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Challenging the Myth of Ethiopian Terrain Advantage: An Exploration of the Battle of Adwa

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Abstract

This study recasts the Battle of Adwa through a geographic lens, illuminating the spatial dynamics of troop camps, mobility, time management, and the intricate interplay between armies and terrain. In doing so, it challenges the commonly held narrative of Ethiopia's inherent topographic advantage, uncovering a unifying spatial pattern across the Italo-Ethiopian war's battlefields. Beyond highlighting this shared spatial structure, the study reveals how Ethiopia's geography proved not just a shield, but also a double-edged sword. Its strategic location and geo-economic assets made it a consistent target for invasion, despite the terrain's challenges. Additionally, the research sheds light on the pivotal role of "core-periphery" geopolitics in shaping the war's outcome, as Italian attempts to exploit regional divisions met their match against Ethiopian unity. Furthermore, the study emphasises the crucial element of adaptability in the face of diverse landscapes. Emperor Menelik's spatially-oriented leadership empowered his generals to outmanoeuvre the rigidly positioned Italian army, exemplifying "topographical possibilism" in contrast to the Italians' "topographic determinism" - their dependence on strategic locations for exerting pressure. Ultimately, the Battle of Adwa stands as a testament to the fact that victory doesn't solely reside in the terrain; it hinges on human agency and the ability to adapt and overcome.

Keywords: Terrain advantage, geostrategy, spatial adaptability, determinism vs. possibilism

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Introduction

On March 1, 1896, the Battle of Adwa marked a crucial event in Ethiopian and Italian history. This violent conflict saw both sides suffer greatly, with 11,000 casualties in total, and nearly 43% of the Italian forces killed, wounded, or missing (Pankhurst, 1963). Emperor Menelik's battlefield tactics during the battle have earned him comparisons to the legendary French emperor Napoleon. “The Adwa campaign … was rivalled among nineteenth century military campaigns only by Napoleon’s Russian campaign ... Unlike Napoleon’s Russian campaign, the Adwa campaign ended in victory” (Jonas, 2011, p. 334).

The Battle of Adwa significantly impacted both Ethiopia and Italy, with Ethiopia emerging as the only uncolonized African country and consolidating its sovereignty. Additionally, the battle inspired other African states to follow Ethiopia's lead in pursuing decolonization. In Italy, anti-government protests broke out in major cities, driving the resignation of Prime Minister Francesco Crispi (Prouty, 1986).

Scholars have analysed the Battle of Adwa from various perspectives, with some attributing the Italian defeat to the Ethiopian army's fighting skills and leadership (Jonas, 2011; Mekouria, 1991; Zewdie, 1991; Milkias, 2005). Others argue that environmental factors significantly influenced the battle's outcome (Berkley, 1902; Prouty, 1986). It is important to note that the Ethiopian landscape was not an insurmountable hurdle for many invaders (Tibebu, 1996), but the Italian army's limited familiarity with the Adwa terrain and the use of faulty maps during the war played a part in their defeat (Berkeley, 1902; Zewdie, 1991).

Given the contrasting interpretations of the Battle of Adwa, a geographical assessment could offer valuable insights. Geography, known as the "mother of war strategy" (Gray et al., 1999), plays a fundamental role in determining the outcome of war. However, studies looking exclusively at the Battle of Adwa's geographic aspects are scarce. A more all-encompassing interpretation of the battle can be accomplished by exploring the underlying factors that inspired Italy to colonise Ethiopia, the military geostrategies employed, and the spatial considerations contributing to the battle's conclusion.

Geographic information can be primarily extracted from historical literature, as history and geography are intricately connected (Nolan, 2009). Historical geographers have employed innovative methods by using archival-based research to uncover and reconstruct the past lived experiences of people (Jacobs et al., 2002). While the study of a single geographic variable, such as terrain, geology, climate, weather, or drainage, can offer valuable insights, a comprehensive

approach that considers multiple elements of physical geography, including the lithosphere, hydrosphere, and atmosphere, is necessary.

This study has identified three gaps in the body of literature on the Battle of Adwa. The first area is the requirement to investigate the battle from a geographical viewpoint. The second area is the necessity for additional research that explicitly examines the micro-geographical features of the battlefields. The third area is the demand for more robust evidence to either confirm or refute whether Ethiopian topography played a critical role in the Italian forces' defeat.

To address these gaps, this study intends to identify and characterise the spatial components of the army, including army mobilities, army camping, and inter-army and intra-army gaps demonstrated during the Battle of Adwa. Furthermore, the study aims to determine whether the Ethiopian army's victory resulted from the Italian army's unfamiliarity with Ethiopia's terrain. The comparison of the Ethiopian and Italian armies' geographically influenced planning and operational military strategies during the battle will demonstrate how various elements such as the physical environment, army, leadership, and sociopolitical factors shaped the Battle of Adwa's outcome. The study's primary contribution is to provide comprehensive information on the spatial aspects of the Battle of Adwa and fill gaps in the literature.

Methodology

This study utilises main literature, including chronicles, diaries, memoirs, and journalistic reports recorded by Ethiopian chroniclers, Italian generals, and European journalists, to gain a comprehensive understanding of the Battle of Adwa. These documents provide implicit and explicit geographic information that reconstructs the battle's geographical patterns.

The literature extensively covering the Battle of Adwa, such as Mekouria (1991), Jonas (2011), Milkias and Metaferia (2005), Gnogno (1993), Wylde (1901), and Berkeley (1902) were heavily relied upon in this study. However, the study recognizes the limitations of these sources, including their primary focus on the chronicles of the emperor and nobles and their need for more coverage of information from regular people. Additionally, the study acknowledges that these sources primarily emphasised the geographical patterns of the battle. To address these limitations, the study triangulated the information obtained from the opposing views of the authors examined in the study and analysed secondary sources that provided a broader context of the events leading up to the Battle of Adwa. Furthermore, the study utilised various online archives and databases, including the British Library and the Library of Congress.

