently removed to overcrowded, infertile, and disease-infested lands called 'native reserves.' The settler administration now imposed a slew of taxes that forced Africans to have to work for a pittance on the white settler farms, mines, factories, and emerging suburbia. If they did not, they were arrested and turned into convict labor anyway. Or the settlers simply raided entire villages and force-marched them to their properties to work for nothing.[12] The entire road, rail, urban, mine, and agricultural infrastructure of the colonial period was built using poorly paid, conscript, or convict labor. This is how Africans subsidized colonial settler prosperity, became the tools of empire, and built Europe.

In deciding to *grant* independence to its colonies in 1960, the British government overestimated its power over these settlers, who had forged a racist Rhodesian citizenship and nationality. They had no intention to leave or to free Africans because their entire enterprise could not sustain itself without Africans subsidizing it through miserly paid and forced labor. In contrast to other parts of Africa where Europe had direct control over its colonies, technically Rhodesian settlers had been self-governing since 1923. Through vigorous promotion of white immigration they had steadily built a significant white population, relatively wealthy, and in love with the climate. The infrastructure – cities, roads, rail, electricity – were all designed with permanent residency and citizenship in mind, not temporary or occasional stay.

Things deteriorated rather rapidly from 1960. All peaceful means of achieving independence had been dashed. One African political party after another was banned as soon as it was formed. Then in 1965, the settlers declared unilateral independence from Britain as a white-ruled state. Africans had had enough. From 1961 onwards, first Zimbabwe African People's Union (ZAPU) and then Zimbabwe African National Union (ZANU) started sending their young cadres for military training overseas and in newly independent Ghana, Algeria, Egypt, and Tanzania. They returned to set up training bases in Tanzania, later Angola, Zambia, and Mozambique. Reconnaissance and skirmishes followed. By 1971 two guerrilla armies had emerged to lead the self-liberation war. The Zimbabwe People's Revolutionary Army (ZPRA), the armed wing of ZAPU, was based in Zambia, had training bases in Angola, and mobilized military training and logistics from the Soviet Union, East Germany, Yugoslavia, Cuba, and Iraq. The Zimbabwe African National Liberation Army (ZANLA), the military arm of ZANU, operated initially from Zambia, then Mozambique, with training bases in Tanzania, and military support from China, North Korea, Romania, and Yugoslavia.

Chimurenga was a self-curing process with emphasis on the restoration of pride in cultural and spiritual identity. This connection between the struggle for freedom and African cultural values can be traced back to the 1950s-early 1960s when the nationalists adopted Zimbabwe as the name for Rhodesia. All that was left was to fight for its liberation. Having found that their top-down, learned jargon had failed, the mission-educated, urban elites went back vigorously to their roots. They reclaimed their leopard skin hats, shrines, drums, and ancestral spirits, their own *Mwari* (god), and their rituals, which the missionaries cast as symbols of the devil and the colonial settlers saw as dying remnants of the primitive tribesmen. Their spiritually anchored culture now became a weapon or medicine against the disease of *chirungu* or *svexilungwini* (the white man's corrupting ways). Without this self-cure, which was also an epistemic and ontological return, the gun and the syringes would never accomplish their assigned role of arming the comrade (as the guerrilla was called) and repairing his sick and injured body. Thus while various scholars have covered the intersection between nationalism, guerrilla war, and faith,[13] I am concerned with that

convergence as an example of building on local, grassroots-invented idioms and integrating incoming resources to plug deficiencies.

At the level of personnel, guerrilla healthcare was an integrated system of indigenous and allopathic human resources – the spirits, spirit mediums, *n'anga*, physicians, medics, and ordinary people. It reflects the tendency of Africans, locating themselves strategically and deliberately at the intersections of endogenous and incoming therapeutic systems, to exercise pragmatic choice, not limiting themselves to one or other, or just seeking the best in both, but integrating them into one. Whether one goes to a *n'anga* or a hospital or both, the balance of spiritual forces governing the body and soul must be in equilibrium before seeking therapy. Hence people consult the ancestors (and with Christian encroachment, the prophet, pastor, or simply prayer) before taking the patient to seek treatment.[14]

ZAPU healthcare in Zambia

For clarity, the two principal geographic arenas, the 'rear' (operational and refugee bases in neighboring countries) and the 'front' (the war theater inside Zimbabwe), will be explored separately for the remainder of the essay. In this section, the discussion focuses on ZAPU/ZIPRA and ZANU/ZANLA healthcare infrastructure in Zambia and Mozambique respectively before turning to the front. The discussion covers 1975–1980 only. All sites referred to in the rest of the essay are indicated in the map below (Figure 1).

ZAPU's politicians were headquartered in Lusaka, while ZPRA's command element and troops were based at the main army camps at Mulungushi (CGT 1–4), Solwezi, and Maheva. The forward bases into Zimbabwe were located in the Zambezi valley, with one entry into Zimbabwe via Kariba and Chirundu, the other between Kazungula and Batoka. Nampundwe was a transit camp for recruits coming from Zimbabwe and South Africa via Botswana. Everybody underwent a medical exam at Nampundwe to determine their suitability for military training or their needs if going to refugee camps and school. The tests covered visual, heart, respiratory, and other conditions. Sometimes thoroughness was deemed secondary to clearing the place and moving people out quickly to avoid bunching up and becoming easy targets for Rhodesian airstrikes.[15] After being processed (interrogated and medically checked), they were transported to Freedom Camp, Victory Camp, and Mkushi Camps (refugee camps for boys, girls, women respectively), or for training initially at Morogoro in Tanzania (prior to 1976), then later in Angola (1976 and after). Other children were accommodated at JZ, Works, and Makeni camps.

'We started small,' recalls Benjamin Dube, the deputy head of the movement's health department. Initially ZAPU had only a 'medical assistant,' Jabulani Ncube, who ran ZAPU's first two camps, Nkomo and Luthuli, from the party's headquarters at Zimbabwe House, Lusaka. During training, the recruits were also taught basic first aid, hygiene, and other essentials. Meanwhile, ZAPU had farmed out some recruits to different countries (including Zambia) to train as medical assistants, nurses, laboratory technicians, and physicians. Also from 1977 as the war intensified, more secondary school students were coming into Nampundwe via Botswana and as the bombings intensified, recruits increased in tandem with injuries, hence the need for more medical personnel.[16]

The combination of increased health personnel and necessity for healthcare had significant infrastructural implications. Prior to 1979, ZAPU had no field hospitals, and relied entirely on Zambian facilities. Dube explains:

Figure 1. The 'rear' and 'front' of *chimurenga*, including covering Mozambican and Zambian guerrilla and refugee camps, 1976–1979. Source: Author.

> We had a very good working relationship with the University Teaching Hospital, Zambia, Lusaka. We also had a very good cooperation with the hospitals [in] Kabwe where our cadres were nursing; we used to get them admitted there. We had a good working relationship with the hospitals at Solwezi. When we were bombed [in 1978], I think over 100 of our chaps at one time they filled that hospital. And also in the Copperbelt, that is Kitwe and Ndola.[17]

By 1979 ZAPU had two field hospitals, one at Victory Camp, the other at Solwezi, with a combined capacity of 250 beds. Dube says of the latter field hospital:

> We had a big field hospital there [VC] which had everything, as you can even see, with microscopes and all those things. Things were expanding. We were even in the process of establishing an x-ray sort of unit. In the big camps in Solwezi, we had a big field hospital which was donated by the Swedes. It had almost everything you can think of. It was a field hospital … with operating theatres … the laboratory was at Victory Camp. It was through the assistance of a German couple. The husband was a doctor; the wife was a laboratory technician. And she's the one who assisted us to train … to do in-house training for the girls who were there.[18]

The laboratory was used to test mostly malaria, pregnancies, stools, blood, and so on. The medicines were donated 'from all over the world,' as were the equipment, testing materials, and supplies like cotton wool.[19]

The Swedish Air Force had delivered the mobile field hospital to ZAPU to alleviate the dire medical situation in the wake of the devastating Rhodesian aerial attack in 1978. John Landa Nkomo, a high-ranking ZAPU official and later Vice-President of Zimbabwe,

'received that hospital at the Lusaka International Airport, with the jeeps and so on.' Later on this fully equipped mobile hospital was moved to Solwezi 'because life had become very difficult there with malaria.' ZAPU took it with them to Zimbabwe after independence, while some of its equipment was donated to the Zambian government.[20]

ZAPU/ZPRA's physicians were based in Zambia, moving between the party headquarters in Lusaka, the guerrilla bases, and the refugee camps. Gordon Bango (Figure 2) headed the organization's department of health, with Benjamin Dube, trained in the German Democratic Republic (GDR), deputizing him from 1978. Bango trained as a medical doctor in Hungary before becoming a resident doctor in Scotland.[21] He was part of a scholarship scheme that Joshua Nkomo, leader of ZAPU and ZANU's precursor the NDP (National Democratic Party), had secured during his visit to the Soviet Union in 1959. The students would be sent for university studies in strategic areas in Yugoslavia, the GDR, the Soviet Union, Czechoslovakia, and Hungary. Besides Bango, beneficiaries included Sydney Sekeramayi (later ZANU) and Stanley Urayayi Sakupwanya, who both specialized in medicine.[22]

The most detailed account of ZAPU/ZPRA healthcare comes from Dube himself. Initially he was assigned to look after the refugees at Victory Camp, before being seconded to all

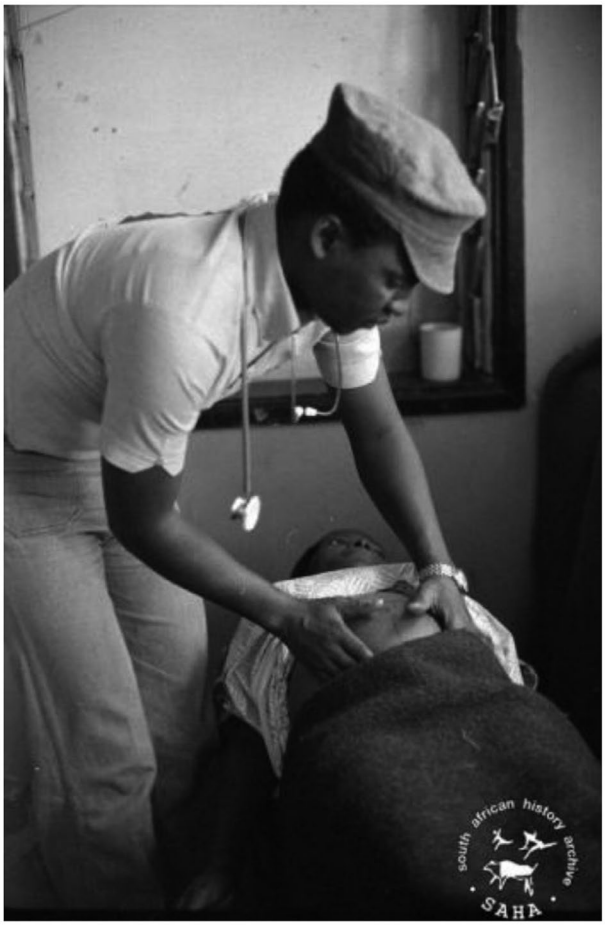

Figure 2. Dr Bango busy at work at Victory Camp. Source: The South African History Archive.

