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Firearms in the East African Hinterland and Their Impact on the Military Strategies of Indigenous Armies, 1800–1907

Abstract

This article is devoted to the assimilation and use of firearms in the East African hinterland (i.e., the zone extending circa 400 km west of the coast of present-day Kenya and Tanzania) and to their influence on the warfare of its people from the mid-nineteenth century until the end of the Maji Maji Rebellion. The author also examines the various obstacles to the local acquisition and adaptation of firearms to warfare, namely the cultural, technical, socio-economic and political factors.

The author argues that most of the societies in the hinterland adopted firearms for military purposes during the period scrutinised. The exceptions were those who perfected their warfare, basing it on models from the highly militarised Maasai and Ngoni peoples; these models were developed based on military training within age classes. In principle, such choices resulted indirectly from restrictions on the sale of gunpowder imposed by the Sultanate of Zanzibar, and, more directly, from an insignificant share in the caravan trade. Cultural factors and technical aspects of handling firearms were often secondary barriers, gradually overcome in the process of adaptation.

The author believes that in some armies of the hinterland, especially towards the end of the post-colonial era, separate formations equipped with specific types of weapons, including firearms, were created. This made it possible to diversify armies' tactical tasks and, consequently, to enhance their effectiveness, especially in offensive operations. Various types of fortifications were also improved and adapted to defensive purposes. However, such processes were possible mainly in armies belonging to centralised (although often tiny) polities. Since the wide dissemination of firearms essentially inhibited the processes of centralisation, such changes had limited scope for broad application.

Słowa kluczowe: Afryka Wschodnia, XIX wiek, historia, okres przedkolonialny, kolonializm, wojna, broń palna

Keywords: East Africa, nineteenth century, history, pre-colonial era, colonialism, war, firearms

This article examines the spread and military use of firearms in the hinterland region of East Africa, as well as the changes in military strategy their presence triggered during the nineteenth century. Although the caravan trade and its connections with local ruling elites decisively contributed to the proliferation of firearms, many significant negative factors hampered their use. We demonstrate how various factors – political, technical, cultural, and economic – led to extensive variation in the adoption of firearms by different polities in the region. The use of advanced warfare techniques that did not involve firearms undoubtedly played an important role in slowing down the process. However, even though more centralised communities were more willing to adopt guns, e.g. against well-armed caravans, this weapon was eventually adopted by most societies before the end of the pre-colonial era. Furthermore, the extent to which military strategy was modified under the influence of firearms also varied greatly. These changes primarily concerned defensive measures like the construction of fortifications around political centres and even battlefield earthworks. To understand the reasons behind different degrees of internalisation of firearms, we point to political and social factors, such as the degree of political centralisation and abilty to mobilise labour.

The introduction of new types of firearms has always been related to the state and the technological advancements made by societies[1]. In pre-colonial Sub-Saharan Africa, where almost exclusively either pre-used or obsolete guns from other continents were imported, such interrelation may not be so obvious. However, even if not to the same extent as in Europe, the import of firearms influenced the organisation of armies and warfare. For example, formations equipped with modern guns and artillery gradually became part of the armies of Western Sudan, especially in the coastal states of the Bay of Benin, while traditionally armed cavalry dominated inland areas[2]. In East and Central Africa, during the nineteenth century, firearms transformed the ways of life of various societies due to the rapid development of the caravan trade, which led to the creation of new political entities and the destruction of existing ones[3].

[1] See M.E. Howard, *War in European History*, Oxford 2009; R. Law, *Horses, Firearms, and Political Power in Pre-Colonial West Africa*, "Past and Present", 72, 1976, 1, pp. 112–132; J. Goody, *Technology, Tradition and the State in Africa*, Cambridge 1971. A valuable review of the literature on firearms in Africa from the late Middle Ages to the present was recently published by Felix Brahm: F. Brahm, *Guns in Africa*, in *Oxford Research Encyclopedia of African History*, 2020, https://oxfordre.com/africanhistory/display/10.1093/acrefore/9780190277734.001.0001/acrefore-9780190277734-e-700?p=emailAu54LmqSQXZpk&d=/10.1093/acrefore/9780190277734.001.0001/acrefore-9780190277734-e-700 (accessed 12 September 2025).

[2] R. Law, *The Horse in West African History: The Role of the Horse in the Societies of Pre-Colonial West Africa*, Oxford 1980, p. v. For example, the use of firearms in the army of Samori's state became common and was not limited to obsolete types of guns; furthermore, his subjects produced copies of technically advanced weapons. See, e.g., M. Tymowski, *L'armée et la formation des États en Afrique occidentale au XIXe siècle – essai de comparaison. L'État de Samori et Kenedougou*, Warszawa 1987.

[3] See, among others, A. Redmayne, *The Wahehe people of Tanganyika*, doctoral thesis, University of Oxford, 1964; A. Shorter, *Chiefship in Western Tanzania. A Political History of the Kimbu*, Oxford

Richard Reid's book on East African warfare examines nineteenth-century Ethiopia, Southern Uganda, and, to some extent, West-central Tanzania. The author argues that, despite the influx of various muskets and rifles into the region, they did not necessarily play a fundamental role in these processes or lead to changes in military strategy[4]. Although this article addresses a similar topic, it reaches different conclusions. The reason is that we are focusing on a sub-region that Reid does not actually deal with, and it has not been widely researched with respect to warfare – namely, the hinterland. In this article, we define this zone as the circa four-hundred--kilometre strip between the Indian Ocean coast and more densely populated or ivory--rich areas near the Great Lakes. This area offered coastal caravans fewer resources than the deeper interior, serving as a buffer zone that had to be crossed to obtain resources like cheap ivory and slaves[5]. We exclude from the analysis the societies of West-Central and Central Tanzania. However, we discuss the weapons market of these areas in the section on the proliferation of guns, which helps explain their relative scarcity in the hinterland.

In contrast to the kingdoms of Southern and Western Uganda, Rwanda, Burundi, and North-west and Central Tanzania, the area of our interest remained largely stateless until the colonial period, with the notable exception of the Kilindi state in the Usambara Mountains, which was founded in the eighteenth century. In the second half of the century, changes in political organisation occurred in the region, but state centralisation was not the dominant trend. The Kilindi state practically collapsed in the late 1860s, and the only strong centralised polity that emerged in the second half of the nineteenth century was the Hehe kingdom, located on the western outskirts of the hinterland[6].

Our analysis spans the caravan era and extends slightly beyond the caesura of the Scramble for Africa to capture the continuity of specific processes at a time when Africans were organising themselves militarily against colonial rule. We decided to bring the narrative up to the end of the Maji Maji, i.e. the last major rebellion in the region in the early colonial period. A significant number of sources from the early

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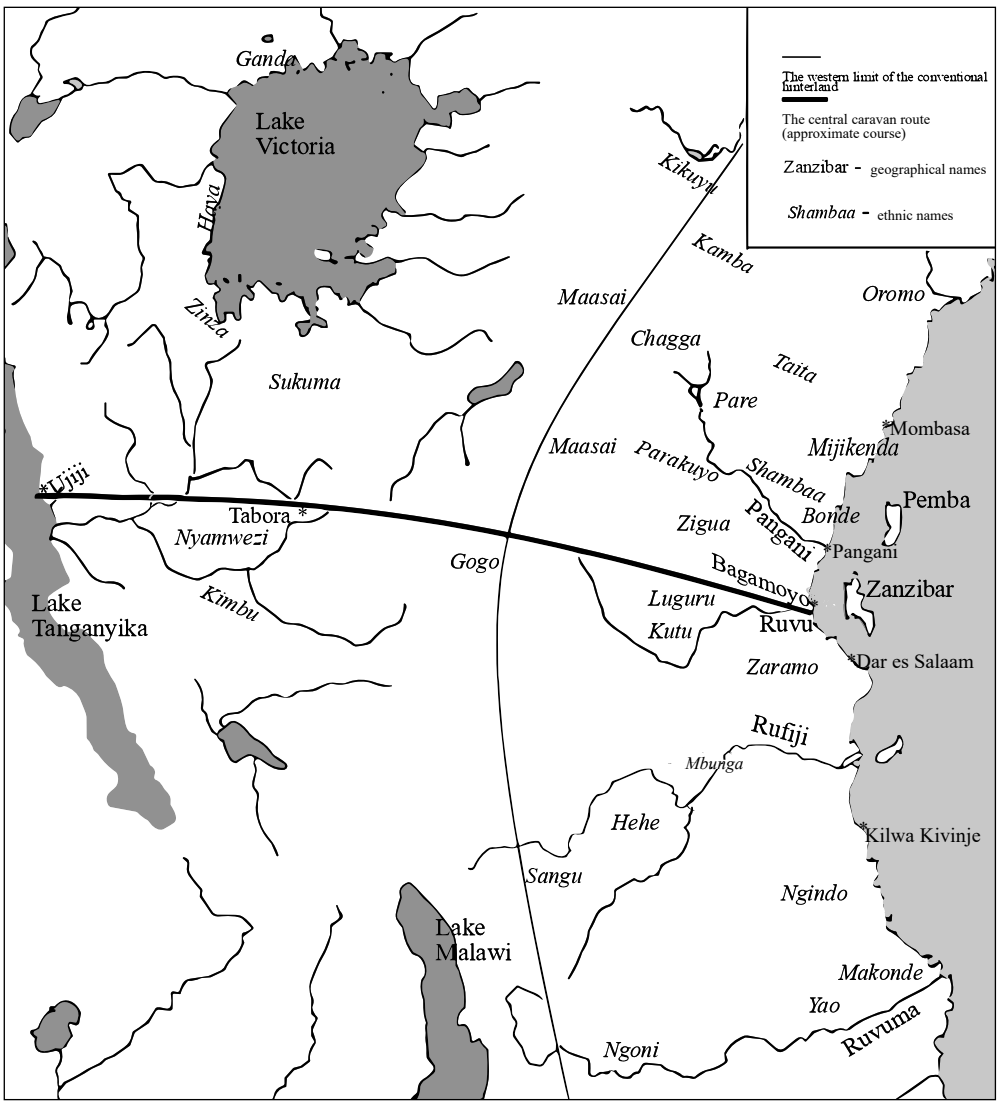
1972; N. Bennett, *Mirambo of Tanzania, ca. 1840–1884*, New York 1971; J. Koponen, *People and Production in Late Precolonial Tanzania. History and Structures*, Helsinki 1988 (Studia Historica, 28); M. Pawełczak, *The State and the Stateless. The Sultanate of Zanzibar and the East African Mainland: Politics, Economy and Society, 1837–1888*, Warszawa 2010.