Geographic Information Systems (GIS) were utilised in this study to georeference the absolute and relative locations described in the historical accounts. A Google Earth base map was used, and the available administrative boundaries were digitised to serve as a reference for mapping thematic layers. Using GIS, this study created map layouts showing the diffusion patterns of army mobilities, army positions, inter-visibilities between armies, and the inter-army gaps. These maps provide a visual representation of the geographical patterns of the battle and enhance the understanding of the role that geographic factors played in the outcome of the battle of Adwa.

The spatial patterns of the battle of Adwa

Several factors played a role in the initiation, conduct, and conclusion of the war between Ethiopia and Italy. These factors operate at a macro and micro-level factor.

The macro-level spatiality of the battle of Adwa

The geographical appeal of Ethiopia for colonisation attempts: Geography has played a significant role in shaping the history of Ethiopia, with the country's strategic location serving as a magnet for invaders from Europe, Africa, and Asia. The Ethiopian highlands, in particular, have been a prime target for colonisation attempts, with a history of numerous battles and conflicts. Between the defeat of King Tewodros in 1868 and the victory of Menelik in 1896, Ethiopia sustained twelve battles (Pankhurst, 1963, p. 151).

The geographical factors that have made Ethiopia appealing to colonisers are multifaceted. One of these factors is the control of the Blue Nile River, which provides 86% of the water to the Nile, the lifeline of Egypt. Egypt alone was involved in 16 major conflicts against Ethiopia, from the battle of Gedarif in 1832 to the battle of Gura in 1876 (Milas, 2013). The Nile's importance to Egypt makes Ethiopia's control of the river a strategic concern for the country and a potential threat to its survival. Additionally, the opening of the Suez Canal in 1869, which connects the waters of Europe with the Arabian Sea, the Indian Ocean, and Asia-Pacific countries, made Ethiopia's proximity to the Red Sea ports a significant threat to the canal's strategic importance.

Furthermore, the abundance of agricultural land in the interior of highland Ethiopia has also been a driving factor for colonisation. Italy's rapidly growing population led to a push for securing agricultural land (Jonas, 2011), and Ethiopia's fertile soils provided an attractive opportunity.

The local geopolitical dynamics: The consolidation of Ethiopian territories through arranged marriages between nobles from different regions has been a traditional practice. The union between Emperor Menelik and Empress Taytu, for instance, brought together large territories under one royal household. Menelik's power base was in southern Ethiopia, with an Orthodox Christian background, while Taytu represented the northern Ethiopia power base, with Oromo and Muslim backgrounds. According to Jonas (2011), Taytu brought Menelik local legitimacy in the north of Ethiopia, where nearly half of Ethiopia was under her influence through marriage alliances and land grants (Prouty, 1986, p. 219).

However, before the Adwa campaign, rivalries among regional chiefs were prevalent in Ethiopia. King Teklehaimanot of Gojam, Ras Mengesha of Tigray, Ras Michael of Wollo, Ras Makonnen of Harar, and Wagshum Biru of Lasta were among the notable rivals of Emperor Menelik (Berkeley, 1902, p. 89). These rivalries posed a threat to Ethiopia's unity and independence, particularly when faced with external threats such as Italian colonial ambitions.

When the Italian colonial ambition became apparent, these chiefs put the country's unity and independence before their own personal power and formed a united front. They recognized the need to set aside their internal differences to defend the country against external threats. This unity led to the successful outcome of the Battle of Adwa, as Ethiopian forces were able to repel the Italian invasion and maintain their sovereignty. The local geopolitical dynamics of Ethiopia, including the consolidation of territories through marriages and the need for unity against external threats, played a critical role in the country's ability to resist aggression and maintain its independence.

The spatiality of army diffusions: During the Battle of Adwa, the Italian and Ethiopian armies displayed opposite spatial diffusion patterns.

The first diffusion pattern was the Italian army's expansion towards the north, west, and south. Prior to the war, the Italian military had already conquered several strategic locations in Ethiopia. They sought to take advantage of the power vacuum created by the southward shift of the core centre of geopolitics towards Addis Ababa, which relegated the status of the Tigray and Eritrea provinces to peripheral territories. The Italian forces built trenches, attempted to take advantage of topographic superiority, controlled chokepoints, and secured supply routes. The Wuchale Treaty, signed on May 2, 1889, between Emperor Menelik and Count Pierto Antolli of Italy, was meant to legalise and solidify areas beyond the southward expansion of the Italians. However, an error in Article 17 of the treaty caused disagreement and ultimately led to the war between the two countries.

As illustrated in Figure 1, the Italian army gradually but steadily encroached on a wide swath of northern Ethiopia in a geographical pattern known as 'expansion diffusion.' The Italian army purchased the port of Massawa in February 1885, colonised Eritrea in 1890 (Fig 1A), moved to Kessela (Fig 1B), and propelled a southward diffusion up to Lake Hashengie in 1895, located in southern Tigray (Fig 1C). The Italian army was mobilised from Europe and other African countries. The native Italian army was shipped out from the port of Naples, while Askaris were recruited from Sudan, Eritrea, Tigray, and the Red Sea coastal region to fight alongside the native Italians. In general, the Battle of Adwa took place in an area that appeared to be a home-field advantage for the Italians.