of ZPRA's military bases. Diseases like scabies, tuberculosis, diarrhea, and malaria were a problem. Water shortage, poor hygiene, and malnutrition made them worse. At Freedom Camp, the malnutrition problem was one of 'some mischief from the logistics people,' Dube explains. 'You would find that more food would go to female colleagues than to male colleagues yet the male colleagues outnumbered female colleagues.'[23] Tuberculosis was also a serious problem in the military camps, brought by comrades returning from military training abroad, especially in Libya. There was no water at Victory Camp; it was carted in a bowser. Only later as classrooms and hostels were increased was a borehole sunk. Whether it was water, food, or medical checks, each group of girls, boys, and soldiers was organized in sections, each with its own commander. Instructions and standards were easy to issue and maintain because it was a hierarchical system.[24]

Then there were the injuries from airstrikes. 'You would get people … hit with fragments everywhere and some with mutilated limbs.'[25] The worst nightmare, Dube says, was napalm. The regime's engineers had developed a home-brewed version of napalm called frantan – 'gelatinized gasoline carried in large drum-like containers [dropped from light aircraft] that detonated the moment they hit the ground, showering everything and everybody within a fifty-yard radius with adhesive globules of burning petrol.'[26] Dube's own medical assistant was one of the casualties of napalm bombing. As a doctor, he draws a sharp distinction between burns from napalm and the injuries comrades brought from the front – gunshot wounds, bullets, sometimes fractures, and soft-tissue injuries. The medics in each unit could patch these up and get serious cases medevaced (medical evacuation) to the rear.[27]

In the wake of the Rhodesian attacks, each resident of Victory Camp was mandated to dig her own pit to shelter so that:

> when [the Rhodesians] throw napalm on us, we could be safe, because the pit was such that you dig downwards and then to sideways, so that [the opening] is just an entrance, we would be behind [the cover when the napalm was discharged].[28]

This was obviously an outcome of research and careful engineering planning, indicating the factor of war as teacher, and guerrilla organizations as innovative and adaptive. Like in ZANLA, the inmates of camps went through training to sensitize them of the napalm threat and anti-napalm procedures.

For girls, being in Victory Camp presented two problems. One was the monthly period. Regina Ndlovu explains the predicament of a teenage girl having a monthly period, who did not have enough cotton wool, and was expected to go for *toyi-toyi* (military exercises) at 4 am. In those instances one had to get panties from friends, wear several of them. It was not a valid excuse to say 'I have a period therefore I can't go for exercises.' 'What would you do if you [were] in the bush and the enemy was following you behind?' Ndlovu asks. 'Would you say, today I am menstruating, I will not shoot?'[29] The second was teenage pregnancies, 'a big problem' according to Dube. Being a traditionalist, Nkomo was strongly opposed to contraception. It says a lot that logistics personnel was sending more food to the girls camp and far less to the boys camp despite the former being far fewer. This food for sex problem pushed the physician to write 'a nasty report' to ZPRA intelligence chief Dumiso Dabengwa.[30] Dube says the issue was quickly solved, but the problem of 'chefs' (superiors) abusing their positions is not unique to ZPRA; ZANLA too had its problems.[31]

The scale of the Rhodesian bombardment on 19 October 1978 left not only dead but also injured and ultimately disabled bodies. Up until then, ZAPU had no facilities of its own dedicated to care of its disabled. For straightforward amputations and other war injuries, the

party relied on the University Teaching Hospital at the University of Zambia. The evidence comes from Zakhele Ndebele's gripping account of injuries sustained during Rhodesia's attack on Freedom Camp, codenamed 'Green Leader.' Already hit by shrapnel on the arm, he ran for cover, only for his foot to be shattered by a bomb.

> So when I tried to stand up my foot was already shot. I stepped on my foot and I felt as if I'm falling into a pit, but it wasn't really a pit; in fact my leg was shattered so the bones came out a bit.

He blacked out momentarily. The pain jerked him awake. Ndebele started crawling, towards safety, as the Rhodesian planes pounded above. When they were gone, somebody pulled him out of the trench he had holed into.

After the fog of bombs and gunfire had lifted, Ndebele and four others were taken to University Teaching Hospital. Four or five wards were full of ZPRA. Not one Zambian. That was in October. He was hospitalized until December; in between, his leg was amputated above the knee. December passed. January. Although he says he had recovered mentally, Ndebele 'no longer wanted to dress…. My arm could not move upward well, so when they were trying to dress me I was feeling pain, I was saying "No, leave me like this"'. He was discharged that January, but ZAPU was determined to ensure his full recovery. A group of them were flown to Czechoslovakia for treatment. The Czechs fitted him with an artificial leg, but unbeknown to him, Ndebele was also carrying shrapnel in his ear. He got it removed, only for the doctor to find another lodged in his throat; he carries it to this day.[32]

When the group returned from Czechoslovakia in 1979, they were taken first to Makeni and then to a camp for the disabled. The camp, says Dube, was located in Solwezi. Naison Ndlovu was in charge of this rehab center, working under Stephen Nkomo, who headed the Social Welfare Department along with Thenjiwe Lesabe.[33] As a teacher and counselor, Ndebele received comrades coming from the front with serious injuries. Some recovered and went back to the battlefield. Others did not and were accommodated until the end of the war. Those cadres who suffered from mental illness – Dube concedes 'depression' was a serious problem – were admitted in Zambian government institutions for treatment.[34]

ZANLA healthcare in Mozambique

Situated some fifteen miles north of Chimoio town was a complex of twelve ZANLA camps called Chimoio, in the Mozambican province of Manica. Two of them are important for this essay: Parirenyatwa, ZANLA's hospital, and Percy Ntini, its rehabilitation center.[35] The third site discussed here, Chibabava, was the scene of devastation by jigger flea.

Named after Zimbabwe's first African physician and nationalist Simon Tichafa Parirenyatwa, Parirenyatwa Hospital was a 100-bed hospital at the time of the Chimoio bombing in November 1977. It was ZANLA's major health facility for handling injuries and conditions except critical cases, which were referred and transported to the Mozambican government hospitals at Chimoio, Gondola, and Beira.[36] The admission wards were a barrack structure made of wood and grass. The living quarters for hospital staff were round huts made of similar material – the traditional style for constructing housing structures in Zimbabwe. Parirenyatwa had at least one mobile operating theater on wheels and three ambulances.[37] It also had three theaters stationed outside the camp complex in tents in an area commonly called *kukavha* (at the cover).[38] As a security precaution, injured guerrillas were taken to *kukavha* during the day and brought back into the ward at night until they recovered because the wards were in the open and susceptible to aerial bombing.[39]

Herbert Ushewokunze, Sydney Sekeramayi, Felix Muchemwa, and James Chideme Muvhuti were among the physicians to join ZANU in the Mozambican rear bases in 1977. Sekeramayi trained first in genetics in Czechoslovakia and then medicine at the University of Lund, Sweden.[40] Ushewokunze had attended University of Natal, South Africa. Muvhuti had a medical degree from Sofia University in Bulgaria, while Muchemwa was coming from Birmingham Medical School, UK. Sekeramayi was charged with monitoring all bases for standards and compliance,[41] Ushewokunze was assigned the task of sourcing medical supplies from Europe and North America, and Muchemwa was appointed the chief medical officer of Parirenyatwa. Little is known of Muvhuti thus far from the available archives. The main duty of all four doctors was to serve the guerrillas and refugees and to provide direction to ZANLA's medical corps, dynamic and responsive to the rapidly unfolding situation at the rear and the front. All four were civilians when they joined the struggle; they underwent basic military afterward (Figure 3).[42]

As head of ZANLA's health department, Herbert Ushewokunze did not rely on allopathic medicines alone. On the contrary, one of his assistants at Parirenyatwa was a herbalist named George Muchemeyi, who was killed during the Chimoio bombing on 23 November 1977.[43] To be clear, these herbalists were usually spirit mediums and healers whose task went far beyond treating the body to preventing the causes of injury or affliction. Said Tendai Zvichapera, who survived the Rhodesian raid: 'A number of *zvapungu* (bateleur eagles) prevented enemy warplanes ('birds') from bombing Chimoio armoury in 1977…. On the battle fronts, combatants got war ethos and chaplaincy from *mhondoro*.'[44] Adds former ZANLA political Commissar Wilfred Mhanda (*chimurenga* name Dzinashe Machingura):

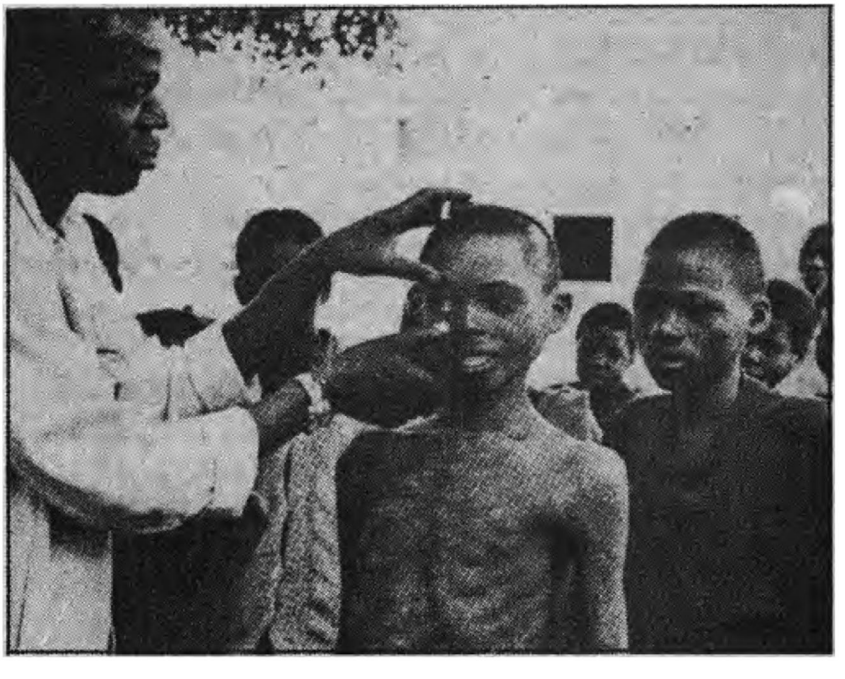

Figure 3. One of the medical doctors (who looks like Dr Ushewokunze) busy at work at Parirenyatwa. Source: *Zimbabwe not Rhodesia*.