[4] R. Reid, *War in Pre-Colonial Eastern Africa. The Patterns and Meanings of State-level Conflict in the Nineteenth Century*, Oxford 2007, pp. 42–51.

[5] For a more analytical approach to the concept of hinterland in the context of caravan trade and the political influence of the Sultanate of Zanzibar, see: M. Pawełczak, *The State*, pp. 18–19.

[6] S. Feierman, *The Shambaa Kingdom. A History*, Madison 1974; A. Redmayne, *The Wahehe*. On the new, large-scale polities in central Tanzania that emerged in the second half of the nineteenth century, see: M. Pawełczak, *From marginality to expansion: three polities on the East African central caravan route in the late pre-colonial era*, "Studies in African Languages and Cultures", 58, 2024, pp. 39–66.



Map: Distribution of ethnic groups mentioned in the text, with the conventional border of the hinterland marked

colonial period allow us to capture phenomena and processes that do not appear in pre-colonial texts.

In Reid's opinion, despite their initial popularity, firearms lost significance because solutions that neutralised the effects of shooting were invented or because gunpowder and ammunition were in short supply[7]. Moreover, excessive interest in

[7] R. Reid, *War*, p. 46.

firearms harmed the effectiveness of the armed forces. For example, the author argues that the "gun-cult" prevailing in Buganda hampered the strategic development of its army[8]. Reid believes that having a musket in Eastern Africa was more exemplary of prestige than military power. He contends that in Ethiopia, where the process of replacing spears with guns was very slow, firearms were of secondary importance in warfare, even though the country imported relatively large numbers of them[9]. We believe that the adaptation of weapons to local cultural and military conditions should be seen as a dynamic process that progressed in tandem with the development of the region's prime movers, namely the caravan trade and, later, colonial rule. Taking into account the various types of barriers to the proliferation of firearms, we will demonstrate the growing importance of firearms in terms of their military function. Unlike Reid, we contend that they did modify the military strategies of peoples who had longer and more intense experience with them.

In his book *The Gun in Central Africa*, devoted to the pre-colonial and early colonial period, Giacomo Macola ascribes more importance to the symbolic meanings of firearms than to their purely military use. He argues that in the Central African savanna, "guns did not work solely as hunting and military implements, and their history is poorly served by approaches that do not distinguish between the functional properties of firearms and the set of symbolic values and meanings that they were taken to encapsulate"[10]. In accepting Macola's argument that Africans easily found "alternative uses for firearms", we emphasise the changing attitudes towards guns as their military importance increased. Macola also accentuates the impact that firearms had on those political systems that drew on caravan trade and lacked traditional, including religious, legitimacy[11]. This problem was earlier identified by Juhani Koponen, who noted that the East African leaders who monopolised trade in export products were able to purchase prestige goods and firearms, which fundamentally changed their positions in the community[12]. In this study, we address the role of the networks that tied African structures of power, the Muslim caravan leaders and the Sultanate of Zanzibar together in spreading firearms.

The sources we have analysed include travel and missionary accounts as well as trade and diplomatic correspondence. Although western sources are, as is well known, marked by considerable paternalism and often a comprehension deficit in understanding the social and cultural contexts in which firearms were used, they

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[8] Ibidem, p. 51.

[9] Ibidem, pp. 42–43.

[10] G. Macola, *The Gun in Central Africa. A History of Technology and Politics*, Athens (OH) 2016, pp. 161–162. David Drengk discusses the literature on this topic in more detail, see D. Drengk, *Revisiting the Historiography of Firearms. African Cultural Meanings beyond Warfare*, "Journal of African Military History", 9, 2025, pp. 1–26.

[11] G. Macola, *The Gun*, p. 162.

[12] J. Koponen, *People*, p. 146.

contain valuable observations on the proliferation of weapons and their quality, as well as on technical issues related to use and maintenance. Regarding strategic issues, the most reliable information comes from texts by German colonial officers involved in the suppression of the uprisings in German East Africa in 1888–1890 and 1905–1907. However, we have also examined Swahili sources, notably the autobiography of the famous caravan leader Ḥamad bin Muḥammad al-Murjebī, known as Tippu Tip, and the chronicle *Habari za Wakilindi* by Abdallah bin Hemedi ’lAjjemy, who for many years dealt on behalf of the rulers of Kilindi state in Usambara in the trade in arms and gunpowder, and took part in numerous wars and skirmishes[13].

THE MARKET AND TECHNICAL ENVIRONMENT

While the data on the import of firearms and gunpowder to Zanzibar are relatively reliable, the proportions of these goods that remained on the coast and those that were carried into the interior are unknown. Furthermore, the quantities of these goods that penetrated the region in question from the area of Portuguese East Africa are unclear. For example, residents of the southern borderlands of the Sultanate of Zanzibar easily purchased muskets from the Portuguese territories[14]. This (among others) is the source of the weapons and gunpowder that entered Buganda and the area controlled by Mirambo[15]. In addition, until the early 1880s, weapons were smuggled from the Makalla Sultanate on the Arabian Peninsula to the northern part of the Sultanate of Zanzibar[16].

The table below shows that imports of arms to Zanzibar declined from the late 1850s to the early 1870s, even if we assume that the data from this period are slightly underestimated. The influx began to grow at the end of the 1870s, which could be related to the Zanzibari economic boom at that time, as well as the decline in the world price of weapons. Despite uncertain data from the early 1870s, we assume that the increase in firearms imports between the end of the 1850s and the end of the 1880s was approximately fivefold. Even if most of the weapons remained in the hands of caravan merchants and various military formations of the coast, significant amounts must have reached the peoples of the interior – both the leaders allied with the Sultanate of Zanzibar and groups who preyed on caravan trade. On the coast, muskets in the “Tower” category (i.e., muskets subject to quality control in

[13] Abdallah bin Hemedi ’lAjjemy, *Habari za Wakilindi*, transl. and ed. J.W.T. Allen, Nairobi-Dar es Salaam – Kampala 1962.

[14] The National Archives, London (hereafter NA), FO 84/1575, Kirk to Granville, 12 November 1880.

[15] House of Commons, British Parliamentary Papers (hereafter PP), (1882) c.3160/133, Kirk to Granville, 11 December 1880; PP (1888) c.5603/44, Euan-Smith to Salisbury, 28 July 1888.

[16] NA, FO 84/1678, Kirk to Granville, 23 September 1884.

the Tower of London) cost approximately 3.25–4.25 Maria Theresa Thalers (MTT) per piece in the 1840s[17]. In the 1880s, technically more advanced Winchesters (presumably used) could be purchased for as little as 2–2.5 MTT each[18].

Table 1. Firearms and gunpowder imports into Zanzibar between 1859 and 1888 in Maria Theresa Thalers (MTT)[19]

Years	Powder (value in MTT)	Guns (value in MTT)	Powder (in kg)	Number of guns
1859–1860[a]	40,386	85,830	60,000	22,780
1864–1865[b]	37,582	19,280	18,750[I]	4,820
1867–1868[c]	27,000	51,750	13,500[I]	12,937
1872–1873[d]	32,000	12,000	n.d.	3,000
1873–1874[d]	54,000	45,000	n.d.	13,000
1876–1877[e]	30,400	159,790	n.d.	79 895[II]
1877–1878[e]	123,025	282,340	n.d.	141,170[II]
1878–1879[e]	61,892	266,000	n.d.	133,000[II]
1888[f]	n.d.		c. 35,000[III]	80–100,000

N.d. – no data; I – at a price of c. 0.5–1 MTT/lb, II – at a price of c. 2 MTT/piece, III – data for the first six months of the year.

[a] NA, FO 54/17, Rigby to FO, 1 May 1860; PP (1863), 3229, Commercial reports received by the Foreign Office from HH Consuls, 1862–1863.
[b] PP (1867), 3762, Commercial report of the H.M. Zanzibar Consul, 1866.
[c] NA, FO 881/1936/14/1, Administration report of the Zanzibar Agency, 18 June 1870.
[d] BPP (1876), c.1588/33/1, Report by Captain Prideaux on the trade and commerce of Zanzibar for the years 1873 and 1874.
[e] NA, FO/84/1657, Report by Consul Kirk on the trade and Commerce of Zanzibar for the year 1881, 21 April 1882, fols 11–24.
[f] NA, FO 5732/52, Euan-Smith to Rosebery, 28 June 1888.

Giacomo Macola challenges the claim that the firearms that entered Africa were generally of poor quality[20]. Nevertheless, the low average price of guns and the documented fact that pre-used weapons were often imported indicate that the quality of those available in East Africa left much to be desired. Reportedly, some of them fell apart after the fourth or fifth shot[21]. Low-quality weapons posed a real threat to the

[17] R. Waters to J. Waters, 2 September 1843, in *New England Merchants in Africa. A History Through Documents 1802 to 1865*, eds N. Bennett and G.E. Brooks Jr, Boston 1965, p. 246; Le centre des archives d'outre-mer, Aix-en-Provence, France (hereafter CAOM), fm sg oind 2 10 2, Cpt. Loarer, Ports au sud de Zanguebar, 1848.

[18] R.W. Beachey, *The Arms Trade in East Africa in the late Nineteenth Century*, "Journal of African History", 3, 1962, 3, p. 453.

[19] The years given represent Zanzibari fiscal years. A Zanzibari year was approximately equal to one year in the Gregorian calendar. It began around 20 August.

[20] G. Macola, *The Gun*, p. 56.