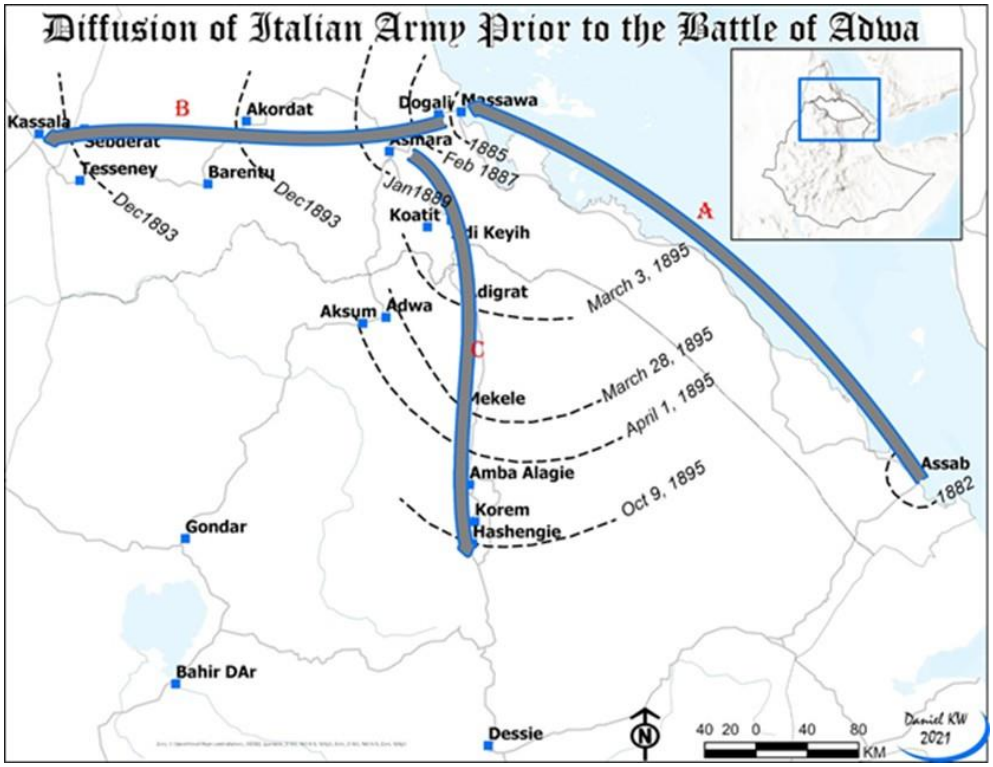

Figure 1: The temporal and spatial diffusion patterns of the Italian forces prior to the battle of Adwa. A) The Italian army's northward diffusion along the Red Sea Coast. B) the westward diffusion through Eritrea, and C) the southward diffusion through Tigray.

The second diffusion pattern was the northward expansion of the Ethiopian army. In response to the southward expansion of the Italian forces into north-central Ethiopia, Emperor Menelik called for arms in September 1894, leading to the mobilisation of the Ethiopian army. Some troops travelled long distances, up to 1,500 km on foot, to engage in battles at multiple strategic locations in northern Ethiopia. The Ethiopian military was composed primarily of patriotic volunteers, who were primarily engaged in agriculture, and were recruited from various regions of Ethiopia (as depicted in Figure 2). However, despite the willingness of regional leaders such as Ras Wolde Giorgis of Kulo Konta, Limu, and Kaffa provinces, and Dejazmach Tessema of Illubabor province to participate in the campaign, the emperor chose to keep them behind for two reasons: to avoid the adverse effects of seasonal flooding due to intense rain in the areas and to secure Ethiopia's southern and eastern regions during the campaign.

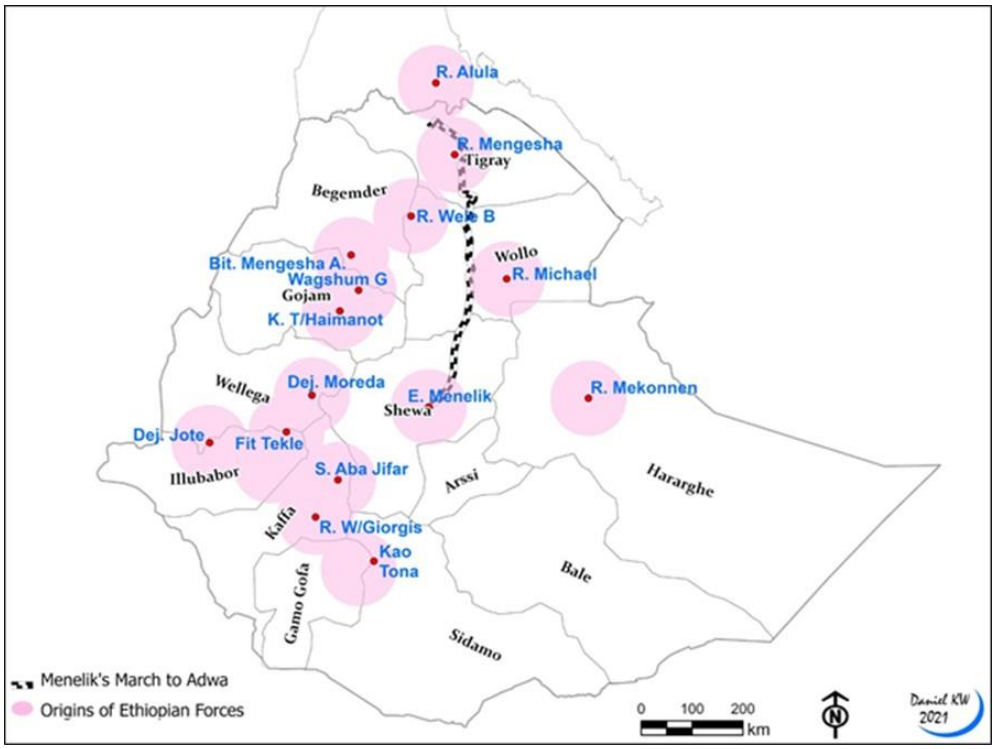

Figure 2: Geographical origins of regional forces that joined the battle of Adwa

The micro-level spatiality of the battle of Adwa

The Battle of Adwa showcased the remarkable spatial intelligence of the Ethiopian army, who displayed adeptness in spatial skills during the march, camping, and engagement with the Italians. Despite not having formal military training or field manuals to guide them, the Ethiopian army demonstrated exceptional spatial organisation and tactics throughout the battle.