'I had personally worked with very senior spirit mediums from 1975 … in Zambia … and enjoyed their full respect. We had fighters in our camps … who were also spirit mediums.'[45] ZANLA's operational headquarters at Chimoio was named after Nehanda, the great spirit of the 1896–1897 *chimurenga*, to whom the anthem 'Nehanda Dzika Mudzimu' (Nehanda descend your spirit) was dedicated.[46]

Like ZPRA, ZANLA trained its own medical corps. At the end of the six-month basic military training of recruits, candidates that had excelled in first aid exercises were selected for medic training.[47] The syllabus covered the treatment or containment of gunshot and shrapnel-inflicted wounds, and diseases associated with crowded conditions and common to villagers in the Zimbabwean countryside.[48] It was standard practice to recall personnel from the front (at all ranks) for advanced medical training in Eastern Europe. This was particularly so in the last two years of the war as it became essential to acquire capabilities to roll out a public healthcare system from Zambian and Mozambican rear bases into the newly liberated zones on the borderlands.[49]

The medical corps was represented at all levels of command: the section, platoon, detachment, sector, the General Staff, High Command, and in the Revolutionary Council and ZANU. At every level there was a commander (in overall charge of operations), a commissar (political reorientation of the rural population), a quartermaster (logistics), and a medic (all health matters).[50] A detachment medical officer was in charge of about 500 medical details distributed to various sectors, battalions, and platoons.[51] In a platoon, each medic moved with his AK-47 rifle, a bandolier or magazines, and a first aid kit for his troop. He answered to the platoon commander.[52]

The medics at the front were usually recalled to the rear for refresher courses after serving one or two deployments. Their stints in the field enabled them to contribute their practical experience to the organization's training. They brought back important empirical evidence on what was new, what was working, what was going wrong, and what needed to be changed and how. Thus ZANLA met the Rhodesian use of weapons of mass destruction with a three-month training conducted in Maputo aimed at managing the effects of napalm, toxic chemicals, anthrax, and cholera.

Versatility was required of medics because situations changed suddenly in war. Look no further than Texen Chidhakwa, who one day found himself undertaking a vey delicate surgery after his boss, Sekeramayi, was summoned to Nehanda by ZANLA commander Josiah Magama Tongogara. All along he had been assisting the physician as he operated on a guerrilla who had a piece of shrapnel lodged in one of his testicles. 'You get hold of the testicle,' the quietly spoken doctor told his medic.

> You put pressure over the foreign body, don't tamper with the inside tissues, cut a good opening, get hold of the foreign body, manoeuvre it out slowly, don't disturb the surrounding tissues, scoop the debris surrounding the foreign body, clean it up with anti-septic and then finish the operation as we always do.[53]

'We learnt on the job,' Chidhakwa would say three decades after independence. 'I was confident that I would succeed and indeed it was successful. That guerrilla is still alive today. That's when I got the nickname, *the Bush Doctor*'.[54]

***

'To this day we live with men, women, children with all four limbs gone, two gone, one gone. Some people are just vegetating,'[55] said Herbert Ushewokunze in his appeal for medical aid in

Durham, North Carolina in 1977. He told his American audience of people who could not be operated on because shrapnel, bullets, and other foreign bodies were lodged in very delicate areas of their bodies. If they were operated on, they could die.[56] All such comrades with serious physical and mental disabilities were accommodated at Percy Ntini Rehabilitation Centre (named after the ZANU nationalist) and at Mupata Wegwenya near Katandika.[57]

Recalls Texen Chidhakwa: 'Percy Ntini was a special area where physically fit combatants were not allowed to visit because you could see comrades without limbs and … with severe injuries from the war.'[58] The leadership feared that seeing their debilitated colleagues in such a state might demoralize the guerrillas to the detriment of the struggle.[59] Depression during the war was so serious that some guerrillas deliberately requested to go to the war front as a way of committing suicide.[60] Especially as the war escalated, the demands of Percy Ntini for medical supplies like prosthetics and wheelchairs also increased to crisis level.

While many comrades were injured inside Zimbabwe in combat, some at Percy Ntini were casualties of the massive bombing raids at Nyadzonia (9 August 1976) and Chimoio (23 November 1977). Increasingly, Rhodesia was using frantan-packed cluster bombs. Again Ushewokunze at Durham describing the devastating aftermath of the Rhodesian attack on Parirenyatwa Hospital:

> One of our biggest medical centers was at Chimoio, a hundred-bed hospital. In it 25 were incinerated, including 15 nurses who were trying to evacuate patients. Our whole health transport system was disrupted, the self-reliance trucks and cars sent to us by support committees, the only mobile clinic we had. Our operating theater-on-wheels, which was on its way to a nearby town and carrying big red crosses on it, with eight patients inside, was bombed by the enemy. The eight patients died plus three nurses who were accompanying them. All our libraries, both medical and educational, were completely destroyed.[61]

Anybody who inhaled the napalm fumes bled heavily from the nose and mouth. Few survived.[62] The Rhodesians usually started the bombing upwind so that the wind drift carried the napalm fumes towards the target to induce sleep and asphyxiation. The guerrillas thus became too weak to return fire or flee. Some were found with the whole body charred, the breathing nose the only sign of life.[63] A guerrilla base became 'a burning furnace' within minutes,[64] napalm cooking life out of human bodies, slowly and painfully sucking the life out of them.[65] Ushewokunze showed his Durham audience another picture from Chimoio:

> This is wood covered by napalm porridge! Imagine somebody dipping his arm in a jar of sulfuric acid – the pain, the agony, the disintegration of tissue, the death. If that porridge lands on you and you try to wipe it away, you're in trouble – your hand falls off, gets eaten away.[66]

Anthrax and cholera were also introduced just upstream of and directly on rivers than supplying camps.[67] At the onset of the first rains (October–November) the chemicals dissolved into and contaminated runoff and ground water, the soil, plants, and the entire food chain, with deadly consequences.[68] No wonder why strange diseases began to occur. At Chibabava, ZANLA's refugee or holding camp in the Gaza province of southern Mozambique, there was 'the hurricane.' A person with this illness suffered 'weakness of the knee joints and moved like a chameleon – take a step forward, hesitate midway before completing the step.' It had no known cure and left no scars (Figure 4).[69]

Chibabava was notorious for another reason: jigger flea. The insect had arrived from Brazil on Portuguese ships in the 1870s. The inmates called them *zvitekenya* or *zvimatekenye* (painful ticklers). ZANLA military instructor Agrippah Mutambara (aka Dragon Patiripakashata) lived at Chibabava in 1975:

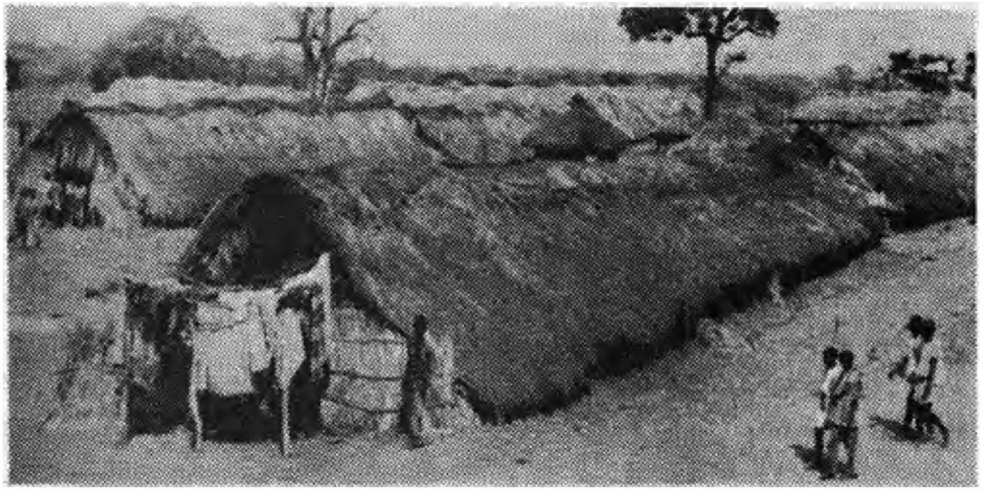

Figure 4. Chibabava Camp in 1979. Source: *Zimbabwe Not Rhodesia*.

> The females of these tiny wingless insects burrow into the skin, causing painful sores. The usual entry point … is the area between the toenails or fingernails and the soft skin beneath…. To take them out soon after entry using a pin causes a lot of pain. Some comrades advised that it was better to leave them in one's skin and wait for them to come of their own volition. Heeding such advice was the most terrible blunder one could ever make. Inside one's foot or finger the jigger flea would create a sacksful of eggs that would hatch into tiny fleas. When hatched, twenty or more young ones would seek freedom by leaving their birthplace and coming out of the skin, but only to burrow their way back into the foot or fingers independently and in many different places. Many comrades lost their toes and were permanently maimed because of these jigger fleas. These tiny creatures thrive and multiply in sandy and dirty conditions and the effective way to curb their multiplication was to keep the floors of the barracks and the surrounding ground wet. For many comrades, that lesson came too late.[70]

An adult jigger flea was about a millimeter long. The pregnant flea would enter the skin under the toenails, lay hundreds of eggs in a small sack which in turn developed into a white, pea-sized structure, up to 10 mm in diameter.[71] Other problems like malaria, diarrhea, cholera, and so on were virulent, but nothing beats napalm and *zvitekenya* in the war memories of refugees and guerrillas who survived.

Medical supplies to ZPRA and ZANLA

Guerrilla healthcare defies the conventional association of the African guerrilla movement with the Sino-Soviet blocs. To set up healthcare infrastructure in Zambia, Mozambique, and liberated areas required medical supplies. The communist countries supplied guns and military training but limited medical assistance materially. Many groups throughout Western Europe and North America filled this critical void. The assistance included building hospitals and clinics in Tanzania, Zambia, and Mozambique, medical equipment (ambulance vehicles, surgical equipment, microscopes, stethoscopes, crutches, first aid kits, stretchers, syringes), and medical supplies (drugs principally), tents, water pumps and filters, kerosene-powered refrigerators, and so on.[72]

At least in the context of the United States, Canada, and much of western Europe, where government and the media characterized the liberation movements as 'communist terrorists,' blacks and progressive organizations saw 'freedom fighters' waging a just cause against fascist and racist oppression. Sweden in particular openly and actively assisted ZANU and ZAPU with 'humanitarian' resources. In large part, the capacity of NGOs to raise medical and other non-lethal resources for the same guerrillas their governments criminalized or did not support owes to the work of ZANU and ZAPU's diplomatic efforts. In ZAPU it was George T. G. Silundika, Kotso Dube, and Calistus Ndlovu. ZANU had the likes of Reward Kangai, Tapson Mawere, Sydney Sekeramayi, and later Herbert Ushewokunze. Often these Zimbabwean representatives started out as students in North American and European universities, organizing campus protests, fundraising events, and chapters of 'liberation support movements.' It was to such forums that heads of specific departments within the two liberation movements were invited to articulate the aims, needs, and progress of the struggle.