[21] "Les Missions Catholiques", 7, 1875, p. 521.

safety of their users, and despite those users being aware of the risk, fatal accidents occurred. A Hamburg merchant house's sales agent reported that muskets sold by his company led to the deaths of 30 people in Kilwa[22]. Even if the recipients of weapons exaggerated the figure, there is other evidence of the prevalence of the problem. The ruler of Usambara, Kimweri III Shekulwavu, died from a wound received from a malfunctioning weapon[23].

Weapons of inferior quality were imported to Africa, explicitly intended for the continent's markets. "Tower" muskets were relatively more durable. However, they also corroded due to the climate's very high humidity. Percussion lock mechanisms, although assumed to be waterproof, often failed. Furthermore, the humid tropical climate made it difficult to store gunpowder in ways that would guarantee its usefulness[24]. Attempts to drain soggy gunpowder also sometimes resulted in fatal accidents. Salia, the ruler of a Chagga chiefdom, was one of 40 victims of an explosion who died in such an attempt[25].

The introduction of newer firearms into European armies had only a limited impact on the situation in East Africa. Breech-loading rifles became popular in Europe in the mid-1860s. By the end of the next decade, European armies were armed with weapons loaded with composite ammunition and equipped with barrels made of steel rather than iron. Old weapons (i.e., muzzle-loaders) still prevailed on the market[26]. From the 1870s, East Africa received older breech-loading rifles withdrawn from circulation in Europe, as well as specialised weapons brought by travellers[27]. It should be noted that the new type of weapons had versions "for the African market", which does not help in assessing the combat value of local armies. For example, in the 1890s, there was a factory in Spain producing cheap imitations of breech-loading Winchesters[28]. More expensive and modern weapons were usually under the control of chiefs and rulers; for example, the courtiers of Chief Rindi of Moshi had Snider rifles[29]. The leaders who had access to breechloaders and compound munitions used them to underscore their prestige. For instance, Arab caravan owners and their confidants used breech-loading rifles and Winchester bolt-action muskets, while their

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[22] Staatsarchiv, Hamburg, O'Swald & Co., 621-1/147/4, Bd. 26, Veers to O'Swald & Co., 10 March 1875.

[23] A.H. 'lAjjemy, *Habari*, pp. 192–193.

[24] R.F. Burton, *The Lake Regions of Central Equatorial Africa, with Notices of the Lunar Mountains and the Sources of the White Nile; Being the Results of an Expedition Undertaken under the Patronage of Her Majesty's Government and the Royal Geographical Society of London, in the Years 1857–1859*, "Journal of the Royal Geographical Society", 29, 1859, p. 78.

[25] L. Wimmelbücker, *Kilimanjaro-A Regional History: Production and Living Conditions, C. 1800–1920*, Berlin 2002 (Studien zur Afrikanischen Geschichte), p. 215.

[26] R.W. Beachey, *The Arms Trade*, p. 452.

[27] J. Roscoe, *Twenty-five Years in East Africa*, New York 1969, p. 54.

[28] G. White, *Firearms in Africa. An Introduction*, "Journal of African History", 12, 1971, 2, p. 176.

[29] H.H. Johnston, *The Kilima-Njaro Expedition*, London 1886, p. 88.

guardsmen carried older weapons[30]. However, by the end of the period under study, modern weapons were finding real use in combat. According to a German officer, a Zigua-Swahili leader of the anti-colonial uprising (1888–1890) called Bwana Heri, who had been a local representative of the Sultanate of Zanzibar's government, used mainly breech-loaders during the siege of his bush fortress[31]. However, the contents of the abandoned camp of another, equally important leader of the insurgents – the former anti-Zanzibari dissident Al-Bashir ibn Salim al-Harthi, better known as Abushiri – indicated that his men mostly used older types of weapons[32].

Contrary to appearances, modernity in the field of firearms has not always been appreciated. In 1870, Richard Francis Burton advised his readers that when travelling to the tropics, they should take muskets with a flintlock that, if necessary, could be converted into an even more primitive matchlock[33]. In the case of flintlocks, the slowness of preparation for shooting was compensated by the fact that they did not require percussion caps or combined ammunition, which were difficult to obtain[34]. According to Burton, even the soldiers of the Sultan's garrisons, the so-called irregulars, used obsolete matchlock muskets with very long barrels. Such barrels improved the effectiveness of the shot, which was nonetheless spoiled by the poor quality of the powder[35]. Muzzle loaders, lacking appropriate ammunition, were often loaded with sundry bits of metal, including nails, which caused dangerous wounds[36].

Archaic weapons were also easy to repair and lacked complicated replacement parts. In contrast, the conservation and storage of modern guns posed significant problems. Macola challenges the claim that Africans had low technical competence in repairing guns[37]. This is not inconsistent with our findings, but it is worth noting that while there were specialists in East Africa who repaired guns, such professionals were not available everywhere. Services of this nature were accessible in Unyanyembe, where bullets were also cast[38], but in the hinterland, where there were not so many guns, there were only itinerant gunsmiths who followed the armed conflicts. In the 1870s, during the Arab war with the forces of Mirambo, the explorer Verney Cameron encountered a twenty-person caravan in Usagara belonging to a blacksmith

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[30] S.T. Pruen, *The Arab and the African. Experiences in Eastern Equatorial Africa during a Residence of Three Years*, London 1891, p. 211.

[31] R. Schmidt, *Geschichte des Araberaufstandes in Ost-Afrika: seine Entstehung, seine Niederwerfung und seine Folgen*, Frankfurt an der Oder 1892, p. 171.

[32] P. Reichard, *Deutsch-Ostafrika. Das Land und seine Bewohner, seine politische und wirtschaftliche Entwicklung*, Leipzig 1892, p. 174.

[33] R.F. Burton, *Zanzibar: City, Island, and Coast*, London 1872, vol. 1, p. 107.

[34] G. White, *Firearms*, p. 179; R.W. Beachey, *The Arms Trade*, p. 451.

[35] R.F. Burton, *Zanzibar*, vol. 1, p. 107.

[36] H.A. Fosbrooke, *Chagga Forts and Bolt Holes*, "Tanganyika Notes and Records", 37, 1954, p. 118.

[37] G. Macola, *The Gun*, p. 56.

[38] R.F. Burton, *The Lake Regions of Central Africa, a Picture of Exploration*, London 1860, vol. 1, p. 328.

who hoped to make a fortune repairing muskets in Unyanyembe[39]. Many experts were of Ganda origin, and in areas closer to the coast, only Swahili and Zigua repaired guns. In the 1880s, in each of the larger villages of the Zigua, there lived a blacksmith who could make replacement parts for a simple model of a shotgun[40].

PROLIFERATION OF FIREARMS IN THE HINTERLAND – POLITICAL, MILITARY AND BUSINESS CONSIDERATIONS

In the coastal region, which was almost entirely controlled by Zanzibar, firearms were in the hands of Zanzibari governors, commanders of irregular garrisons and private individuals. In the mid-nineteenth century, the governor of Kilwa boasted to a French officer that he had a thousand muskets at his disposal[41]. This number exceeded substantially what other governors had managed to amass[42]. It seems, however, that most of the firearms were in private hands. In the 1850s, one of the Arab tribal leaders living in Zanzibar was able to mobilise 2,000 people with rifles, a number that encouraged him to wage war against his own ruler[43]. At the end of the pre-colonial era, most of the coastal inhabitants who owned firearms never parted with them due to a general sense of insecurity[44]. Since the rulers of Zanzibar's finances depended on profits from the caravan trade, they were interested in the permeability of the inland routes, which were usually threatened by wars and banditry. Therefore, unlike in many other regions of the continent, the Zanzibari government attempted to limit or even ban the supply of gunpowder to non-Muslims. The Albusaʿidi rulers, having a dense network of customs and military posts, were able to control trade in gunpowder to some extent. This contributed to its acute shortage in the coastal region[45].

As intended, the prohibition limited the usefulness of muskets for communities that could not count on steady supplies of powder. Although the Kimbu of central Tanzania were producing gunpowder themselves as early as the nineteenth century[46], such circumstances were exceptional in East Africa. In many coastal areas near caravan routes, such as the lower reaches of the Ruvu River, guns were rare even in the 1870s[47]. The Makonde, who were late entrants to the commodity economy,

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[39] V. Cameron, *Across Africa*, New York 1877, p. 81.

[40] C. Picarda, *Autour*, p. 248.

[41] CAOM, fm sg oind 2 10 2, Cpt. Loarer, Ports au sud de Zanguebar, 1848: Kilwa Kivinje.

[42] M. Pawełczak, *The State*, p. 241.

[43] R.F. Burton, *Zanzibar*, vol. 1, p. 262.

[44] Zanzibar National Archives (hereafter ZNA), AA 10/1, Gissing to Kirk, 14 September 1884.

[45] M. Pawełczak, *The State*, pp. 145–159, 344–350; PP (1877), c.1829/255/1, Haggard to Kirk, 9 April 1884; Steere to Kirk, March 1876.

[46] A. Shorter, *Chiefship*, p. 56.

[47] F. Holmwood, *The Kingani River, East Africa*, "Journal of the Royal Geographical Society", 47, 1877, p. 263.

were unfamiliar with firearms until the 1880s[48]. Even most Mijikenda peoples living near Mombasa, involved in exchanges between the city and its hinterland since time immemorial, used only bows until the end of the pre-colonial era[49]. However, both guns and gunpowder leaked into regions in the immediate coastal hinterland. Paradoxically, Zanzibari governors, who were responsible for arms control, spread them to the hinterland non-Muslims when they needed their military aid in suppressing rebellions[50]. Christian missions equipped liberated slaves' settlements with rifles[51]. Coastal peoples offered enslaved people in exchange for manufactured goods, as was the case with the Digo, the only Mijikenda tribe supplied with gunpowder by the mid-nineteenth century[52]. Other distribution centres included colonies of fugitive slaves, some of which sought the protection of anti-Zanzibari dissidents, the scions of old coastal power elites, such as Mbaruk bin Rashid al-Mazruʿi and Ahmed Simba al-Nabahani. Their clients received firearms and powder in exchange for armed service[53].