Army mobility: The Ethiopian army demonstrated extraordinary spatial organisation during the Battle of Adwa, with leaders strategically positioned according to their military titles. The Fitawrari, Girazmach, and Kegnazmach served as the vanguard commander, left-wing, and right-wing of the core Imperial army, respectively, while Ras Michael and Ras Wolie flanked Emperor Menelik, followed by Empress Taytu's entourage. This internal spatial pattern was based on proven tactical considerations inherited from previous generations and provided critical protection for the Emperor from Italian and bandit attacks. The Ethiopian army's effective spatial tactics highlight how traditional spatial intelligence can be just as crucial in military strategy as formal military training.

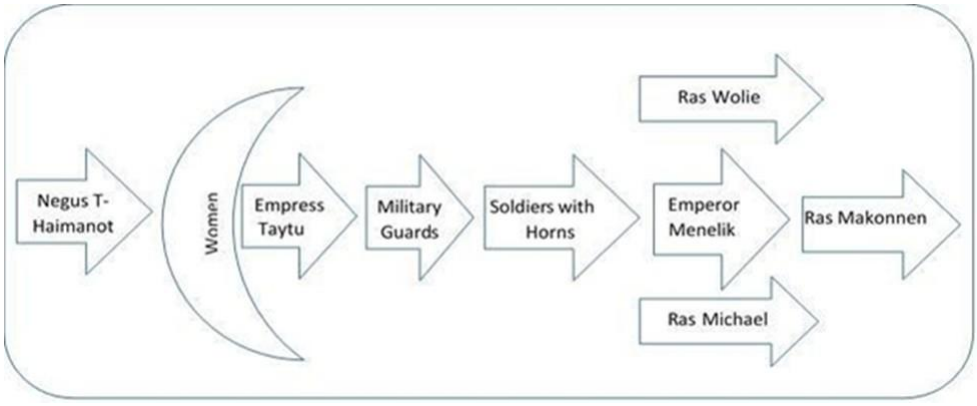

Figure 3: The spatial arrangement of the Imperial march during the Battle of Adwa, constructed from historical descriptions

Army camping: The encampment of the Ethiopian army during the Battle of Adwa also displayed a unique and strategic spatial pattern. According to Jonas (2011), along the route from Illu town to Adwa town, the Ethiopian army constructed 12 temporary base camps that grew in size in response to the expanding army. The duration of stays at each camp varied significantly, from two days in the Hawzen camp to forty-three days in the Mekelle camp. At each encampment, three tents were set up, including the ‘desta’, the red velvet emperor's tent, ‘elfign’, the empress Taytu's tent, and 'adarash', the royal audience tent. The location of the desta tent served as a benchmark for determining the placement of the mobile court, other tents, and the direction of the next day's march. The Empress's elfign tent was erected behind desta, followed by the treasury tent, Imperial wardrobe, royal guard, and clergy tents. Beyond them were the mules and horses, followed by the royal servants' tent. The Ethiopian army's encampment pattern demonstrates their strategic spatial intelligence and highlights the importance of spatial organisation in logistical and security strategies.

The proximity of the chief's tents to the emperor’s court displayed the level of nobility's honour in the imperial hierarchy, as shown in Figure 4. This pattern demonstrates the ‘distance decay effect’, highlighting the decreasing importance of status as one goes further away from the centre (Jonas, 2011). In contrast, historical accounts of troop mobility and encampment patterns of the Italian army are limited.