By the end of the war, some of the European support groups raising medical supplies and shipping them to ZAPU and ZANU included three British-based organizations, International Defence and Aid (DEFA), War on Want, Zimbabwe Medical Aid (ZIMA), and the Anti-apartheid Movement's Health Committee. The organizations from the Netherlands included Dutch Anti-Apartheid, Holland Committee for Southern Africa, and Medical Committee of Angola. The Swedish government offered direct assistance through its agency SIDA (Swedish International Development Agency).[73] Other organizations in Norway, Belgium, Germany, France, and Canada also gave medical assistance on a smaller scale.[74]

ZAPU and ZANU submitted their requirements to these organizations, emphasizing the numbers of refugees in each camp, initially just those outside Zimbabwe, then, as war intensified, Africans inside 'liberated zones' as well. Says one memo commenting on a ZANU (PF) request presented at a meeting of medical NGOs in Leiden in June 1979:

> Medicines list remains large, [only] trade names [are] used, and [the list is] really a pharmacopeia. It looks as if parts of drug company lists in MIMS and some of the British National Formulary have been combined randomly. Contains dangerous and out of date drugs (e.g. Mersalyl – a mercury diuretic! – discontinued in Britain 15 years ago as it poisons the kidney). Dangerous reflection of drug company imperialism in Africa generally.[75]

Also attending the same medical *indaba* was Benjamin Dube of ZAPU. The list he presented is captured in the minutes:

> ZAPU list is less serious than [ZANU's] in that it is shorter but suffers the same regretable (sic) pharmacopoeia (sic) problem. No doubt of ZAPU's major needs, especially due to ZAPU's very own limited supplies. Both PF wings emphasize rehabilitation needs etc. Clear list of bedding, dried foodstuffs and clothing plus a summary of projects.[76]

***

In the United States, several organizations were composed mostly of African Americans, churches, students, and other 'progressive' forces, fundraising and collecting medical supplies, principally – if not exclusively – for ZANU.[77] As often as they could, ZAPU and ZANU heads of health departments traveled overseas to make this argument and solicit materials. Money and supplies were raised through all manner of activities, from fundraising dinners, garage sales, monthly pledges, blanket and clothing drives, to benefit concerts. Among the artists involved in the concerts were African musicians in exile (like the Zimbabwean *mbira*

maestro Dumi Maraire, South African jazz gurus Hugh Masekela and Abdullah Ibrahim aka Dollar Brand), and Jamaican outfits, including Bob Marley and the Wailers. Some of these shows were endorsed by prominent anti-apartheid supporters, like the boxer Muhammad Ali, singer Harry Belafonte, and Rev. Wyatt T. Walker (Martin Luther King, Jr.'s top aide).[78] The Champaign-Urbana Coalition Against Apartheid was one of many groups that collected recreational materials, clothing, blankets, tents, and school supplies for ZANU. As the war intensified, they also prioritized anti-malarials, antibiotics, cardio-vascular medicines and painkillers, and such medical equipment as microscopes, water purifiers, prosthetic limbs, mosquito nets, detergents, [and] disinfectants.'[79]

In their appeals for donations the organizations skillfully deployed the stories of individual contributors to inspire those who wished to make a difference:

> Medical students have donated their stethoscopes to ZANU. An owner of a drug supply house donated several thousand dollars worth [of] drugs. A hospital that was closing donated hospital beds to ZANU rather than have them sold for scrap. Retired doctors and dentists can donate equipment. Many examples of this type show that a little hunting can locate a good deal of medical material…. Cake sales, rummage sales, entertainment events, cultural shows are all well-used techniques for raising money.[80]

Every appeal was quantified to assure a statistics- and accountability-sensitive American public that the donation would be used 'solely to buy medicines and medical equipment.' Medical Aid to Zimbabwe, a Bronx-based organization of health workers and community activists raising and supplying material aid to the liberation struggle, used this strategy to perfection. Here is their poster in 1979 (Figure 5).

Guerrilla healthcare on the front

Since the advent of colonial rule, Africans had grossly inadequate or no access to allopathic healthcare facilities. For example, in 1976, the state provided one hospital bed for every 255 whites compared to one for every 1261 Africans.[81] Whites enjoyed 'state of the art care at a ratio of one doctor for every 1800 people' compared to 'one doctor [for] no less than 100,000 Africans.'[82] By 1979, the official policy was to shut down rural district hospitals that served Africans, leaving only mission hospitals or nothing at all. Already, by 1976, the missions provided over 75% of healthcare to Africans in the rural areas, compared to government's allocation of just 9% of the total health budget to rural Africans.[83]

Then there was Rhodesia's chemical and biological warfare, launched in 1974. Chemicals that had been intended for problem insects, birds, and animals were extended to kill a new problem animal: 'the terrorists' and villagers 'running with terrorists.' One was thallium sulfate, a tasteless pesticide with delayed toxicity, so that a guerrilla might eat a meal laced with it in one place and travel far, before the effect kicked in two or three days later. Organophosphates like fenthion and parathion, and the organochloride isobenzan or telodrin, killed through skin contact; many guerrillas died after wearing denims received from trusted businessmen.[84] If the guerrilla died in the bush, the vultures, eagles, hyenas, jackals, and lions that ate his remains also died. The poisons affected not just the 'terrorists'; children too were dying after eating candy, wild fruits, and tinned foods left as bait to kill 'terrorists.'[85]

The Rhodesians also extensively used biological materials as poisons. Guerrillas suffered from Rhodesia's use of cholera bacterium, which induced acute diarrhea and death. The Selous Scouts planted the cholera in water reservoirs. The guerrilla leaving for the front or

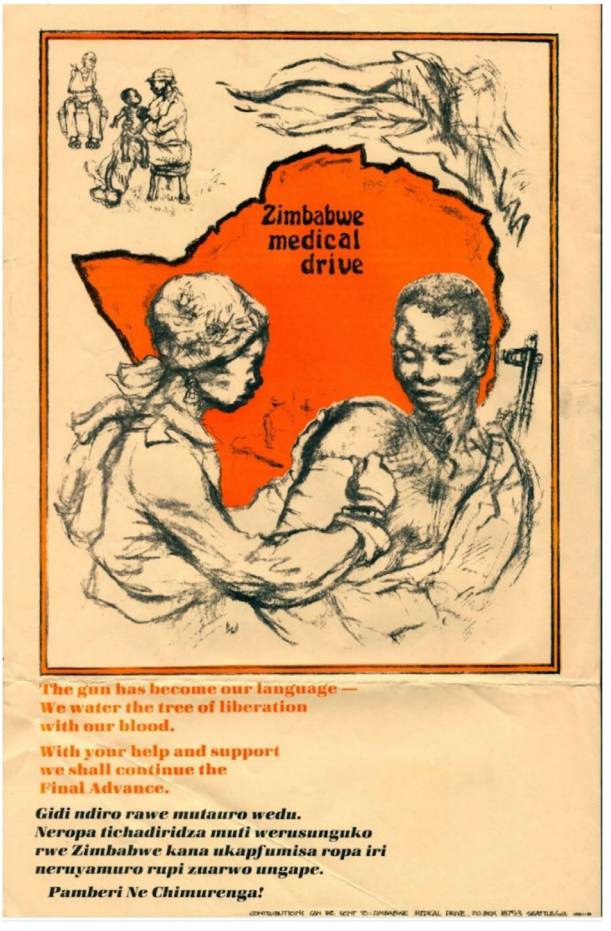

Figure 5. Medical Aid to Zimbabwe poster, circa 1978. Source: African Activist Archive.

to conduct other errands then spread the bacterium over a wide arc.[86] No cholera outbreaks had occurred in the country from 1890 to 1974, but since then it had become a constant problem, when the Rhodesians began to systematically 'pollute the wells and water supplies with cholera and typhoid … then rush back to vaccinate the whites in case the thing boomerangs.'[87] Thus by late 1979, anthrax had affected one-third of Rhodesia,[88] with about 11,000 cases in 1978 alone.[89] Pools and pastures were contaminated with the deadly spores to kill African villagers and their livestock to deny guerrillas a protein diet, and on filter caps of cigarettes to kill the 'terrorists' individually.[90]

In a *PBS Frontline* interview in 1998, Zimbabwe's former health minister Timothy Stamps admitted that the Rhodesians, colluding with South Africa and other Western allies he did not name, transformed the guerrilla-infested countryside into a testing ground for weaponized ebola and Marburg viruses, which are not endemic to Zimbabwe. Just like cholera, the Marburg virus outbreaks were focused, not generalized, in an area of intense fighting between the South African army and *Mkonto weSizwe* (MK) guerrillas. The ebola outbreak was limited to the Zambezi River, leading Stamps to conclude that it was an experiment to test whether the newly developed virus was capable of directly infecting black people.[91]

***

On the front, the *mhondoro* and *n'anga*/*izinyanga*, mission hospitals, African physicians, and the *mujibha*/*chimbwido* were the four major factors in guerrilla healthcare. The rural majority believed in ancestral spirits, and most guerrillas were rural people despite their secular military and ideological training. Many had been born and raised in these very lands, worshipping *Mwari* (God) via the ancestral spirits.[92]

Shrines, caves, pools, trees, forests – all these were therefore available to the guerrillas as sacred associates and signs of the ever-presence of the ancestors. Caves had served traditionally as burial places of chiefs, bunkers where entire communities retreated and fought from during the first *chimurenga* of 1896–1897. The injured would be carried there and the healers would work on them until recovery. Or death. Now the comrades did the same. Certain pools and springs were sacred, believed home to *njuzu* (mermaids) and *majukwa* (water spirits), and sources of potent underworld medicines. There were sacred forest groves where long-departed ancestors were buried, where nobody was allowed to venture, cut trees, or burn grass. The trees grew into thick forests, accessible only to spirit mediums, elders, and healers. Injured or sick comrades were now treated and nursed there. And some of the guerrillas were spirit mediums.

The cave became the guerrilla hospital; here, allopathic and indigenous medicine met. It was too dangerous to keep an injured comrade in one's house; sooner or later word would go out. Traditionally, shrines like the *muchakata* or *muhacha* tree are sites where people make beer offerings to *makombwe* (rainmaking spirits). Now guerrillas went there to ask *makombwe* to create the right atmosphere to enable the therapeutic process of *chimurenga*, which would heal the land of the scourge of oppression, to succeed.