The gunpowder flowed most readily to those peoples of the near hinterland who had ties of kinship with the town communities of the Swahili coast. The caravans and armies of the interior depended on supplies from the coast or their Muslim counterparts. The complications involved in obtaining the precious material in Usambara are described in detail in *Habari za Wakilindi*. The chieftains of the Kilindi state, which was ravaged by civil war, would send trusted men to the coast. They would supply local chiefs with livestock and ivory in exchange for weapons, powder and flints. It is interesting to note that such transactions were not thoroughly market-based: for example, the ruler's envoy to Pangani, an important port on the northern coast of Tanzania, received gunpowder and flints from the title-holding Swahili notables (*majumbe*), with each bestowing according to the capability rather than the payment received. This type of transaction, therefore, had the characteristics of a political act and a favour that could result in future counter-gifts and services, rather than a purely commercial deal[54]. Aside from this time-consuming and uncertain method, the Kilindi could only rely on obtaining gunpowder from a defeated opponent. The substance was therefore considered the greatest booty that could be gained in war[55].

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[48] J. Kirk, *Ascent of the Rovuma, East Africa*, "Proceedings of the Royal Geographical Society", 9, 1864–1865, 6, p. 286.

[49] Church Missionary Society Archive, University of Birmingham (hereafter CMS), C A5/O/24/50, Rebmann to CMS, 27 October 1847.

[50] "Central Africa", 2, 1884, pp. 147–148.

[51] Universities' Mission to Central Africa Archive, Rhodes House, Oxford University (hereafter UMCA), A1 (IV) A. Porter to Penney, 28 July 1881; ZNA, AA 1/38, Salīm b. ʿAlī to Barghash bin Saʿid, 24 Rajab 1292 [26 August 1875]; UMCA, A1 (VI) A, Wilson to Steere, 15 July 1881.

[52] UMCA, A1 (VI) A, Wilson to Steere, 15 July 1881; PP (1877), c.1829/335, Kirk to Derby, 10 October 1877.

[53] M. Ylvisaker, *Lamu in the Nineteenth Century. Land, Trade and Politics*, Boston 1979, p. 87; M. Pawełczak, *The State*, pp. 145–159.

[54] A.H. 'lAjjemy, *Habari*, pp. 188, 233.

[55] Ibidem, p. 232.

While the Sultanate of Zanzibar attempted to control the hinterland with a few garrisons and a network of friendly political leaders, it was completely incapable of controlling most of the deeper interior[56]. Colonies established by coastal merchants in central and western Tanzania dominated only their immediate neighbourhoods[57]. According to John Iliffe, by 1890, about half of the communities of present-day Tanzania used firearms. We assume that most of the guns went to the distant interior, where ivory was still available after 1850[58]. This point can be illustrated by the prices of weapons obtained on the coast and in areas where they were paid for with ivory – a commodity that was no longer available in the hinterland due to the overhunting of elephants. In the 1880s, Arabs from Tabora in the Unyamwezi region sold Mirambo two Winchester rifles, each worth 5 MTT on the coast, for five *farasila* (about 80 kg) of ivory, worth at least 400 MTT on the coast: a 40-fold return on investment (not including transport costs)[59]. In the 1860s, according to the autobiography of the Arab merchant Hamad bin Muhammad al-Murjebī, 15 pounds of gunpowder worth 2.55 MTT was exchanged in the remote interior for one *farasila* of ivory then worth 60 MTT, giving roughly a 20-fold return[60].

At the turn of the 1880s, caravans brought 30,000 weapons per year to Tabora and its neighbourhood[61]. Local merchants kept up to 30 barrels of gunpowder (each probably containing 25 pounds of powder) in their houses[62]. Through Nyamwezi merchants, some of the muskets passed into the hands of non-Muslim leaders, who paid with ivory and enslaved people. The merchants' most significant customer in the 1870s and the first half of the 1880s was probably the king of Buganda[63]. The merchants were initially careful not to sell arms to neighbouring non-Muslim Nyamwezi chiefs. As Richard Francis Burton wrote in the late 1850s about the circulation of guns in Unyamwezi: "The Arabs are too wise to arm the barbarians against themselves". At that time, the Arabs presented chiefs of the region with old guns, but the most powerful recipients rarely received more than three of them[64]. According to Verney Cameron, who travelled through roughly the same area less than 20 years later, in most of the villages he passed, at least every second man would go into battle armed with a musket[65]. This opinion is confirmed by Henry M. Stanley, who noted that

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[56] M. Pawełczak, *The State*, pp. 325–360.

[57] Ibidem, p. 351.

[58] A. Sheriff, *Slaves, Spices and Ivory in Zanzibar. Integration of an East African Commercial Empire into the World Economy, 1770–1873*, London 1987, pp. 171, 192.

[59] PP (1882) c.3160/142, Kirk to Granville, 12 January 1881.

[60] Hamed bin Muhammed al Murjebi, *Maisha ya Hamed bin Muhammed al Murjebi yaani Tippu Tip, kwa maneno yake mwenyewe*, ed. W.H. Whiteley, Dar es Salaam 1974, pp. 17, 30.

[61] NA, FO 84/1575, Kirk to Granville, 24 August 1880.

[62] R.F. Burton, *The Lake Regions*, vol. 2, p. 308.

[63] PP (1882), c.3160/133, Kirk to Granville, 11 December 1880; PP (1888), c.5603/44, Euan-Smith to Salisbury, 28 July 1888.

[64] R.F. Burton, *The Lake Regions*, vol. 2, p. 308.

[65] R.W. Beachey, *The Arms Trade*, p. 451.

Arab traders "realised their mistake too late", which cost them safety on the caravan routes. They were now determined to take revenge on "anyone who sold weapons to the natives"[66]. In practice, however, these assurances remained unfulfilled[67].

As Unyamwezi became gradually imbued with firearms and its inhabitants continued to frequent caravan routes running to the coast, some supplies may have found their way into hinterland markets. Except for the Nyamwezi and the Yao, who dominated the Lake Nyassa-Kilwa route by the seventeenth century, the most important trading community were the Kamba from central Kenya. By the 1840s, they were buying muskets in Mombasa to defend caravans. Several years later, an Anglican missionary watched a Kamba caravan use musketry to repel a bandit attack[68]. It was not so much local bandits as Muslim caravans, however, that provoked indigenous communities to perfect their defensive capabilities. By the 1840s, the peoples of the interior still had only a very small number of guns, but neither did the visitors from the coast. In the 1830s, an attack by local warriors on a Swahili caravan in the Chagga country occurred. The caravan consisted of several hundred porters but only 32 askaris equipped with guns. The skirmish ended with the extermination of the caravan[69]. While at that time the Chagga only saw guns brought by caravans, firearms later flowed slowly into the country. By the 1850s, some mercenaries in the chiefdom of Moshi possessed guns. By the 1860s, there were muzzle-loaders in another Chagga chiefdom, Mamba. Reportedly, there was a large number of guns in the latter polity by the beginning of the next decade[70]. It is known that Chief Rindi of Moshi was sending caravans of ivory to the coast, presumably to procure guns[71].

By that time, the Kamba faced strong Swahili competition in the caravan trade, due to the latter's advantage in capital and firearms[72]. Caravans heading to the interior in the 1870s and 1880s sometimes consisted of 2,000–3,000 people, and carried as many as a thousand muskets[73]. However, at the same time, other indigenous peoples, located somewhat peripherally to major trade routes, were gaining access to firearms through the Zanzibar trade infrastructure. In the early period (until about 1860), caravan stations of the near hinterland were located outside the region's few hubs of power[74]. In such places, coastal traders established contact with non-Muslim

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[66] H.M. Stanley, *How I Found Livingstone: Travels, Adventures, and Discoveries in Central Africa. Including Four Months' Residence with Dr. Livingstone*, London 1872, pp. 381–382.

[67] PP (1882) c.3160/142, Kirk to Granville, 12 January 1881.

[68] J.L. Krapf, *Travels, Researches, and Missionary Labours during an Eighteen Years' Residence in Eastern Africa*, London 1860, p. 304.

[69] L. Wimmelbücker, *Kilimanjaro*, p. 134.

[70] Ibidem, p. 150.

[71] Ibidem, p. 186.

[72] R.J. Cummings, *Aspects of Human Porterage with Special Reference to the Akamba of Kenya: Towards an Economic History, 1820–1920*, PhD thesis, University of California Los Angeles, 1985, pp. 213–214.

[73] R.W. Beachey, *The Arms Trade*, p. 451; R.F. Burton, *The Lake Regions*, vol. 1, p. 233.

[74] M. Pawełczak, *The State*, pp. 198–199.

communities, such as the Zigua from present-day north-east Tanzania, who received guns from human traffickers in exchange for enslaved people.

One place where such arrangements occurred is Zungomero, a caravan station that was allegedly ruled by a ring of slavers from the coastal town of Windi (north of Bagamoyo). They were assisted by Kisabengo, a Zigua chief ruling from his capital village (later known as Simbamweni) located in the area of the present-day city of Morogoro. Together, they had a total of 300–400 men with muskets under orders[75]. Another Zigua chief received weapons, gunpowder, and ammunition from the Arabs of Zanzibar in exchange for slaves[76]. Participation in the caravan trade and slave hunting brought the Zigua a radical improvement in their political and economic situation, although they never established a centralised polity. In the early 1850s, the chiefs of the northern part of Uzigua, whose territories bordered the Kilindi monarchy, had 600 muskets. The latter polity was considered the strongest in the region until the 1840s. At that time, its ruler, Kimweri II, was unable to effectively control the caravan trade route that circumvented Usambara from the south, resulting in limited access to firearms. Facing the growing challenge of the Zigua, he sacrificed his ivory reserves to purchase 400 guns to arm a special military unit against the intruders from the southern plains[77]. This, however, left an imbalance in Zigua's favour, demonstrating that the resource mobilisation of the strongest state in the region no longer allowed it to offset the predominance of participants in the caravan trade (which was coupled with foreign merchant capital flowing freely into East Africa)[78].