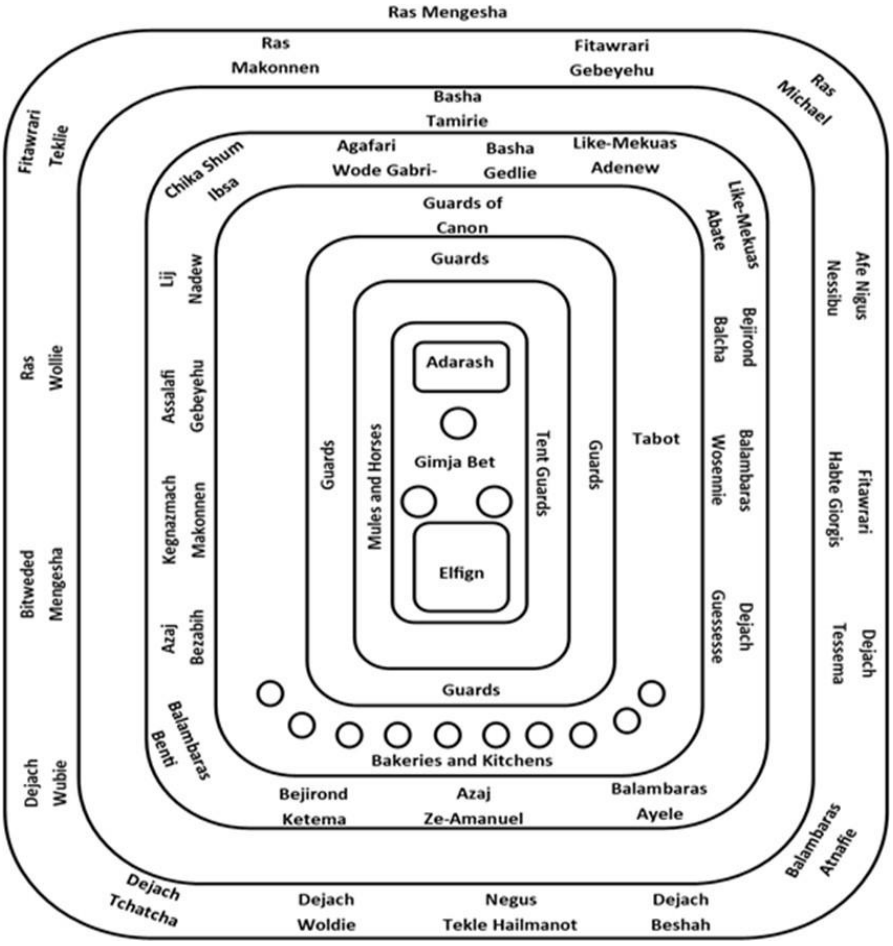

Figure 4: The spatial arrangement of Menelik's army encampment during the Battle of Adwa, adapted from Pétridès (1963)

Spatiality of Intra-army gaps: The physical distance within the Ethiopian and Italian army units was marked by significant variations. Prior to their convergence at Mekelle, there were significant gaps between the Ethiopian troops. For instance, an advance guard led by Ras Makonnen was approximately 70 km ahead of Menelik's army during the Battle of Amba Alage. During the northward march, the troops of Ras Michael and Ras Wele peeled away on either side from the main

army, utilising the terrain to minimise bottlenecks, enhance security, and reduce the impact on the host population (Mekouria, 1991). Even at Adwa, the Ethiopian army units were positioned far apart, with larger gaps between units that were equipped with horses.

In contrast, the intra-gap of the Italian army was different. The main headquarters of the Italian forces were located at Asmara, while General Baratieri's base was in Adigrat, Tigray. From the Adigrat headquarters, advance armies were dispatched to Mekelle and Amba Alage with instructions to defend or slow down the Ethiopian army. The Italians placed Askaris at the forefront of each army unit, which helped buffer and insulate the white Italian soldiers from direct attacks launched by the Ethiopians.

At Adwa, the gap between the Italian army groups was characterised by confusion in the timing of their deployment, their direction of movement, and the coordination between different units. This lack of spatial organisation resulted in kick-off, axial, and lateral spatial confusions that contributed to the defeat of the Italian army.

Kick-off confusion occurred when General Baratieri planned to secure a strategic position between Mount Eshasho and Mount Semayata undetected by the Ethiopians. However, only two routes existed to reach the target, which meant one brigade had to trail the other. General Ellena's fourth brigade lagged behind, resulting in General Arimondi's army being delayed by hours. This temporal discordance created a kick-off confusion that diminished the prospect of a surprise attack on the Ethiopian camp.

Axial confusion occurred when the variable pace of the armies created confusion between the advancing and delaying troops. General Baratieri ordered his generals to meet at their venue synchronously during the final Italian plan. However, General Albertoni travelled faster and overstepped the intended venue, resulting in an axial gap that was later exploited by the Ethiopian forces. The confusion of time and space between the General Albertoni and General Arimonid' brigades continued until 4 a.m. (Henze, 2000), leading to further disorganisation within the Italian army.

Lateral confusion occurred when General Dabormida's army diverged from the intended path and moved to the far-right flank, creating a lateral gap of 4 km from the central army. This divergence, coupled with topographic challenges, resulted in a delay of Dabormida's brigade by over an hour (Jonas, 2011: 192). Emperor Menelik recognized the confusion and ordered his troops to exploit the gap created by Dabormida's divergent movement (Jonas, 2011), leading to a significant advantage for the Ethiopian forces.

Analysis of Inter-army gaps: The gap between the Italian and Ethiopian troops varied, dictated by factors such as troop size, terrain characteristics, artillery capabilities, and the geostrategies adopted by the commanders. The Italians preferred maintaining a safe distance from their enemy, utilising their long-range artillery capabilities. On the other hand, the Ethiopians favoured closer proximity to the enemy camps, allowing for effective shots and sudden dashes forward (Berkeley, 1902, p. 74). For example, at the Coatit battlefield, the Italians camped 1,900 m away from Ras Mengesha's army (Berkeley, 1902. p. 72) while the Ethiopian artillery narrowed the gap to within 1,100 m. At the Amba Alage battlefield, Emperor Menelik was camped about 70 km south of Amba Alage. At Mekelle and Adwa, the Ethiopian army was consolidated into one position. Emperor Menelik mounted his red tent at about 6,500 m, a safe distance from the Italian camp. The Italian artillery had a range of 3,800 m, but at Adwa, the initial gap between Menelik and Baratieri's camps was 40 km.

When General Baratieri launched a surprise move towards the Ethiopian position on February 29, the gap between the Ethiopian and Italian armies shrunk to 15 km (Ali, 1998). The goal was to put the Ethiopians at a disadvantage. However, when the fight started, Albertone's brigade opened fire from a five thousand feet distance, but the gap quickly shrunk. As historians describe it, the Ethiopian fighters only fired once the enemy was within musket range to conserve their bullets. They only fought at a time of their choosing, not when the enemy would have preferred (Berkeley, 1902, p. 305). The importance of the gap between the two armies highlights the significance of spatial strategies in military planning and execution.