Guerrilla healthcare infrastructure was thus not always an outcome of human modification or fabrication, but people's strategic deployment vis-á-vis the available mountains, caves, etc. as weaponizable material in the service *chimurenga*. By *strategic deployment* I mean the way people use their intellect to locate themselves in the environment in such a way that it works advantageously for them without significant or any modification. One example is turning a mountain into a weapon against the enemy by deploying and fighting from inside, under, in front, or behind it. *Under* – because in *chimurenga*, infrastructure ceases to be just terrestrial, human-made, or material and physical. Through *njuzu*, the medicines to treat wounded comrades could be obtained from underneath the pool's surface, in the pale blue underworld whose 'subterranean villages and cities' stretched into the horizon, its pastures teeming with cattle.[93] I seek the practitioners' reasons, not ours; that's how one could read this view of medicine.

***

The ZANLA infiltration of Dande in 1971–1972 set the tone for the role of ancestral spirits and spirit mediums throughout the war. The area was home to numerous powerful mediums – Chiwawa, Musuma, Mutota, Madzomba, Chipfene, Chiodzamamera, Chidyamauyu, and Nehanda. The guerrillas sought them out to gain legitimacy among the population, which firmly believed in ancestral spirits; to access the safest, most secret routes and sites for weapons movement and caching, usually located in sacred places, which were sources of herbal medicines known only to spirit mediums and healers; and to obtain war medicines

not just for wounds and ailments but, as per *dzimbahwe* traditions, sacred and spiritual medicines for protection against misfortune and evil spirits as well. For allopathic substances and herbs to work – *to be medicine* – the spiritual and psychological conditions had to be well aligned, all misfortunes that shut out the medicative elements from working cast away. Then, and only then, could the academy-trained physicians' medication work.

As physicians or *n'anga*/*izinyanga* coming to cure the land of the disease of white minority oppression, guerrillas' primary medical tool, the gun, could only be efficacious if armed by the ancestral spirits. Thus the *mhondoro* became privy to the minutest of guerrilla operational details, including their state of wellness, routes, and modus operandi. That is why in 1972, the medium of Nehanda, now very old, had to be stretchered out of the northern district to a ZANLA base in Mozambique.[94] The guerrilla commanders – at least most of them – also believed that the departed ancestors communicated battle directives to the fighters through spirit mediums, birds and animals.[95]

The African population in the operational zones generally deferred to their indigenous healthcare system composed of ancestral spirits, *n'anga/izinyanga*, and apostolic prophets, who healed not just the medical conditions (a wound, a disease) but gave spiritual healing and protection to the community and kin within it. Hence leaders like Joshua Nkomo, a Methodist immersed in the faith of his Kalanga ancestors, implored guerrillas to obey *imithetho yabadala* (*sindebele*) or *mirau yavakuru* (ways of the elders). To obey the ancestors was itself a self-medicating move: the spirits used animals and dreams as vehicles to warn and guide the fighter in times of danger.[96]

ZPRA guerrillas regularly consulted the ancestral spirit mediums and *izinyanga* to heal them of afflictions, injuries, and misfortunes. Common conditions treated included persistent headaches and stomachaches (especially from poisoning), injuries, dizziness, fits, bomb shock, and possession by evil spirits. The guerrillas took part in cleansing and propitiation rituals at shrines whenever required by the spirit mediums in their tactical areas of operation. During these rituals, especially when just arriving into an area, the guerrillas would be required to place their weapons in the hands of the healers or spirit mediums as part of the process of informing the ancestral spirits of their arrival. The reason: so that these tools and those who carried them could receive spiritual armament and lethality during the firefight against the enemy. Thus informed, the ancestors would throw a protective shield around the community and guerrillas, that they be insulated from enemy discovery, bombardment, and death.[97]

That was the medicine needed to cure ailing operations. Jairos Muumbe was a *mujibha* in Muumbe village in Chief Musikavanhu area of Chipinge:

> When the boys came into the Musikavanhu area, the spirit mediums went with them into a *ngòmé* (the sacred hut) for the ancestral spirits to help the comrades access the area. For some time, every time there was a contact, a comrade would lose his/her life. Thus, the Chief and the spirit mediums led in the propitiation rites alongside the comrades. From that day on, nothing of that sort happened.[98]

The ZANLA guerrilla Solomon Ndunduma (*chimurenga* name Jeffrey Muridzo), operating in Buhera, says that before the propitiation procedures 'mine detectors easily swept away the mines put up by the guerrillas…. Afterwards landmines did the business of sabotaging the economy and killing the enemy.'[99] He confirms that things turned after his section heeded Chief Makumbe's instruction to 'avail a black goat, black and white clothes,' and traditional beer offerings to the ancestors. The landmines they planted began to blast the enemy's vehicles in earnest.[100]

As the guerrillas testify, the spirits worked in different ways. Can See Mapuranga's statement echoes in hundreds of guerrilla accounts: 'At times, we got communication from eagles. If they fought each other, a fight was imminent. Definitely, our spirits and indeed our ancestors helped us get our independence.'[101] Sydney Mukwenje emphasizes the critical role of spiritualized materials as medicines and weapons in *chimurenga*: 'We also had snuff [*buté*] and *chifumuro* (a herbal tuber) in our pockets which we continuously rubbed onto our [fore]heads which according to tradition could ward off whatever evil intentions the soldiers had.'[102] He negates to say *chifumuro* means 'the exposer'; its purpose is to expose the adversary's hidden plans. Marijuana was also used for a similar purpose, in addition to galvanizing its smoker into doing fearless and daring things. The male guerrillas and refugees in particular were frequently punished for venturing out to source it from surrounding Mozambican villages.[103] *Buté*, by contrast, is the ancestors' all-purpose medicine and weapon against afflictions of any kind, including bad luck.

The Rhodesian Security Forces' *Soldier's Handbook on Shona Customs* (1975) – the field manual every soldier had to master as part of the counterinsurgency operations – also acknowledged the widespread use of charms among Africans as follows:

> Almost every African wears a charm, either round the neck, round the wrist, or [keeps it] in the pocket. These are usually very small, wrapped in cloth, worn on a string. Tiny beads are also worn, again round [the] neck, waist or arm. One such charm or 'medicine' is *mangoromera* … the skin or armband which has python skin or crocodile gall, etc., stitched into it. It is a charm vesting super human strength, courage or audacity in the wearer. It was, and may be even still, *the prized magic of the boxer, criminal and tough guy of the urban areas and would be ideal for the terrorists*.[104]

As can be seen, the Rhodesians recognized that 'the terrorists,' regardless of their secular training in communist countries, remained steeped in their own idioms and extended them to their personal health and wellbeing and the conduct of insurgency.

This pragmatic healthcare philosophy is apparent in *Guerrilla Snuff*, wherein Martinus Daneel tells the story of the *svikiro* Lydia Chabata who, possessed by *shavé renjuzu* (mermaid spirit), went underneath the pools to search for special, powerful medicines to cure the guerrilla commander, Weeds Chakarakata (a.k.a. Cosmas Gonese), of poisoning. Chabata nursed the commander for over two months in a cave working with Chakarakata's medic to treat him, carrying him from cave to cave in the Bikita area, where pro-guerrilla physicians would sneak in to examine and treat the patient. The commander was suffering from poisoning – the festering sores all over his head and body having caused his hair to fall out, muscles to shrink, and eyes to sink into their sockets. He was a moving skeleton.[105] Cosmas Gonese recovered and saw independence, and thanks the ancestral spirits, the *njuzu* medicines, and allopathic treatment in equal measure.

***

So far we have seen *mhondoro* and *n'anga*/*izinyanga* as vital cogs in ZANLA and ZPRA's war fronts. The third element is the mission hospital. By and large, ZPRA's relationship with the church was strained to say the least because of the issues that are dealt with in the larger project, but that fall outside this essay. The literature on the church's role in *chimurenga* is rich, but it does not deal with healthcare in any detailed way.[106] Thus at present, our evidence

for the guerrilla initiative to creatively subvert the church into a critical pharmacy or dispensary for drugs and other medical supplies comes from the ZANLA front. The story, however, should not begin there.

By remaining open, the mission hospital thus became available to guerrilla initiative as an important healthcare infrastructure. Guerrilla 'MOs' (medical officers) replenished medical supplies at mission hospitals and clinics, and collected 'donations' from teachers towards the struggle. In Gutu, for example, the priests of the Catholic Order of the Bethlehem Fathers at Mukaro and Mutero were not just replenishing the guerrillas' medical supplies but also treating them when injured or ill.[107] A summary of this relationship between guerrillas and the Catholic priests in particular is contained in Bishop Donal Lamont's *Speech from the Dock*:

> I drove from Regina Coeli Mission to Avila in Inyanga [sic, Nyanga] North on 21st April [1976], and shortly after arrival was informed that a letter had been handed into the Mission requesting medicines. I was shown the note [which] asked for anti-malarial tablets and medicines for diarrhea…. The letter had been delivered by a villager, a man, on behalf of [the guerrillas]. I was asked what ought to be done about it, and I replied that we ought to give medical aid to anyone who asked, and that the nurses should not argue about the matter…. As far as medical help was concerned, no missionary should inquire about the religion or politics of those who asked for help…. If the Security Forces came looking for medicines, they too were to be given whatever they needed and whatever the Mission could afford to give … The second decisive motive was the safety of the personnel involved. What would happen, then, were they, few in number, without any means of defence whatever, without even a telephone closer than a two-hour journey – what would these helpless people do were they to refuse things demanded of them? … If our missionaries deny the medicines, there is nothing to prevent armed men from invading the Mission at any hour of the day or night and forcibly taking what they want.[108]

Hence Lamont's act of 'charity' also derived from fear of the consequences of refusing to help the guerrillas, a desire to preserve the lives of church staff and property because of missions' isolation in the war-torn countryside. The mission in question, Avila, was one of several isolated Catholic stations in the diocese of Mashonaland.