Starting from the 1860s, the coastal merchants used only caravan stations where there were local authorities capable of securing a safe passage, even if this meant paying a high toll. One of those places became the Simbamweni mentioned above. The stockaded village was built in the 1850s as Kisabengo's hub of power. Its location on the plain at the foot of the northern slopes of the Uluguru Mountains enabled the chief to take over Zungomero's functions as the main caravan service centre of the region in the early 1860s. He subdued northern Uluguru and the adjacent plains. While he sidelined the local chief, he never attempted to usurp his ideological authority based on the beliefs of the indigenous population. Typically for all important caravan centres on the central caravan route, Simbamweni was inhabited by a multi-ethnic population, including communities that specialised in agriculture, artisanship, porterage and trade. While Simbamweni, the heir and daughter of Kisabengo (the name of the fortified town comes from the ruler's title), with her co-ruling husband, managed to sustain a good relationship with Muslim merchants, they never accepted Islam. The ruling spouses peacefully hosted caravans but still ruled their

[75] R.F. Burton, *The Lake Regions*, vol. 1, pp. 95, 97; idem, *The Lake Regions of Central Equatorial Africa*, p. 45.

[76] J.L. Krapf, *Travels*, pp. 100, 121; R.F. Burton, *The Lake Regions*, vol. 1, pp. 12, 123.

[77] S. Feierman, *The Shambaa*, p. 141; A.H. 'lAjjemy, *Habari*, p. 23.

[78] A. Sheriff, *Slaves*, pp. 128–137.

neighbours as oppressive aliens using the strength conferred by their firearms superiority. During the 1870s and 1880s, their authority was reinforced by a solid alliance with the Sultan of Zanzibar, which allowed them easier access to gunpowder[79].

Other caravan centres in the hinterland were ruled by diarchic regimes consisting of a semi-official (often Muslim) agent of Zanzibar who championed the interests of caravan merchants and a local non-Muslim leader, a member of the "founding lineage" with whom the former had sometimes cognate ties. In other cases, the regional leader would convert to Islam to increase credibility with coastal visitors and gain an edge over local competitors with regard to firearms and gunpowder. These were critical under such regimes, as the mass of the population rarely followed the leadership, and maintaining harmony was difficult. By the 1870s, however, it was not internal conflict that was most dangerous but instead small polities or bands that made a living by looting caravans[80].

OBSTACLES TO THE PROLIFERATION OF GUNS AND ALTERNATIVE PATHS TO MILITARY POWER

From the perspective of political organisation, at the beginning of the nineteenth century, the eastern and central East African hinterland was almost entirely decentralised. Only in a handful of areas in north-eastern and central Tanzania (including Chagga and Pare) were up to a few dozen small chiefdoms established. The only state in the area, ruled by the Kilindi, lay in the Usambara mountains. It was established in the eighteenth century; its territorial expansion peaked in the mid-nineteenth century before plunging into civil war over a succession conflict in the 1860s[81]. The changes in the region over the century were primarily due to two major factors, the effects of which significantly increased during the period. The first was the long-distance caravan trade focusing on slaves and ivory; the second was the intrusions of warlike peoples, especially the Maa-speakers and the Ngoni, which led to a series of migrations and changes in political and military organisation[82].

The "Maasai wars", in which different Maa-speaking tribes struggled for pastures in the first half of the nineteenth century, resulted in the participants raiding settled agricultural communities as far as the coastal area. Furthermore, some of the belligerent groups ousted from areas suitable for grazing cattle were forced to switch to a different mode of subsistence. As traditional systems of warfare were embedded in certain socio-economic conditions and required a strong ideological underpinning,

[79] M. Pawełczak, *The State*, pp. 202–203.

[80] N. Bennett, *Studies in East African History*, Boston 1963, pp. 76–80; M. Pawełczak, *The State*, pp. 354–358.

[81] S. Feierman, *The Shambaa*, p. 155.

[82] M. Pawełczak, *The State*, pp. 154–162.

the Parakuyo, a Maa-speaking group of pastoralists who had been decimated and deprived of their pastures by the Purko-Kisongo Maasai, considered themselves incapable of cultivating the Maasai style of fighting. By the early 1850s, some of them were adopting guns as an alternative means of defence[83].

On the other hand, neighbours of the Maasai borrowed elements of the latter's methods of warfare, which in some cases also involved imitating specific aspects of their social organisation. A good example is the Kikuyu people, who, despite living near the caravan route leading to Lakes Victoria and Turkana, did not assimilate firearms before the end of the pre-colonial period. The Kikuyu, who had previously been routinely robbed of their cattle by the Maasai, began to resist them fiercely, using not only Maasai spears, swords, shields and battle array but also by adopting forms of the enemy's social organisation, namely age-sets[84]. The same was true of the Gogo people living on the central caravan route in the area immediately west of the Usagara Mountains[85]. Among the hinterland peoples, the Maasai way of fighting was not widely adopted, possibly due to different socioeconomic conditions, but also the relative ease with which firearms could be accessed. The availability of Maa-speaking mercenaries may help to account for the non-adoption of Maasai tactics as well. Some peoples only borrowed elements of the Maasai technique and supplemented them with skills or weapons from other sources, such as the Taita, who fought as mercenaries for the rulers of Usambara and Chagga[86]. In addition to Maasai-style spears, shields and swords, they used bows and poisoned arrows[87]. They began to adopt guns only as late as the 1880s, despite their early nineteenth-century involvement in the caravan trade[88].

Another type of formation using eclectic weaponry and battle array was the *ruga ruga*, bands of armed men imitating the martial art of Nguni-speaking immigrants from South Africa (who, in East and Central Africa, were most often referred to as "Ngoni")[89]. Such units fought as the armies of the rulers of the new, large polities of central and western Tanzania, including Mirambo and Nyungu-ya-Mawe, but also plundered independently. As with the Maasai, elements of Ngoni tactics and weaponry were assimilated by societies and militarised groups in present-day eastern and south-eastern Tanzania. A good example is the Mbunga, a community based in the Kilombero Valley and the Uhutu country (south of the Uluguru Mountains), which

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[83] Ch. Jennings, *Scatterlings of East Africa: Revisions of Parakuyo Identity and History, c. 1830–1926*, PhD thesis, University of Texas at Austin, 2005, p. 142.

[84] L.S.B. Leakey, *The Southern Kikuyu before 1903*, vols 1–3, London – New York – San Francisco 1977–1978, vol. 1, pp. 310, 337; vol. 2, p. 577; J.L. Berntsen, *The Maasai and Their Neighbors: Variables of Interaction*, "African Economic History", 1, 1976, 2, p. 8.

[85] CLAUS 1911, p. 31.

[86] L. Wimmelbücker, *Kilimanjaro*, p. 151.

[87] E.H. Merritt, *A History of the Taita of Kenya to 1900*, PhD thesis, Indiana University, 1975, p. 144.

[88] Ibidem, p. 202.

[89] M. Pawełczak, *The State*, p. 162.

formed in the 1860s from a conglomerate of various peoples. They gathered around a group that was earlier assimilated by Nguni emigrants and emulated their art of war using similar spears and shields[90]. Like the Maasai, the Mbunga successfully dealt with gun holders, both caravans and hinterland peoples, such as the Kingaru subjects from the north-eastern part of the Uluguru mountains, a region not too distant from the main East African trade route[91].

The adoption of Ngoni military patterns, as with the Maasai, was a typical response from victimised societies deprived of access to firearms and gunpowder. The Ngoni raided their neighbours for slaves and cattle[92]. Among these neighbours were the Hehe, whose territory lay outside the caravan routes. They were constantly harassed by the Ngoni until the 1870s, when, by imitating their armament and centralisation of political structures, they gradually regained sovereignty and became the more aggressive party in the long-standing conflict[93]. Although the Hehe emulated the "Zulu" type of warfare, they did not follow the model of military mobilisation based on age-sets, and introduced certain innovations, such as throwing spears[94].

Notably, muskets did not easily gain popularity among peoples who had assimilated effective gun-free war-fighting methods. Raising the topic of cultural barriers to the use of firearms, Macola contends that the Ngoni saw guns as a threat to their social order and traditional military organisation[95]. This may be confirmed by the fact that a German officer from the early colonial period noted that the so-called "Zulu" (i.e., Nguni language users from Portuguese East Africa serving in the German colonial army) did not trust the modern Mauser rifles with which they were equipped, because they "did not see properly the effects of their use". For this reason, they would choose the familiar-looking shields and spears of the Mbunga, who had fallen on the battlefield, to fight with, instead of guns[96]. On the other hand, the Hehe, who modelled their military organisation after Nguni patterns and did not use firearms before 1877[97], finally adopted them to a limited extent[98].

Among peoples who had access to firearms and gunpowder, resistance to adopting firearms may have arisen from various practical reasons. Irrespective of the quality of the guns, the basic factor impairing the efficacy of East African users was the

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[90] "Les Missions Catholiques", 17, 1885, p. 537.

[91] Archives générales spiritaines, Chevilly-Larue, France (hereafter AGS), Tununguo journal, Introduction.

[92] A. Shorter, *Chiefship*, pp. 239, 246–247.

[93] A. Redmayne, *The Wahehe*, pp. 140–141; P. Redmond, *The Politics of Power in Songea Ngoni Society*, Chicago 1985, pp. 53–55.

[94] D. Pizzo, *To Devour the Land of Mkwawa. Colonial Violence and the Hehe-German War in East Africa c. 1884–1914*, PhD thesis, University of North Carolina, Chapel Hill 2007, pp. 55–56.

[95] G. Macola, *The Gun*, p. 162

[96] P. Reichard, *Deutsch-Ostafrika*, p. 173.

[97] A. Redmayne, *The Wahehe*, p. 192.

[98] G. Brown, A.M. Hutt, *Anthropology in Action: An Experiment in the Iringa District of the Iringa Province, Tanganyika Territory*, London 1935, p. 32.

lack of training. This required extra supplies of bullets and, more importantly, powder, which was scarce due to Zanzibari legal restrictions. Even the Swahili – who had the easiest access to powder – were not considered good marksmen. According to a pioneer missionary's patronising comment: "When attacked, the men will turn out with a great noise, and fire off their long 'Tower' flint-lock guns without aim, but as soon as one of their number is down, they take to their heels like hares. I think this is a characteristic of most East African communities"[99]. Considering that coastal Muslim merchants often taught their allies from the interior how to use weapons[100], it can be assumed that their marksmanship was not superior.