Geostrategies on the battlefields

The Battle of Adwa was a significant event in Ethiopian history, marked by the successful defence of Ethiopian sovereignty against the invading Italian army. The geostrategies implemented by both sides played a crucial role in determining the battle's outcome.

Due to the power vacuum created by the southward shift of the political centre towards Addis Ababa, Italy was able to conquer numerous strategic locations in northern Ethiopia before the outbreak of the war. This resulted in a reversal of military strategy, with Italy now defending occupied territories. On the other hand, Ethiopia was forced to adopt an offensive strategy to retake Italian-controlled lands.

Ethiopia's army units were structured based on soldiers' place of origin and allegiance to a regional commander. Chiefs were assigned to a given location by

the emperor and were given the autonomy to take the initiative based on the situation on the ground. This decentralised approach allowed for flexibility and adaptability on the battlefield but was misinterpreted by Italian commanders and some historians as a sign of leadership fracture (Mekouria, 1991). On the other hand, Italian generals were reluctant to follow the strategies adopted by General Baratieri. Despite providing signalling devices and cautioning his generals to remain in contact with each other and with him, none of his orders were fully executed. This lack of coordination and communication among Italian generals ultimately contributed to their defeat at Adwa (Milkias & Metaferia, 2005).

At the micro level, each battlefield in the Italo-Ethiopian War exhibited unique geographical characteristics and corresponding geostrategies. This analysis will focus on the geostrategies employed at the Coatit, Amba Alage, Mekelle, and Adwa battlefields.

The Coatit battlefield

The Coatit battlefield, located in southern Eritrea at 14° 47' N, 39° 16' E, was the site of the opening battle of the war. Here, Ras Mengesha led the opposition against the Italian presence in northern Ethiopia. Despite Ras Mengesha's movements in southern Eritrea and Tigray in 1894, General Baratieri waited for the ideal locational advantage before engaging in battle. On January 12, 1895, Baratieri spotted Mengesha's army from a distance and immediately marched to the top of the Coatit mountain under cover of darkness.

With the first rays of the sun on January 13, the Italians opened fire from a height of 1,900 metres above the Ethiopian camp. Despite a counterattack by the Ethiopians, the combination of Italian defence and terrain factors forced Mengesha to retreat under the cover of night and mist. This was a significant victory for the Italians, which resulted in heavy casualties for Ras Mengesha's army.

The mountainous terrain at Coatit proved decisive in the war, granting the Italian army a dominant position and devastating artillery advantage over the Ethiopian forces. This forced Ras Mengesha's retreat, bolstering Italian morale and enabling them to occupy key strategic locations in northern Ethiopia. The battle cemented the importance of topographical advantage in the Italians' minds, shaping their strategies for future engagements.

The Amba Alage battlefield

Dominating the landscape at 3,950 metres in Southern Tigray (12°59'N 39°33'E), Amba Alage ("mountain" in Amharic) is a formidable natural fortress defined by steep escarpments. Its strategic position overlooking a key roadway from Maychew to Mekelle has made it a repeated battleground throughout history.

The Italo-Ethiopian War saw Amba Alage erupt into the first major clash on December 7, 1895. Under Ras Makonnen's leadership, 30,000 Ethiopian troops prevailed against a 2,350-strong Italian column commanded by Major Toselli. This historic battle marked the first unified effort by Tigray and Showa forces Jonas (2011).

The six-hour engagement resulted in severe Italian losses, with over 2,000 casualties representing a quarter of the Eritrean colony's military strength. Ethiopian losses were also significant at 276. Amba Alage's topography offered the Italians a significant advantage. Toselli cleverly deployed his forces, including Askaris and defecting Ethiopian generals, on the dominant mountaintops (Figure 5), proving a nearly insurmountable obstacle for the Ethiopians. As one local chief observed, "even a soldier armed with a stone could defend effectively" (Mekouria, 1991) from such a commanding position.

Despite heavy losses, Ras Makonnen exploited weaknesses within the Italian coalition, targeting Toselli's unreliable allies and striking at the core where Ras Sebhat and Sheik Thala were entrenched. This determined Ethiopian victory at Amba Alage, as Jonas (2011) notes, shattered the myth of Italian invincibility.

The Mekelle battlefield

Mekelle, at 13°29′49″N 39°28′37″E with an average elevation of 2,254 metres, was a strategic prize for the Italians seeking to halt Menelik's northward advance after Amba Alage. Its half-finished fort was hastily transformed into a formidable stronghold, its defences bolstered by a 70-metre wall, ten-foot trenches, and a grim obstacle course of broken glass, barbed wire, and sharpened stakes. Even the Enda Yesus church became an ammunition depot.

Despite these fortifications, Ras Makonnen's Ethiopian army launched five assaults between January 8th and 11th, suffering heavy losses. Recognizing the stalemate, Empress Taytu switched tactics, implementing a siege that cut off the Italians' water supply. Facing starvation, the Italians surrendered after forty-three days. This bloodless victory showcased the effectiveness of Taytu's leadership (Prouty, 1986), proving that strategic wit could overcome entrenched strongpoints. Furthermore, the Ethiopian army leaders adapted this tactic in subsequent military strategies, ultimately leading to the Ethiopian victory at the Battle of Adwa. The

Mekelle battlefield illustrated the importance of strategic thinking, patience, and the use of siege warfare, which Empress Taytu and her army effectively utilised to achieve their objective.