There were also Africans trained as medical doctors who were inside Zimbabwe who lent critical services to the struggle. When guerrillas were injured, these physicians would go into the bush to attend to them, and then direct that they be medevaced to caves where they would come and treat them.[109] I do not yet have evidence for the ZAPU/ZPRA-aligned physicians, but there were three prominent ZANLA-aligned medical doctors rendering assistance to guerrillas inside Zimbabwe in 1976–1978. Drs Simon Mazorodze and Oliver Munyaradzi had both trained in medicine at University of Natal Medical School. Stationed in Masvingo, they would sneak out to treat injured or sick comrades in the caves of Shurugwi, Zaka, Mwenezi, and Masvingo. Edward Munatsireyi Pswarayi was also helping out guerrillas in Zaka and Bikita. Pswarayi had graduated with a degree in medicine from the University of the Witwatersrand in 1956, just after Samuel Tichafa Parirenyatwa. Ex-ZANLA guerrilla field commander Henry Muchena, later an air marshal in post-independence Zimbabwe's army, remembers all three physicians well:

> I first met [them] in 1976 in Machingambi-Harava in Zaka [and again a year later in Bikita] when he came to the battle front to deliver medical supplies. A number of our comrades had been injured during combat and the late Simon Mazorodze brought Pswarayi and the late Oliver Munyaradzi and would treat the wounded comrades.[110]

Suicide stage and guerrilla medevac

'Suicide stage' is the circumstance at which an injured or sick guerrilla could be left behind, when he 'volunteer[ed] to be left behind to die.' As ex-guerrilla Texen Chidhakwa explains, it was a stage 'where you see that a fellow guerrilla has lost both his legs and an arm but they are bleeding heavily.' There was nowhere to get an ambulance or stretcher bed to medevac the guerrilla to hospital – in fact, no hospital even existed anywhere near! 'We would make the painful decision that 'comrade *vava kutosara pano*' [comrade is now going to be left here].' The medic first certified that the guerrilla was dying, then took away his gun, and left him with a grenade to blow himself up instead of being captured and tortured. At least suicide was a faster way to die than torture.[111]

Usually the guerrilla would grab his grenade, remove the firing pin (but not throw it away), and wait for the enemy to come. Once the guerrilla removed the safety pin, a grenade became a self-firing explosive, and when it exploded, it disintegrated, the shrapnel tearing the guerrilla into pieces. A grenade, once fired, was no longer usable or *there*. By contrast an AK-47, an RPG-7 or a mortar could be taken by the enemy and lost to living comrades. Then, as Rhodesian soldiers (which the people called *masoja* or *masotsha*) closed in, the guerrilla let go. The rule was '*unofa nemurungu*' (you die with a white man) rather than be captured, tortured, then sell your comrades and *chimurenga* out, and still get hanged afterwards anyway.[112] The grenade was a way for a comrade to die fighting and with honor; it left no trace useful to the enemy.

Sometimes the medic prognosticated 'suicide stage' too quickly, leaving a guerrilla for dead when he was alive. Two cases illustrate this. The first is that of ZPRA regional commander (southern Matabeleland) Comrade Thadeus Parks Ndlovu, narrating the events of August 1978:

> We went back to Botswana where we used to get our [ammunition] supplies. Coming back … we made a contact … around half past four on the 8th of August…. After some time I thought, now I'm failing to handle the gun, why? I said 'Hey, comrades I've been hit.' I tried to skirmish but I saw something which was unusual to me … those were intestines…. Then my intestines came out. I had to push them back in again. I said to my comrades, 'Comrades, … I don't think I will proceed. What you can do now, take out the shoes.' Ah luckily … Boers [Rhodesians] … assaulted that area…. I don't know how they by-passed me. It was … very lucky I survived that. I went to sleep somewhere. In the morning … a villager took me to another village…. There was this home-brewed beer. There were a lot of people there…. They took me to a house. They tried to make me some porridge…. Then the headman took his new bicycle, gave it to another young boy: 'Take this man.' And then I went … back to … a hospital [at Phikwe].[113]

For ZANLA guerrilla Onias Garikai Bhosha (*chimurenga* name George Gabarinocheka), 'suicide stage' was when his fingers were blown off by a bomb *masoja* had put in a transistor radio, which detonated as soon as one member of the guerrilla section turned it on. This radio had come from a local businessman in Kaitano area of Rushinga named Nyamupfukudza, who said it was a gift. Two guerrillas, Tafirenyika and Pedzisai Madyiwa, died on the spot; Gabarinocheka survived only because he was a few meters away, but the shrapnel perforated his face and head, and tore into his fingers. The surviving guerrillas concluded he was dead, buried him under tree branches and proceeded with the struggle for self-liberation.

Gabarinocheka regained consciousness three days later, looked around, and started crawling, his sight partially blinded by the blast, hitting against trees and rocks. Afterward

he managed to get to Kaitano School and asked the schoolchildren to go and tell their elders to come and fetch him. They then informed the guerrillas, who took him to one of the local ZANLA bases called Mukoma, and subsequently medevaced him to Chifombo in Zambia.[114] In this case, medevac was also self-evacuation, even in extreme pain, with shattered leg or bullets lodged inside one's body.[115] This was usually the only option when one was left for dead by his comrades.[116]

Whenever possible, injured comrades were stretchered out of the combat zone to mountains or rear bases. That did not always happen, for example when faced with 'the practical problem of having two stretcher cases, one with a fractured leg and the other with a swollen ankle and suspected fracture of the collar bone – in addition to the punishing weight of the munitions.'[117] The only option was to take up positions, administer first aid, wait until it got dark, then medevac the comrades to the rear. 'This make-shift stretcher was also our ambulance during the liberation struggle,' Chidhakwa remembers.[118]

It was made from two straight poles driven into, along, and out of the longer sides of a disused grain sack. A bicycle, where it could be found, acted as a very good 'gun carriage.' This gun carriage could also be converted into a platform for carrying the stretcher bearing an injured guerrilla.[119] Carrying the injured guerrilla on a makeshift stretcher and under guerrilla escort, the *mujibha* would walk on foot, taking cover in the caves and under trees by day, resuming by night. After crossing the border, they either walked some more or, on the rare occasion, took a ride on the train or bus inside Mozambique or Botswana to the hospital.[120] Sometimes they used donkeys, very rarely motor vehicles, scotch-carts or wheelbarrows because they left a signature very easy to track. Whenever they used a bicycle, the guerrillas and *mujibhas* would put a tree branch behind the rear wheel to wipe out their footprints and confuse *masoja* as to the direction they had taken.[121]

It was sometimes in the course of acting as a field ambulance that *mujibha* and *chimbwido* began their journey to training in Zambia and Mozambique. This was certainly the case of ZANU chairman Herbert Chitepo's bodyguard Sadat Kufamazuva (birth name Bensen Kadzinga). It was in the Rushinga area, in the wake of a gun battle in 1973. The section commander, David Zvinotapira, had been shot in the leg. The surviving guerrillas assigned the then untrained Kadzinga to organize a bicycle from the local villagers, medevac the injured guerrilla to safety, and look after him while they provided armed escort. The pursuing *masoja* caught up with the group, and after another contact, the other two remaining guerrillas gapped, leaving Kadzinga alone with the injured guerrilla. Zvinotapira handed the young Kadzinga his sub-machine gun and remained with his pistol, and began training the *mujibha* on-the-move how to fire it. Next he took off his camouflage and remained with civilian clothes, then started walking painstakingly but inauspiciously through a maize field pretending to be a farmer. Meanwhile, his young protégé and evacuator was crawling on the ground. When the two at last got to cover, they stayed at a village near Karanda for three months, before escaping to Zambia when their trail had become cold. Sadat was not the only one.[122]

By the end of 1978, ZANLA in particular had made significant inroads into Zimbabwe and declared large swathes of areas near the Mozambican border 'liberated zones.' Pswarayi was behind bars. The fates or whereabouts of Mazorodze and Munyaradzi are not yet apparent from available archives. We know that ZANLA was busy setting up mobile health clinics and field hospitals, as described in a pamphlet published around 1979:

> The ZANU guerrillas operating inside Zimbabwe are fighters, teachers and nurses all at the same time. The villagers feed and shelter the fighters while the guerrillas bring medicines, political and practical education to the people.
>
> The fighters travel with portable schools – a blackboard and chalk, pencils and paper. Their classroom is under trees, close to the village. Fighting disease is a common political and health lesson taught in these outdoor classes…. The guerrillas instruct the people in ways they can protect themselves from [malaria and bilharzia]. People should build their houses away from the rivers so that their sewage does not seep into the river; they should boil any water they use for cooking…. The guerrillas help the villagers build wells that will reach clean water.[123]

That is why, in its request to European donors in June 1979, ZANU specifically requested 'relevant texts that could be translated into Shona for distribution in camps.' The donors suggested to translate parts of David Werner's *Where There Is No Doctor*.[124]

Towards a narrative of innovation against the odds: the end

I have sought to show that the ordinary person is not merely a victim, beneficiary, or bystander in innovation. I have also stressed that in the context of *chimurenga*, it is impossible to make sense of creativity absent the spiritual.

The Africans we see here are not merely victims of tools of empire or beneficiaries of benevolent nationalist leaders. They are creative beings who die fighting, innovating, and making and triumph in their struggles because they are creative and resilient. We have to take their philosophy of innovation seriously: they persevere because they trust that they are not walking alone, but under the protective wing of their ancestors. And because in the case of *chimurenga* and other African struggles agency does not end in the secular realm but is always spiritually anchored, the secular-based framework that animates analyses of technology do not adequately account for the forces at play. Perhaps technology in such narratives is too secular, too neat, too tekkie. It is impossible to understand what is technological to Africans like these without first understanding the spiritual forces that give context to their mortal or physical/material activities. The most important aspect of science, technology, and innovation in this case is not the science, technology, and innovation itself, but the African spirit of creative resilience born of the specificities of struggles people are enduring. The exploration above centralizes people as the critical agent of history, with intellection and spirituality as critical elements. Technology comes downstream of worldview and the forces people collectively believe to populate everyday life and the way the world works.

Notes

1. See Godin, "Innovation."
2. Nass, "Zimbabwe's Anthrax Epizootic," 1; Nass, "Anthrax Epizootic in Zimbabwe"; see also Sterne 1967, 1493–5 and Lawrence, Foggin, and, Norval 1980, 82–5.
3. Hoffman, Taw, and Arnold, *Lessons*.
4. Locke and Cooke, *Fighting Vehicles* and Wood, "The Pookie."
5. Lester, *Protection of Light Skinned Vehicles*.
6. ACIL Tasman, *Bushranger Project*.
7. Tilley, *Living Laboratory*.
8. Chung, *Re-living Chimurenga*; Tekere, *A Lifetime of Struggle*; Bhebe, *Simon Vengesayi Muzenda*; Mhanda, *Dzino*; Mutambara, *The Rebel in Me* and Sadomba, *War Veterans*.
9. For example, Smith, *The Great Betrayal*; *Smith*, *Bitter Harvest*.