Numerous accounts indicate that gunshots aroused panic among non-Muslim peoples who did not know how muskets worked. Even the display of weapons was often intended to produce an intimidating effect. Not far from the coast, near the present-day Kenya–Tanzania border, men were observed parading around with long muskets and huge powder horns, which contained neither powder nor bullets[101]. There was a belief that shooting not only intimidated the enemy but also stimulated the shooters. Henry M. Stanley, reporting on the attack by Unyanyembe Arab forces on the headquarters of a chief, writes of warriors firing "to encourage themselves with noise or to strike terror into the hearts [of the enemy]"[102]. A decade earlier, John H. Speke noted that Africans judged the quality of weapons by the loudness of the shot[103]. Even if this observation may have resulted from the author's racial prejudices, the belief in the deterrent power of the sound of a gunshot remains a rational response. This approach may explain the excessive consumption of gunpowder, despite its chronic shortage. It was reflected in the ways weapons were loaded. Typically, twice the amount of gunpowder necessary was put in the barrel. East Africans did not use a wad, placing the bullet directly on the powder. Such practices often resulted in an explosion when the shot was fired[104]. Additionally, mining powder was commonly used; this destroyed the gun after a few shots[105]. To avoid the effects of excessive recoil, shooters held their shotguns with both hands, away from the shoulder, which in practice made effective aiming impossible[106].

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[99] T. Last, *A Visit to the Wa-itumba Iron-Workers and the Mangaheri, near Mamboia, in East Central Africa*, "Proceedings of the Royal Geographical Society", New Monthly Series, 5, 1883, 10, p. 583.

[100] K.M. Stahl, *History of the Chagga People of Kilimanjaro*, London 1964, p. 249.

[101] R.F. Burton, *The Lake Regions*, vol. 2, p. 308. In Sofala, located in Portuguese East Africa, a British Navy officer noticed soldiers who sported muskets without locks, see T. Boteler, *Narrative of a Voyage of Discovery to Africa and Arabia. Performed in His Majesty's Ships Leven and Barracouta from 1821 to 1826 under the Command of F.W. Owen. In Two Volumes*, London 1835, vol. 1, p. 336.

[102] H.M. Stanley, *How I Found*, p. 280.

[103] J.H. Speke, *Journal of Discovery of the Source of the Nile*, Edinburgh 1864, p. 35.

[104] UMCA, A1 (IV) *A.H. Golddart's correspondence* [n.d., probably 1881].

[105] R.F. Burton, *The Lake Regions*, vol. 2, p. 308.

[106] C. von der Decken, O. Kersten, *Baron Carl Claus von der Decken's Reisen in Ost-Afrika in den Jahren 1859 bis 1865*, Leipzig–Heidelberg 1869–1871, vol. 1, p. 323.

In tandem with this narrative are references to Africans who used weapons for purposes that had little to do with military needs: to deter pests that threatened the harvest; to ignite fires; to announce one's presence or the arrival of a caravan or an important person; to convey a specific message; or to announce the beginning of a celebratory feast[107]. Although such uses of firearms should not come as a surprise to a Western reader, when coupled with information about low technical culture and doubtful military effectiveness, they reinforce the narrative about Africans' inability to use the European products of modernity according to their primary purpose. Furthermore, authors of Western accounts often present the Africans' experience with firearms in the context of the dominant local worldview, which was based on belief in witchcraft. Many accounts suggest that Africans were afraid not only of the deadly power of bullets, but also of the magical force embedded in guns. For example, the Oromo of today's northern coastal Kenya allegedly did not dare to enter the house where they were kept or even come within a few meters of it[108]. In the mid-nineteenth century, when the missionary Johann Ludwig Krapf was on his way to the Usambara Mountains, he received a request from the village headman to fire his muskets to drive away evil spirits[109]. During this period, it was even believed on the coast that gunshots helped to disperse a tornado[110]. Nearly two decades later, Stanley noticed that among the Manyema (of the eastern part of today's Democratic Republic of the Congo), who had only recently heard the sound of gunfire for the first time, the noise aroused mortal fear. The people believed that the Arabs had "stole[n] the lightning" and concluded that using bows and arrows against firearms was pointless[111].

It may seem that these accounts support Macola's thesis that firearms were incorporated into the world of African symbolism, not only socially (where they were synonymous with prestige and power) but also spiritually. However, such observations need to be relativised. Characteristically, the observations quoted above come either from a fairly early period when firearms were barely known, or from areas

[107] S.T. Pruen, *The Arab*, p. 99; J. Thomson, *Through Masai Land. A Journey of Exploration among the Snowclad Volcanic Mountains and Strange Tribes of Eastern Equatorial Africa*, London 1885, pp. 76, 338; J. Thomson, *To the Central African Lakes and Back. The Narrative of the Royal Geographical Society's East Central African Expedition, 1878–80*, London 1881, vol. 2, p. 182; J.H. Speke, *Journal*, p. 144; H.H. Johnston, *The Kilima-Njaro*, pp. 75, 89; H.M. Stanley, *How I Found*, p. 185; J.L. Krapf, *Travels*, p. 321; A.H. 'lAjjemy, *Habari*, p. 154; R.F. Burton, *Zanzibar*, 1872, vol. 1, pp. 391–392; Yohanna b. Abdallah, *Chiikala cha Wayao*, Zomba 1919, p. 29.

[108] C. von der Decken, O. Kersten, *Baron Carl Claus von der Decken's Reisen*, vol. 1, p. 394; vol. 2, 222–223.

[109] J.L. Krapf, *Travels*, p. 269.

[110] R.F. Burton, *Zanzibar*, vol. 1, p. 156.

[111] H.M. Stanley, *How I Found*, p. 381; H.M. Al Murjebi, p. 67. More examples include Bontinck's edition of al-Murjebī's autobiography in ft. 260, see *L'autobiographie de Hamed ben Mohammed el-Murjebi Tippo Tip (ca. 1840–1905)*, transl. F. Bontinck with coll. K. Janssen, Brussel 1974, p. 236.

where, for different reasons, they had not been adopted. Furthermore, belief in the magical power of firearms was easily reconciled with the knowledge of how to use them. A gunshot was treated as a means of intervention in the extrasensory world and only supplemented the use of artefacts usually associated with magical purposes. At the same time, the view does not imply any irrational way of handling the weapons or planning war. As the author of the early colonial chronicle *Habari za Wakilindi* put it, "The Kilindi armed themselves with guns in their hands, horns in their loins, swords under their arms and amulets on their heads"[112]. Interestingly, the author's own attitude towards magic was critical, which may have to do with the modernising influence of Islam on the East African coast that began during the reign of Sultan Barghash (1870–1888)[113].

Increased migration, violence, cultural exchange and the clash of different worldviews in the period 1870–1906 all had an impact on changing attitudes to firearms. For some societies, they became a necessity; in others, ideologies arose that undermined or relativised their destructive potential. There is ample evidence that East Africans believed that the effects of shooting were subject to manipulation. Famous for their proficiency in protective magic, the Taita assumed that they could protect themselves from the bullets of the victims of their raids. The Taita were acquainted with a medicine that, they imagined, made guns burst the moment the trigger was pulled[114]. Later, the Maji Maji insurgents believed that specially prepared water could neutralise the striking power of German bullets. There is evidence that this belief, wrapped in an ideology of anti-colonial resistance, was sometimes challenged in the region controlled by the uprising[115]. Until the Scramble for Africa, the Ngindo had relatively limited experience with muskets, even if they cooperated with caravan merchants. Under German rule, after a short period of official restriction, significant quantities of arms and gunpowder penetrated the interior of East Africa[116], but even during Maji Maji, the Ngindo still used bows and poisoned arrows in battle. On the other hand, among the Matumbi insurgents living closer to the coast, firearms played a significant role. The possession of rifles gave the leader of an insurgent group a higher rank. Commander Ngogota of Pungutini was reported to lead 2,000 men with guns[117], although this figure may be exaggerated. In any case, the

[112] A.H. 'lAjjemy, *Habari*, p. 219.

[113] Ibidem, p. 216.

[114] Ch. New, *Life, Wanderings, and Labours in Eastern Africa. With an Account of the First Successful Ascent of the Equatorial Snow Mountain, Kilima Njaro, and Remarks upon East African Slavery*, London 1873, p. 334. Another version of the belief that it was possible to influence the outcome of a shot assumed the existence of magic rifles. Firing such a weapon prevented the enemy from aiming effectively, see A. Redmayne, *The Wahehe*, pp. 427, 441.

[115] *Records of the Maji Maji. Part One*, eds G.C.K. Gwassa and J. Iliffe, Dar es Salaam 1967, p. 19.

[116] G.A. Graf von Götzen, *Deutsch-Ostafrika im Aufstand, 1905/06*, Berlin 1909, p. 47.

[117] G.C.K. Gwassa, *African Methods of Warfare during the Maji Maji War, 1905–1907*, in *War and Society in Africa*, ed. B.A. Ogot, London 1974, p. 137.

apparent Matumbi familiarity with firearms did not preclude belief in supernatural methods to protect themselves against the enemy's bullets.