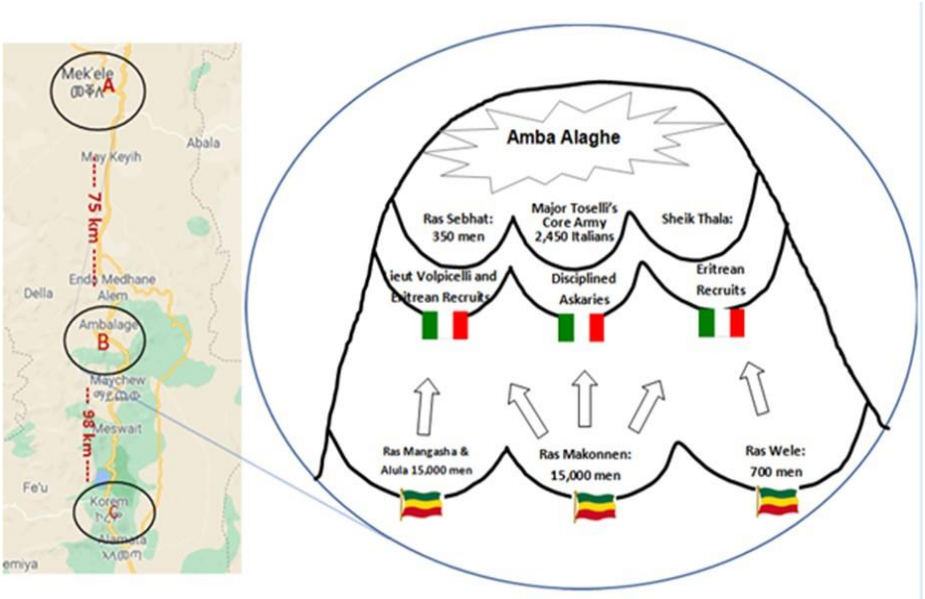

Figure 5: The Spatial Arrangement of Advance Guards at Amba Alage. The army leaders of Italy and Ethiopia were stationed at Mekelle and Lake Hashenge, respectively, while their advance guards were positioned near Amba Alage.

The Adwa battlefield

Adwa, nestled at 14°10′N 38°54′E with an elevation of 1,900 metres, witnessed a defining Ethiopian victory over the Italian army. The two forces clashed on March 1, 1896, with Ethiopia's estimated 120,000 troops overcoming 17,978 Italians, leaving 6,000 Italians dead, 1,500 wounded, and 3,000 captured. While Adwa's 32 square kilometres hosted this clash, the actual battlefield, a high-altitude elliptical bowl measuring 4 km north-south and 8 km east-west, saw a lower troop density (228 sq m per infantryman) compared to battles like the Franco-Prussian War and WWI (Hupy, 1986).

Mirroring previous battles, the Italians fortified Mount Enticho upon arrival, while Emperor Menelik established his headquarters at Enda Gerima church. February was spent on intelligence gathering and positioning, with the

Italians confident in their fortified location but wary of the terrain's vulnerability to flanking attacks.

Ultimately, Ethiopian victory hinged on superior tactics and a deep understanding of the local landscape. Historians describe their formation as a fluid "half-moon" or "cross" (McLachlan, 2011; Milkias, 2005). King Teklehaimanot's infantry and cavalry occupied a strategic plateau (Milkias & Metaferia, 2005), while Ras Makonnen's forces sheltered near Adwa town. Deftly utilising the hilly terrain, Ras Michael's and Ras Mengesha's armies flanked the Italian flanks, and Ras Alula's forces guarded the western flank. Menelik's elite Mehal-Sefari and Empress Taytu's fighters formed the central reserve, backed by additional reserves under Ras Wolie and Wagshum Gwangul. Dejazmach Liben Bashir's army, attached to the Emperor's Mehal-Sefari, was strategically camped in reserve at the foot of the mountains overlooking Adwa (Milkias, 2005).

General Baratieri, the Italian commander, felt his entrenched position on the eastern slopes offered an advantage. He divided his forces into four brigades, aiming to occupy strategic heights before Menelik attacked (Figure 6). He hoped a prolonged Ethiopian inaction would boost Italian morale, while an attack would allow them to leverage the terrain for heavy Ethiopian losses.

On February 29th, Baratieri ordered his troops to occupy crucial positions, including Dabormida at Belah Spur, Arimondi at Mount Belah, Albertoni at Kidane Mihret hill, and Ellena in reserve. According to Jonas (2011), Albertoni felt confident that the surrounding mountains were impassable for the Ethiopian forces. The early morning sun initially favoured the Italians by concealing their advance, while giving them a clear view of the Ethiopian positions. However, despite this significant advantage, the Ethiopian soldiers fought bravely and ultimately emerged victorious in the Battle of Adwa.