10. Kriger, *Zimbabwe's Guerrilla War*; Alexander, McGregor, and Ranger, *Violence and Memory* and Bhebe and Ranger, *Soldiers*.
11. The word 'Shona' is an invention of the European colonist, who corrupted the Ndebele's reference to their eastern neighbors as *abatshona* (the ones who go under [retreat into caves and fight therefrom]). I prefer *dzimbahwe* people (those who built their houses in stone), drawing on Mufuka, *Dzimbahwe*, and Pikirayi, *The Zimbabwe Culture*. Hence my preference for *vedzimbahwe* (those of *dzimbahwe*).
12. See Ranger, *Revolt*; Beach, *Mapondera* and van Onselen, *Chibaro*.
13. Ranger, *Voices from the Rocks*; Lan, *Guns and Rain* and Daneel, *Guerrilla Snuff*.
14. See Feierman and Janzen, *The Social Basis*.
15. Ndlovu, "Interview: Benjamin Dube."
16. Ibid.
17. Ibid.
18. Ibid.
19. Ibid.
20. "Nkomo, ZAPU Secretary of Administration," 225.
21. Herald Reporter, "VP Nkomo Mourns Bango."
22. Gwaunza, "Sakupwanya."
23. Ndlovu, "Interview: Benjamin Dube."
24. Ibid.
25. Ibid.
26. Thomson, *The Adventures of Shadrek*, 280.
27. Ndlovu, "Interview: Benjamin Dube."
28. Ndlovu and Nkomo, "Interview: Poli," 7.
29. Ndlovu, "Interview with Regina Ndlovu," 19.
30. Ndlovu, "Interview: Benjamin Dube."
31. Nhongo-Simbanegavi, *For Better or Worse?*
32. Ndlovu and Nkomo, "Interview:Ndebele," 11.
33. Ndlovu, "Interview: Benjamin Dube."
34. Ibid.
35. Mutambara, *The Rebel in Me*, 73.
36. Huni, "Chimoio Massacre" and Mutambara, *The Rebel in Me*, 150.
37. "The Grim Realities of War."
38. Huni, "Bush Doctor."
39. Ibid.
40. "Sekeramayi, ZANU – Student in Sweden."
41. Huni, "Chimoio Massacre."
42. Huni, "The Gun was a Prison for Sell-outs."
43. Mutanda, "Age Couldn't Dissuade His War Effort."
44. Ruvando, "Indigenous Spirits."
45. Karsholm, "Memoirs," 17.
46. Ruvando, "Indigenous Spirits."
47. Huni, "Give Me My Gun"; Huni, "Commander Who Captured the First White Man" and SAHA, *ZAPU*, 25.
48. Huni, "Give Me My Gun" and Huni, "Face-to-Face with the Real 'Gandangas'."
49. Huni, "Bush Doctor" and Huni, "Commander Who Captured the First White Man."
50. Huni, "Chimoio Massacre."
51. Huni, "Give Me My Gun."
52. Musungate, "Father Relives Battle of Mavhonde."
53. Huni, "Give Me My Gun."
54. Ibid.
55. "The Grim Reality of War."
56. Huni, "Bush Doctor."
57. Kadungure, "Cde Bandera."

58. Huni, "Give Me My Gun."
59. Ibid.
60. Huni, "Chimoio Massacre."
61. "The Grim Reality of War."
62. Huni, "Cde Chinx."
63. Huni, "Chimoio Massacre."
64. Huni, "The Rear was a Big War Front."
65. Huni, "Give Me My Gun."
66. "The Grim Reality of War."
67. Dhliwayo, *Endless Journey*, 58, 73.
68. "Health Services at Risk" and "BP Helps Make Chemical Weapons."
69. Mutambara, *The Rebel in Me*, 50–1 and Ngulube, "She Felt Being Chimbwido: Part One."
70. Mutambara, *The Rebel in Me*, 51 and Dhliwayo, *Endless Journey*, 76.
71. *Zimbabwe Not Rhodesia*, 13.
72. ZIMA, "Report," 2–3; *Zimbabwe Not Rhodesia*, 16.
73. Sellström, *Sweden and National Liberation*.
74. ZIMA, "Report," 2–3.
75. Ibid., 4.
76. Ibid., 4.
77. *Zimbabwe Medical Drive*, 1. ZMD was a Seattle-based group of Zimbabweans and North Americans raising money and educating Americans on the Zimbabwean struggle for self-liberation.
78. ZMD Poster; ZMD, "Benefit Rummage Sale."
79. C-U Coalition against Apartheid.
80. *Zimbabwe Not Rhodesia*, 16.
81. Kriger, *Zimbabwe's Guerrilla War*, 62.
82. ZANU Support Committee, *Medical Aid to Zimbabwe*.
83. Kriger, *Zimbabwe's Guerrilla War*, 62.
84. Mavhunga, "Vermin Beings," 166–8 and Mutambara, *The Rebel in Me*, 202.
85. Daneel, *Guerrilla Snuff*, 9.
86. Parker, *Assignment Selous Scout*, 170–1; "The Grim Reality of War."
87. "The Grim Reality of War"; *Zimbabwe Not Rhodesia*, 7.
88. Nass, "Zimbabwe's Anthrax Epizootic," 1; Nass, "Anthrax Epizootic in Zimbabwe"; see also Sterne 1967: 1493–5; Lawrence, Foggin, and, Norval 1980, 82–5.
89. Davies, "A Major Epidemic of Anthrax Part I"; Davies, "A Major Epidemic of Anthrax Part II."
90. Parker, *Assignment Selous Scouts*, 176.
91. "Interview: Dr. Timothy Stamps" and Siamonga, "Rhodesian Landmines."
92. Lan, *Guns and Rain*, 5.
93. Daneel, *Guerilla Snuff*, 157.
94. Lan, *Guns and Rain*, 5.
95. Daneel, *Guerilla Snuff*.
96. Damasane, "Spirituality."
97. Alexander, McGregor, and Ranger, *Violence and Memory*, 170–1. Contrary to Brickhill, "Daring".
98. Mutanda, "Muumbe" and Lan, *Guns and Rain*, 4.
99. Mutanda, "A Combatant's Reflections."
100. Ibid.
101. Mutanda, "No Walk."
102. Mukwenje, "My Liberation War Experience: Part Four."
103. Dhliwayo, *Endless Journey*, 79.
104. Rhodesian Army, *Soldier's Handbook*, 40–1, my emphasis.
105. Daneel, *Guerrilla Snuff*, 137.
106. Bhebe, *The ZAPU and ZANU Guerrilla Warfare* and McLaughlin, *On the Frontline*.
107. Daneel, *Guerrilla Snuff*, 38.

108. Lamont, *Speech from the Dock*, 68–70.
109. Huni, "Chitepo's Death."
110. Herald Reporter, "Tswarayi Hero Status Clarified."
111. Huni, "Give Me My Gun."
112. Ibid.
113. Ndlovu, "Interview: Thadeus Parks Ndlovu," 5.
114. Huni, "Gabarinocheka."
115. Huni, "Give Me My Gun."
116. Sunday News Reporter, "Dube's Military Exploits."
117. Mutambara, *The Rebel in Me*, 105.
118. Huni, "Bush Doctor" and Huni, "Cde Chinx."
119. Ibid.
120. Huni, "Bush Doctor."
121. Mwale, "Stark Reminder."
122. Huni, "Chitepo's Death"; Huni, "Cde Chinx" and Chipamaunga, *A Fighter for Freedom*.
123. *Zimbabwe Not Rhodesia*, 13.
124. ZIMA, "Report," 5.

Disclosure statement

No potential conflict of interest was reported by the author.

References

ACIL Tasman. *The Economic Impact of the Bushranger Project*. Melbourne: ACIL Tasman, 2009.
Alexander, Jocelyn, Jo Ann McGregor, and Terence Ranger. *Violence and Memory: One Hundred Years in the "Dark Forests" of Matabeleland, Zimbabwe*. Oxford: James Currey, 2000.
Bhebe, Ngwabi. *Simon Venegsayi Muzenda and the Struggle for and Liberation of Zimbabwe*. Gweru: Mambo Press, 2004.
Bhebe, Ngwabi. *The ZAPU and ZANU Guerrilla Warfare and the Evangelical Lutherahn Church in Zimbabwe*. Gweru: Mambo Press, 1999.
Bhebe, Ngwabi, and Terence Ranger, eds. *Soldiers in Zimbabwe's Liberation War*. Harare: University of Zimbabwe Publications, 1995.
Brickhill, Jeremy. "Daring to Storm the Heavens: The Military Strategy of ZAPU 1976–1979." In *Soldiers in Zimbabwe's Liberation War*, edited by Ngwabi Bhebe and Terence Ranger, 48–86. London: James Currey, 1995.
Brickhill, Jeremy. "Zimbabwe's Poisoned Legacy: Secret War in Southern Africa." *Covert Action Quarterly* 43 (1992–93): 4–59.
Chipamaunga, Edmund. *A Fighter for Freedom*. Gweru: Mambo Press, 1983.
Chung, Fay. *Re-Living the Second Chimurenga: Memories from Zimbabwe's Liberation Struggle*. Uppsala: Nordic Africa Institute, 2006.
C-U Coalition against Apartheid flyer. African Activist Archive, 1977.
Damasane, Paul. 2014. "Spirituality in the Struggle for Independence." *The Sunday Mail*, July 6.
Daneel, Martinus. *Guerrilla Snuff*. Harare: Baobab Books, 1995.
Davies, J. C. A. "A Major Epidemic of Anthrax in Zimbabwe, Part 1." *Central African Journal of Medicine* 28 (1982): 291–298.
Davies, J. C. A. "A Major Epidemic of Anthrax in Zimbabwe, Part 2." *Central African Journal of Medicine* 29 (1983): 8–12.
Dhliwayo, Jabulani. *The Endless Journey: From a Liberation Struggle to Driving Emerging Technologies in Africa*. CreativeSpace: Jabulani Simbini Dhliwayo (self-published), 2012.
Feierman, Steven, and John Janzen, eds. *The Social Basis of Health and Healing in Africa*. Berkeley: University of California, 1992.
"The Grim Reality of War." 1978. *Africa News* (US), June 26.