GUNS AND TRANSFORMATIONS IN WARFARE

When considering the changes in military strategy resulting from the spread of firearms, one should distinguish between defensive and offensive purposes. Communities whose sole goal was to use guns to deter attackers did not introduce serious strategic innovations. In such cases, guns were treated as auxiliary weapons, and the deterrent effect was all that mattered. As described earlier, firearms were quickly adopted by the peoples of the interior due to increased caravan traffic from the coast. This reduced their sense of security and was not only due to the slave trade. Maasai attacks in the near hinterland peaked in the 1850s. Their main target was cattle, for which they raided both coastal towns – such as Tanga, Vanga and even the suburbs of Mombasa – and the stateless societies of Zigua, Kamba and Mijikenda. Jennings points out that the Maasai attacked people who had firearms, compensating for this lack with their numbers, superior discipline and organisation[118]. Some of their victims, such as Kamba and Mijikenda, appear to have had muskets, but they were unable to resist. The Maasai also clashed with the Swahili caravans that were always armed with guns. In such instances, they threw themselves on the ground under Swahili fire, covering themselves with shields, and then rushed at their enemies as they reloaded[119]. However, while firearms did not provide sufficient protection against large Maasai groups, they appear to have been the best means of defence against petty cattle robbery undertaken by small bands of young warriors. For example, the people of the mountainous Nguu region made extensive use of firearms to defend themselves against the Maasai[120]. One significant advantage of societies armed with firearms was that women were able to participate in their defence[121].

Specific passages of Western travel accounts suggest that East African battles were typically dominated by long-range combat, for which accuracy of shot was not essential. The missionary Septimus Pruen, who repeatedly witnessed battles between various Bantu-speaking peoples, noted that participants often faced each other at a distance beyond the range of the guns and fired at each other with flintlocks "or other obsolete weapons". One such battle lasted 48 hours and did not result in a single casualty[122]. This is clearly a description of a clash between parties who did not

[118] Ch. Jennings, *Scatterlings*, p. 142.

[119] Ibidem, pp. 98–99; J.L. Krapf, *Vocabulary of the Galla Language*, London 1842, pp. 4, 15, 27–28; idem, *Travels*, p. 364; CMS, CA5/O16, Krapf, journal entries, 15 March 1844 and 20 July 1848.

[120] AGS, Mhonda journal, June 1881.

[121] AGS, Tununguo journal, Introduction.

[122] S.T. Pruen, *The Arab*, p. 88.

know how to use guns as lethal weapons, which seems to support Reid's contention. However, neither group may have been interested in going beyond defensive action, shooting to deter their opponent rather than to destroy him. The background to the "lack of strategy" may have been political. Gwassa, writing about the Maji Maji, draws attention to the problem of command in an army that was composed of typically stateless peoples, where leadership was selected based on lineage and clan position. Despite the ideology that bound the insurgents together and their possession of both a certain number of muskets and a strategic concept, their lack of a central command node or structure prevented them from effectively confronting colonial forces, even in offensive operations[123].

The armies with offensive goals often entrusted the offensive military operations to specialised units of musketeers or riflemen. At least some of their members were mercenaries recruited from among alien ethnic groups. Such specialist units were included in both the armies of aggressive polities that emerged from rapid conquest, like that of Mirambo, and those that attacked only for short-term goals and to improve their strategic situation. A good example of the latter is the caravans from the coast that, although focused on trade, attacked and extorted the inhabitants of the interior, especially when they were confident of their superiority in weapons and numbers[124].

In fact, more strategically advanced and better-equipped armies that assigned a specific role to gun-users were associated with centralised polities. These formations fought alongside troops equipped with traditional weapons. Such diversity precluded a situation where, in a prolonged clash, a lack of gunpowder would lead to defeat. This thinking is evident in the Chagga (Kilimanjaro) region, where there were approximately twenty small chiefdoms with populations rarely exceeding five thousand. Some of these chiefdoms competed for their share in the gains from the caravan trade. The first to possess guns were the chiefs of Mamba and Kibosho, who, by mid-century, had become the region's leaders in supplying long-distance trade. In Moshi and Kibosho in the 1880s, firearms constituted 50 per cent of weaponry. Because ammunition was scarce, guns did not completely displace either spears or bows.

As elsewhere, the organisation of warfare required a combination of different formations and types of weapons. The army of Moshi launched an attack with about 100 archers to confuse the enemy, while the spearmen's task was to repel attacks, and the gunmen's was to fire at the enemy from the flanks. The troops covering the retreat were expected to plunder cattle and other movable property[125].

A squad of riflemen emerged in the early 1850s in the Kilindi state. It was called "Duruma", after a people whose caravans armed with guns visited Chagga at that time. They were not foreign mercenaries. Abdallah bin Hemedi 'lAjjemy probably

[123] G.C.K. Gwassa, *African Methods*, pp. 138, 141, 145.
[124] H.M. Al Murjebi, *Maisha*, p. 14.
[125] L. Wimmelbücker, *Kilimanjaro*, pp. 158–159.

referred to the same unit using the words *wavulana walio na bunduki* – young men (or just warriors) equipped with rifles[126]. Although "Duruma" consisted of Shambaa subjects of the Kilindi, the dynasts also hired mercenaries, such as Parakuyo warriors who generally caused fear in the region because of their resemblance to the Maasai[127]. In 1867, Semboja, one of Kimweri II's sons, used Taita warriors to destroy the capital village of the Kilindi state, starting a bloody civil war that lasted until the early 1890s[128]. The Taita continued to fight for the rebel chief. One of their units, called "Swahili", consisted of gun-users[129].

'lAjjemy's portrayal of the earlier stage of the civil war in Usambara (i.e., the late 1860s), which he observed or in which he participated, contrasts with the bloodless spectacle described by Pruen[130]. In the battle near Msigailo, Kimweri III Shekulwavu's forces clashed with his paternal uncle Semboja. It appears that only gun-armed troops fought in the battle, with both parties defiladed in previously prepared firing ditches. The struggle cost a total of 14 casualties on both sides on one day (the figure does not include the number of those killed the next day)[131]. Here, the relatively small number of casualties resulted from the use of effective fortifications and the low quality of the weapons rather than from any lack of war fervour. *Habari za Wakilindi* also describes a three-day battle between the rebellious Bonde people, led by one of the pretenders to the Kilindi throne, and Semboja's allies who opposed him. The latter lost because "they were defeated by the size of the rebellion, and they ran out of gunpowder, shot and flints". Several references in the text prove that guns were of primary importance in this case. Fighting was low-contact, often from protected positions such as the ditches mentioned above[132]. The rebels might have owed their better supply of gunpowder to the fact that their headquarters were closer to the coast and they were generally better connected to the local networks of power, primarily through conversion to Islam[133].

In defensive actions, the introduction of firearms transformed a long-standing method of self-protection practised by East African agricultural peoples. Typically, dispersed populations built stockaded villages that could serve as a refuge in the event of an attack. Such stockades not only defended against armies and armed bands, but also against wild animals. Characteristically, the Kilindi state in the period before 1850 boasted that its villages had no palisades, implying that no enemy would dare attack them[134]. However, Baumann's sketch of the capital village Vugha, from

[126] A.H. 'lAjjemy, *Habari*, p. 193.
[127] Ch. Jennings, *Scatterlings*, p. 125.
[128] S. Feierman, *The Shambaa*, pp. 158–159.
[129] L. Wimmelbücker, *Kilimanjaro*, p. 151.
[130] A.H. 'lAjjemy, *Habari*, pp. 190–191.
[131] Ibidem, pp. 290–291.
[132] Ibidem, p. 231.
[133] Ibidem, pp. 213–216.
[134] "Nachrichten aus ostafrikanischen Missionen", 18, 1904, pp. 26–30; ibidem, 19, 1905, pp. 37–44.

the period of the Scramble for Africa, suggests that it was surrounded by a stockade by that time[135]. In other hilly areas, refugial villages were often hidden among dense bush or forest. Such places were difficult to reach without a local guide. They facilitated easy escape and shelter in the bush in case the enemy managed to break into a village[136].

Bush bomas were still in use during the period of the anti-colonial uprising (1888–1890). One belonging to Abushiri, one of the independent leaders of the insurgents, was a rectangle with a circumference of 800 m, built of palm trunks and, according to local standards, very strong[137]. A German officer wrote that it was more difficult to capture than a fortress that "lay in open country and could thus be seen and attacked from all sides"[138]. However, intermediate solutions were also used in this type of fortress. One of the fortresses that served against the German colonial forces during the uprising of 1888–1890 had an area on the side likely to be attacked cleared. This allowed defenders to fire on the approaching enemy, who were denied cover. Bwana Heri's Mlembule was, as Schmidt narrates, the strongest fortress he had ever seen in East Africa. The compound was apparently adjusted to defend against firearms:

> The four-metre high, solid palisades were backed by earth, packed as high as a man, which our grenades could not pierce. At the corners, proper bastions had been constructed. In front of the palisades, the surrounding, almost impenetrable, primeval jungle had been cleared for about twenty metres, to create a free field of fire[139].

The German commander von Wissmann believed the battle at Mlembule to be "the hardest-fought engagement" of his time in East Africa. The owner reportedly thought that the fortress was too strong for German forces to attempt to attack it. After the colonial army had approached to about 800 metres, defenders started firing from behind the palisade, even though the distance was too great to cause any harm. This was supposed to keep the enemy at a distance, but to no avail. The colonial troops only responded after approaching 300 metres. Since Bwana Heri had a 60-mm cannon, the losses on both sides were substantial[140]. Even if the clearing and use of

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[135] O. Baumann, *In Deutsch-Ostafrika während des Aufstandes. Reise der Dr. Hans Meyer'schen Expedition in Usambara*, Wien 1890, p. 163.

[136] A. Werner, *The Bantu Coast Tribes of the East Africa Protectorate*, "Journal of the Royal Anthropological Institute", 45, 1915, p. 342.

[137] R. Schmidt, *Geschichte*, p. 62.

[138] Quoted after *An Account of the "Abushiri Rebellion" in Tanzania and its Aftermath, 1888–1891 by Rochus Schmidt*, transl. and introd. J.W. East, 2021, p. 65, https://www.academia.edu/63233274/A_History_of_the_Arab_Rebellion_in_East_Africa_Geschichte_des_Araberaufstandes_in_Ost_Afrika_An_Account_of_the_Abushiri_Rebellion_in_Tanzania_and_its_Aftermath_1888_1891_translated_with_an_introduction (accessed 10 October 2025).

[139] R. Schmidt, *Geschichte*, p. 171.

[140] Ibidem, p. 172.

artillery improved the defensive effectiveness of the fortress, and the losses on the colonial side were greater than usual, the result of the clash was easy to predict. About 106 defenders (15–20 per cent of the garrison) were killed in the fortress, against nine people among the attackers (including three Germans)[141]. The fortress was ultimately an insufficient defence in the face of the attacker's significant advantage in firearms.