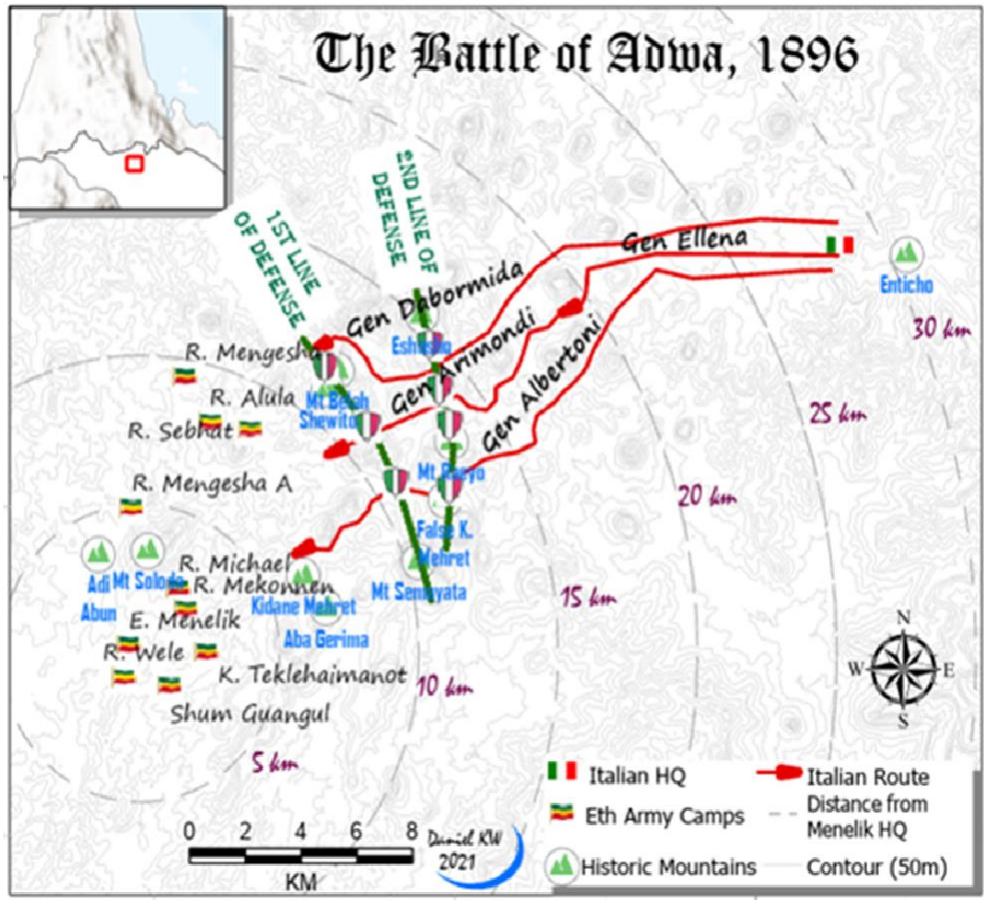

Figure 6: The map of the Battle of Adwa, highlighting the locations of the first and second lines of Italian defence during the conflict.

Appraisal of battlefield topographies

The claim that unfamiliarity with the Adwa battlefield topography negatively impacted the Italian army's performance has been widely cited. However, a closer analysis of the situation reveals that this proposition is unwarranted.

Firstly, although northern Ethiopia is known for its rugged topography, it is not significantly different from Italy's topography. Approximately 40% of Italy's territory is mountainous, and the climate in Adwa is very much different from that

of Rome, Italy (Berkeley, 1902). Additionally, the Ethiopian fighters had to march a much longer distance than the Italian army within Ethiopia, crossing 34 rivers to reach Adwa (Mekouria, 1991).

Secondly, the Italians had occupied most of the battlefields before the Ethiopians, building fortified positions and gathering relevant information about the terrain. They also had a longer presence in the area and established friendly relationships with local leaders (Wylde, 1901) long before the battle of Adwa.

Thirdly, General Baratieri lived in Tigray longer than Emperor Menelik and had a better understanding of the area. When Baratieri arrived in Massawa in 1890, he was already an amateur African ethnologist seeking a tactical advantage over Ethiopian adversaries (Jonas, 2011). The distance travelled by the Ethiopians immediately before the war was much more significant than the Italian army's overnight march, and hence, the Italian army's exhaustion from this march is unlikely to have been a crucial factor.

Finally, at Coatit, Amba Alage, and Mekelle battlefields, Italian forces occupied and gained topographic supremacy before the Ethiopian army. During the Battle of Adwa, the Italians attempted to use the Belah Mountains as shelters and cover from the Ethiopian camps. The Adwa mountains and hills blocked Italian visibility from the Ethiopians' camps, making it safe to assume that the Italians were more familiar with the battlefield's topography than the Ethiopians (Milkias & Metaferia, 2005).

Conclusion

The examination of historical accounts of the Battle of Adwa through a geographical lens has provided significant insights into the spatialities of troop camping, mobilities, space-time management, and army-topography interactions. This study has uncovered the underlying spatial pattern across the battlefields of the first Ethiopian-Italian war.

Ethiopia's terrain, however, presents a double-edged sword. While Italians blamed their defeat on its harsh inaccessibility, many scholars view it as the bedrock of Ethiopia's millennial independence. This study challenges that notion, revealing how Ethiopia's strategic location and geo-economic potential made it a constant target for invasion.

Furthermore, the study highlights the pivotal role of "core-periphery" geopolitics in shaping the war's outcome. Italians' attempts to exploit regional divisions and win over peripheral chiefs ultimately failed, illustrating the tenacity of Ethiopian unity. Notably, mischaracterizations like labelling the Ethiopian army as solely "Showan" by Italian generals and European scholars further expose efforts to undermine that unity.

Adaptability to diverse landscapes emerges as another key factor. Emperor Menelik's spatially oriented leadership empowered his generals to outmanoeuvre the rigidly positioned Italian army. This rigidity confined their options, revealing their adherence to "topographic determinism" in maximising pressure through strategic locations. In contrast, the Ethiopian army's ability to overcome obstacles exemplifies "topographical possibilism."

Moreover, it's crucial to consider the psychological dimension of defeat. Given the prior assessment of Ethiopians as “undisciplined and ill-armed savages” (Pankhurst, 2005, p. 218), it would be very difficult for the Italians to swallow the bitter reality of being defeated by them. Therefore, attributing their loss to the "unfair" challenges of the terrain offered a convenient face-saving explanation, shielding their ego and preserving a sense of superiority.

In conclusion, this study dismantles the myth of Ethiopian terrain as a clear advantage, demonstrating that the Italians also benefited from its complexities. The Battle of Adwa reminds us that topography is not a singular victor, and that adaptability and human agency hold immense power in shaping the course of conflict.

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