Godin, Benoit. "Innovation: The History of a Category." *Project on the Intellectual History of Innovation* (Working Paper # 1). Montreal, 2008.
Gwaunza, Musah. 2014. "Sakupwanya: 'Doctor of the War' Par excellence." *The Manica Post*, July 11.
"Health Services at Risk", *Focus* (UK) (September 1977).
Herald Reporter. 2011. "VP Nkomo Mourns Bango." *Herald*, May 24.
Herald Reporter. 2014. "Pswarayi Hero Status Clarified." *The Herald*, June 12.
Hoffman, Bruce, Jennifer M. Taw, and David Arnold. *Lessons for Contemporary Counterinsurgencies: The Rhodesian Experience*. Santa Monica, CA: RAND, 1991.
Huni, Munyaradzi. 2012. "Chitepo's Death: Survivor's Horror Account." (Interview with Bensen Kadzinga, War Name Sadat Kufamazuva). *The Sunday Mail*, December 1.
Huni, Munyaradzi. 2012. "A Humble and Bitter War Commander" (Interview with Retired Brigadier Ambrose Mutinhiri). *The Sunday Mail*, August 2.
Huni, Munyaradzi. 2012. "Gabarinocheka: He Rose from the 'Dead'." (Interview with Cde Chinodakufa). *The Sunday Mail*, August 25.
Huni, Munyaradzi. 2012. "Rutanhire Relives Horrors of the War." (Interview with Jackson Musanhu, War Name Cde George Rutanhire). *The Sunday Mail*, December 15.
Huni, Munyaradzi. 2013. "Cde Chinx: Music was My Gun." (Interview with Dick Chingaira Makoni, War Name Cde Chinx). *The Sunday Mail*, May 19.
Huni, Munyaradzi. 2013. "Chimoio Massacre: A Doctor's Nightmare." (Interview with Felix Muchemwa). *The Sunday Mail*, March 10.
Huni, Munyaradzi. 2013. "Commander Who Captured the First White Man." (Interview with Luke Mushore War Name Dick Joboringo). *The Sunday Mail*, February 17.
Huni, Munyaradzi. 2013. "Face-to-Face with the Real 'Gandangas'." (Interview Onias Garikai Bhosha, War Name Cde George Gabarinocheka). *The Sunday Mail*, January 6.
Huni, Munyaradzi. 2013. "Give Me My Gun, My Grenade: I Want To Die." (Interview with Akwino Aquous Muwoni, War Name Guerrilla Texen Chidhakwa). *The Sunday Mail*, April 27.
Huni, Munyaradzi. 2013. "The Gun was a Prison for Sell-outs." (Interview with Wereki Sandiani, War Name Cde Philip Gabella). *The Sunday Mail*, May 26.
Huni, Munyaradzi. 2013. "The Rear was a Big War Front." (Interview with Tendai Kuzvidza, War Name Cde Hondo Mushati). *The Sunday Mail*, May 26.
Huni, Munyaradzi. 2013. "The Rear was a Big War Front." (Interview with Tendai Kuzvidza, War Name Cde Hondo Mushati). *The Sunday Mail*, June 8.
"Interview: Dr. Timothy Stamps, Minister of Health, Zimbabwe." *PBS*, 1998.
Jasanoff, Sheila. *States of Knowledge: The Co-Production of Science and the Social Order*. London: Routledge, 2006.
Kadungure, Samuel. 2014. "Candid Talk with a Heroine." *The Manica Post*, August 31.
Kadungure, Samuel. 2014. "Cde Bandera: Selfless, Gallant Fighter." *The Manica Post*, September 5.
Karsholm, Preben. "Memoirs of a Dutiful Revolutionary: Fay Chung and the Legacies of the Zimbabwean Liberation War." Introduction to Fay Chung, *Reliving Chimurenga*, 7–25.
Kriger, Norma. *Zimbabwe's Guerrilla War: Peasant Voices*. Cambridge: Cambridge University Press, 1992.
Lamont, Bishop Donal. *Speech from the Dock*. Leigh-on-Sea: Kevin Mayhew, 1977.
Lan, David. *Guns and Rain: Guerillas and Spirit Mediums in Zimbabwe*. London: James Currey, 1985.
Lawrence, J. A., C. M. Foggin, and R. A. Norval. "The Effects of War on the Control of Diseases of Livestock in Rhodesia (Zimbabwe)." *Veterinary Record* 107 (1980): 82–85.
Lester, Craig. *Protection of Light Skinned Vehicles against Landmines – A Review*. Melbourne: DSTO Aeronautical and Maritime Research Laboratory, 1996.
Mavhunga, Clapperton Chakanetsa. "Vermin Beings: On Pestiferous Animals and Human Game." *Social Text* 29, no. 1 106 (2011): 151–176.
Mazinyane, Abel. 2015. "Cuba's Contribution to Liberation Struggle for Southern Africa." *The Sunday News*, July 12.
McLaughlin, Janice. *On the Frontline: Catholic Missions in Zimbabwe's Liberation War*. Harare: Baobab, 1996.
Medical Aid to Zimbabwe. *Medical Aid to Zimbabwe (brochure)*. New York: MAZ, 1976.

Mhanda, Wilfred. *Dzino: Memories of a Freedom Fighter*. Harare: Weaver Press, 2011.
Mufuka, Ken. K. Mandizvidza, and J. Nemerai. *Dzimbahwe: Life and Politics in the Golden Age*. Harare: Harare Publishing House, 1983.
Mukwenje, Sydney. 2013. "My Liberation War Experience: Part Four … Captured, But Released." *The Patriot*, December 12.
Musungate, Tabeth Hazvinei. 2014. "Father Relives Battle of Mavhonde." *The Patriot*, July 10.
Mutambara, Aggrippah. *The Rebel in Me: A ZANLA Guerrilla Commander in the Rhodesian Bush War, 1975–1980*. Solihull: Helion, 2014.
Mutanda, Freedom. 2015. "A Combatant's Reflections on War." *The Manica Post*, May 15.
Mutanda, Freedom. 2015. "Age Couldn't Dissuade His War Effort." *The Manica Post*, July 31.
Mutanda, Freedom. 2015. "It Was No Walk In The Park: Mapuranga." *The Manica Post*, May 8.
Mutanda, Freedom. 2015. "Muumbe, the Mujibha of Mujibhas." *The Manica Post*, March 20.
Mwale, Emergency. 2014. "Stark Reminder of the War on the ZIPRA Front." *The Patriot*, March 20.
Nass, Meryl. "Anthrax Epizootic in Zimbabwe, 1978–1980: Due to Deliberate Spread?" *PSR Quarterly* 2 (1992): 198–209.
Nass, Meryl. "Zimbabwe's Anthrax Epizootic." *Covert Action* 43 (1992–93): 12–18.
Ndlovu, Mary. Interview with David Beer," Toronto, Canada, August 12, 2011. Zenzo Nkobi Photographic Archive, SAHA and Mafela Trust.
Ndlovu, Mary. "Interview with Dr. Benjamin Dube," Bulawayo, October 14, 2011. Zenzo Nkobi Photographic Archive, SAHA and Mafela Trust.
Ndlovu, Mary. "Interview with Regina Ndlovu," Bulawayo, May 6, 2011. Zenzo Nkobi Photographic Archive, SAHA and Mafela Trust.
Ndlovu, Mary, and Zephaniah Nkomo. "Interview with Ellingworth Poli," Bulawayo, November 14, 2011. Zenzo Nkobi Photographic Archive. SAHA and Mafela Trust.
Ndlovu, Mary, and Zephaniah Nkomo. "Interview with Longman Ndebele", Bulawayo, March 1, 2011. Zenzo Nkobi Photographic Archive, SAHA and Mafela Trust.
Ndlovu, Mary, and Zephaniah Nkomo. "Interview with Thadeus Parks Ndlovu," Bulawayo, December 11, 2010. Zenzo Nkobi Photographic Archive, SAHA and Mafela Trust.
Ngulube, Salimu. 2014. "She Felt Being Chimbwido was not Enough: Part Two." *The Patriot*, February 6.
Nhongo-Simbanegavi, Josephine. *For Better or Worse? Women and ZANLA in Zimbabwe's Liberation Struggle*. Harare: Weaver, 2000.
"Nkomo, John, ZAPU – Secretary of Administration, Minister of Local Government and Rural Development," Interview, Harare, July 21, 1995. Liberation in Southern Africa – Regional and Swedish Voices, Nordic Africa Institute, Aluka.
van Onselen, Charles. *Chibaro: African Mine Labour in Southern Rhodesia*. London: Pluto Press. 1976.
Parker, Jim. *Assignment Selous Scouts: Inside Story of a Rhodesian Special Branch Officer*. Alberton: Galago, 2006.
Ranger, Terence. *Peasant Consciousness and Guerrilla War in Zimbabwe*. London: James Currey, 1985.
Ranger, Terence. *Revolt in Southern Rhodesia*. London: Heinemann, 1967.
Ranger, Terence. *Voices from the Rocks: Nature, Culture and History in the Matopos Hills of Zimbabwe*. Oxford: James Currey, 1999.
Rhodesian Army G Brank. *Soldier's Handbook of Shona Customs*. Salisbury: Rhodesian Army G Brank, 1975.
Ruvando, Vitalis. 2015. "Indigenous Spirits: Enduring Vicars of Revolutions." *The Patriot*, January 29.
Sadomba, Zvakanyorwa. *War Veterans in Zimbabwe's Revolution*. London: James Currey, 2011.
SAHA (South African Historical Archives) *ZAPU through Zenzo Nkobi's Lens*. 2012. http://www.saha.org.za/publications/zapu_through_zenzo_nkobis_lens.htm
Sellström, Tor. *Sweden and National Liberation in Southern Africa Vol. 1*. Uppsala: Nordiska Afrikainstitutet, 1999.
Siamonga, Elliot. 2014. "Rhodesian Landmines Stalk Ba Tonga." *The Patriot*, October 30.
Sibanda, Mkhululi. 2014. "War Vet Sibasa Speaks on War." *Sunday News*, July 26.
Smith, Ian. *Bitter Harvest: Zimbabwe and the Aftermath of Its Independence*. London: John Blake, 2008.
Smith, Ian. *The Great Betrayal: The Memoirs of Ian Douglas Smith*. London: Blake, 1997.

Sterne, Max. "Distribution and Economic Importance of Anthrax." *Federation Proceedings* 26 (1967): 1493–1495.
Sunday News Reporter. 2014. "Dube's Military Exploits." *Sunday News*, August 10.
"Sydney Sekeramayi, ZANU – Student in Sweden – Deputy Secretary for Health, Minister of State for National Security," Interview, Harare, July 27, 1995. Liberation in Southern Africa – Regional and Swedish Voices, Nordic Africa Institute, Aluka.
Tekere, Edgar. *A Lifetime of Struggle*. Harare: SAPES, 2007.
Tilley, Helen. *Africa as a Living Laboratory*. Chicago, IL: University of Chicago Press, 2011.
Thomson, Ron. *The Adventures of Shadrek: Southern Africa's Most Infamous Elephant Poacher*. Long Beach, CA: Safari Press, 2001.
Wood, J. R. T. "The Pookie: A History of the World's First Successful Landmine Detector Carrier." 2005. Accessed July 14, 2013 4:42 AM. www.jrtwood.com/article_pookie.asp
ZANU Support Committee. *Medical Aid to Zimbabwe*. New York: Zimbabwe Support Committee (brochure), 1976.
ZIMA (Zimbabwe Medical Association) "Report by Publicity Secretary to ZIMA Committee on the Weekend Conference," Leiden, Holland, Saturday/Sunday 23–24 June, 1979. Aluka.
ZMD. "Benefit Rummage Sale" (Saturday May 5, 1979). African Activist Archive, Michigan State University.
ZMD. *Zimbabwe Medical Drive* (brochure). Seattle, WA: ZMD, 1978–1979.
ZMD (Zimbabwe Medical Drive). "Dumi and the Maraire Marimba Ensemble Benefit Dance." (Friday, Nov. 17, 1978) (poster). African Activist Archive, Michigan State University, 1978.
ZSC (ZANU Solidarity Committee) *Zimbabwe Not Rhodesia: The African people's Struggle for Independence and Liberation*. New York: Zimbabwe Solidarity Committee, 1979.