Fortresses were also constructed in flat, woodless, open terrain, often near rivers. They protected both centres of political power and nodal points on caravan routes. In some cases, they performed both functions, such as the already mentioned Simbamwene. Stanley, who saw it in the early 1870s, assessed its area at half a square mile, although he admittedly exaggerated in claiming that its fortifications were "on [the] Arabic-Persic model" and that "well-built towers of stone guard each corner". The walls, however, were pierced with two rows of loopholes for musketry and were certainly built for defence against firearms[142]. Another example of fortresses built upon flat terrain comes from the Hehe, a society that began to use fortresses against the Nguni intruders. At the outset of the colonial era, despite a sweeping victory with the German colonial forces in a pitched battle in 1891, the Hehe king, Mkwawa, terrified by what he considered a huge loss of over 200 warriors to an enemy well-armed with rifles, resolved to return to the traditional defensive strategy. He concentrated his forces in his main stronghold of Fort Kalenga. The structure was first seen in 1884. The place of the same name that was destroyed by the German army in 1894 was more newly built. It was inhabited by 2000 to 3000 warriors with their families and livestock[143]. It was probably the most extensive pre-colonial fortress in the interior of East Africa, with descriptions and sketches remaining, but it could not mount an effective defence against the tactics of modern warfare. Despite the solid walls and the large river (the Little Ruaha) flowing through the middle of the structure, the sheer size of the irregularly shaped fortifications (*c*. 1500 × 1000 m) did not provide much defence against von Wissmann's forces equipped with machine guns[144].

It can therefore be said that Kalenga was not best suited to the requirements of colonial warfare. However, it probably effectively protected its inhabitants from potential adversaries among the neighbouring societies previously conquered by the Hehe. However, the construction of fortresses in open spaces, both on the plains and in hilly terrain, only began when there was an increased influx of firearms and their use for offensive purposes. This can somewhat be seen in the foothills of Kilimanjaro. Early travellers in Chagga country, such as the missionary Johannes Rebmann, saw

[141] Ibidem, p. 175.

[142] H.M. Stanley, *How I Found*, pp. 115–116; M. Pawełczak, *The State*, p. 203.

[143] G. Brown, A.M. Hutt, *Anthropology*, pp. 35–36; E. Nigmann, *Die Wahehe*, Berlin 1908, p. 77; A. Redmayne, *The Wahehe*, p. 152.

[144] A. Redmayne, *The Wahehe*, p. 166.

only trenches around chiefs' capital villages; but another missionary, Charles New, who was in Kilimanjaro in 1872, also saw thick stone walls everywhere. In 1883, the explorer Joseph Thomson observed the fortress of the chief of Moshi, which had a "triple tree trunk palisade of great strength". The following year, Harry Johnston mentioned that the place served as a refuge for the surrounding population in case of impending war[145]. The proliferation of forts in Chagga country was linked both to the increased movement of caravans in the last decades before the Scramble for Africa and the ambitions of some chiefs keen to expand their influence at the expense of their weaker neighbours[146].

Chief Sina's fortress at Kibosho was considered to be the most elaborate and most difficult to capture in the Kilimanjaro area. It consisted of several interconnected segments, enclosed by a 3-metre-high stone wall with wooden plating, unbreakable wooden gates, and moats that were 10–15 yards deep. The fort owed its fame mainly to its defence against the forces led by Hermann von Wissmann during the Abushiri uprising (in February 1890). Even though its defence against the artillery-using attackers lasted just over 24 hours, its capture posed difficulties for the colonial forces and resulted in more human losses than in other, similar cases[147]. The Chagga, armed with Martini-Henry rifles, fired at the colonial army from the tops of trees and holes in the ground. The Germans' biggest problem, however, stemmed from the complexity of the fortress construction. The German commander did not know how much defensive works were left for him to take. Shelling from defensive positions went on all day and night; at night, Wissman fired his Maxim gun. After the attack the next morning, Sina fled with all his cattle[148].

There is practically no description of siege operations between African adversaries in the hinterland. However, light may be shed on this problem by the description of the siege that took place deeper in the interior as described by Ḥamad bin Muḥammad al-Murjebī, who refers to the attack of his own forces on the fortified village belonging to Kasanura, a chief from Uvinza (north-west Tanzania). Al-Murjebī's advantage in firearms and men over the defenders must have been considerable. The fortress was surrounded by three streams. The fortifications consisted of two palisades, moats and thorny trees. The spaces in the palisades were filled with sand to stop bullets, which proves that they were adapted to defend against opponents armed with firearms. In the line of fortifications, there were "battlements and embrasures for muskets". The defenders apparently understood the economical use of gunpowder and ammunition because they fired only when the enemy approached the outer palisade. Al-Murjebī emphasises the effectiveness of the fortifications, as they held off his superior forces for more than six weeks. Finally, he decided to build a siege machine

[145] Fosbrooke also describes other, smaller fortresses in Chagga; H.A. Fosbrooke, *Chagga Forts*, p. 119.

[146] L. Wimmelbücker, *Kilimanjaro*, pp. 144–152.

[147] P. Reichard, *Deutsch-Ostafrika*, p. 177.

[148] H.A. Fosbrooke, *Chagga Forts*, p. 118.

on wheels, the height of which exceeded the fortress's palisade, which allowed him to shoot at the people inside and, consequently, capture the fort[149].

The above examples, showing only the defeat or retreat of the defenders, are certainly not typical, but they explain the motives for the popularity of fortresses during the era of the spread of firearms. Only an exceptionally numerous, well-armed, well-trained and well-commanded opponent, as can be seen most clearly in colonial armies, was capable of conquering a solid fortress.

CONCLUSION

The course of various conflicts between the polities of the hinterland proves that armies which possessed a considerable number of firearms and sufficient quantities of powder, munitions, and flints were usually more successful than those that had limited access to them. While the societies that had perfected methods of warfare based on traditional social institutions and weapons were not helpless against firearm users, a growing number of those who before 1850 had rarely seen guns adopted them within the next two or three decades. They did so to address problems caused by the region's destabilisation or simply to take their share in the economic successes achieved by competitors.

As we have seen, a range of cultural, technical, and socio-political restrictions limited the use of firearms. A belief in the possibility of manipulating the effectiveness of weapons through spiritual or supernatural means was a psychological phenomenon firmly rooted in an African worldview. This belief did not disappear once the use of weapons became routine, as attested by the Maji Maji uprising. Much more serious were technical restrictions related both to the quality of the guns and to gunpowder. The most difficult to assess are the socio-political constraints. East African polities were most often unable to produce the surplus needed to feed and equip a standing army undergoing constant – or at least consistent – training. Beyond this, however, the problem lay in introducing a command system in decentralised societies that would enforce the discipline necessary to achieve specific strategic tasks. Guns were clearly products of a foreign civilisation, assuming a particular type of human-object relationship and shaped in Europe over a long process of modernisation. However, Africans conscripted into colonial armies where sufficient quantities of powder, ammunition and training personnel were available readily gained the skills involved in handling and maintaining rifles.

Firearms spread unevenly in the interior. The extent to which a society embraced them depended on that community's role and position in the caravan trade as well as on patronage from the Zanzibar government or a coastal community. The strictness with which the Zanzibari government's prohibitive regulations were applied

[149] H.M. Al Murjebi, *Maisha*, pp. 99, 101. See also *L'autobiographie*, ftn. 359, 258.

depended on the particular balance of political power, cultural proximity, and kinship and cognate ties between the coastal people and the residents of the hinterland. Aside from the problem of supplies, the mechanism of firearms' acceptance is primarily one corresponding to the military ascendency of neighbours and armed visitors. The military significance of guns largely lies in their defensive potential. Wars of conquest in pre-colonial nineteenth-century East Africa could be waged effectively without firearms, as proven by the Maasai, Ngoni and other highly militarised societies. In this context, guns were often weapons used by the demographically weak, loosely organised, non-militarised societies who sought a better position amid violent slavers, ubiquitous conflict among indigenous societies, or guerrillas fighting better-armed opponents, as in the cases of the Mirambo war against the Arabs or the fighters of the Maji Maji against colonial troops. Even in the case of caravans, which sometimes terrorised the areas they traversed, the primary function of firearms was their use as a defence mechanism against numerically superior groups.

Other challenges were posed by the offensive use of firearms, especially against opponents who possessed them themselves. The assimilation of firearms in East Africa took a wide variety of forms – from restricted acceptance to complete internalisation, which implies an adaptive process that took place among those societies able to secure permanent access to arms and gunpowder. At the initial stage of the assimilation process, firearms were used for deterrence by 'making noise,' as in the case of those communities that by the end of the period under study had limited quantities of guns and limited handling skills. Complete internalisation, on the other hand, would have meant not only the creation of specialised units regularly training in the art of handling and maintaining weapons, but also assigning them specific roles in different types of military action, as well as mastery in the art of building fortifications. By the end of the period under study, these features existed in some regions, notably parts of Chagga and Usambara with adjacent Bondei and Uzigua. The key to understanding this progress is that these societies lived for decades in a state of near-permanent war and frequently encountered armed caravans, both peacefully and on a war footing, on a near-daily basis.

The above considerations provoke reflection on how the prevalence of firearms in the hinterland influenced the political trends there during the period under study. The fact that even occasional participation in the caravan trade made it possible to obtain firearms prevented higher organised societies (i.e., those possessing central government and other forms of integration such as the age-group system) from expanding at the cost of different communities. The firearms factor also contributed to the anarchisation of life in the interior. The late nineteenth century created better conditions for the small commandos and gangs that mixed different forms of warfare and that had the tactical flexibility to replace firearm-equipped formations with other combat methods in the event of a lack of gunpowder. In the longer run, however, a centralised political structure, regardless of scale, provided greater opportunities for strategic innovation and the mobilisation of labour to build fortifications.

Since the wide dissemination of firearms essentially inhibited the processes of centralisation, such innovations had a limited scope.

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