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Author(s): Alexander James Hughes

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**‘From mechanisation may be born a David to slay a Goliath’ An Assessment of  
the Impact of Sir Basil Henry Liddell Hart’s Indirect Approach on Operation**

**Compass 1940 – 1941.**

**By Alexander James Hughes**

**MA Military History**

**University of Chester**

**HI7306**

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## **Introduction**

In the Second World War the Germans introduced a new form of warfare: Blitzkrieg, whereby rapid mechanised assaults supported by aircraft swept all before the advancing Wehrmacht. Blitzkrieg was not, however, a German invention, it was in fact British, while the term Blitzkrieg was created by an Italian journalist and then seized upon by Goebbels for propaganda value.<sup>1</sup> The way in which the Second World War is portrayed in classrooms, and in corporate media, is full of such errors which is not aided by national stereotyping that only furthers historical inaccuracy and ignorance. The topic chosen for discussion focuses on an often overlooked and indeed forgotten victory in the North African Campaign in the Second World War. History documentaries, Hollywood films and vast numbers of books have focused on the duel in the desert between Montgomery and Rommel, culminating in the Second Battle of El Alamein, almost endlessly. Prior to Rommel's arrival in the desert, however, a series of battles took place as a part of a far larger operation, Operation Compass, where some 30,000 British and Empire Forces eventually destroyed the 250,000 strong Italian 10<sup>th</sup> Army.<sup>2</sup> The men who commanded the British forces were radicals, unorthodox commanders who challenged the accepted practices and viewpoints of the typically conservative British Army. General Wavell, Commander-in-Chief Middle East, was an early supporter of mechanised warfare and protégé of Allenby of First World War fame.<sup>3</sup> General O'Connor, an aggressive commander comparable to Rommel<sup>4</sup> and Percy Hobart, now famed for Hobart's funnies, was another supporter of armoured warfare responsible for training the men who would ultimately become

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<sup>1</sup> William, J. Fanning Jr. *The Origin of the Term Blitzkrieg: Another View*, The Journal of Military History, Vol 61, No. 2 (Apr, 1967),p.284

<sup>2</sup> J. Thompson, *Forgotten Voices: Desert Victory*, (Great Britain, Ebury House: 2011), pp.3-4

<sup>3</sup> Fergusson Bernard, O'Neill, Robert & Brown Judith M. Wavell, Archibald Percival, first Earl Wavell (1883–1950), *army officer and viceroy of India* Oxford Dictionary of National Biography, available: <<http://www.oxforddnb.com/view/article/36790?docPos=1>> accessed 22/04/12

<sup>4</sup> Carver, Michael, O'Connor, Sir Richard Nugent(1889–1981), *army officer*, Oxford Dictionary of National Biography, available: <<http://www.oxforddnb.com/view/article/31511>> accessed 22/04/12

known as the Desert Rats.<sup>5</sup> The British Army has been criticised for being too conservative, unwilling or unable to adapt the new mechanised technology of the period into existing doctrine or to find an effective tactical application for it.<sup>6</sup> Such criticism, though not entirely unfounded, has gone too far. There are many examples of when British commanders mishandled or underestimated the use of armoured vehicles and paid heavily for their mistakes: the Battle of France, the Dieppe Raid<sup>7</sup> and the now infamous Villers Bocage<sup>8</sup> fiasco are examples. When used correctly, however, as in Operation Compass, British armoured units performed well and achieved some incredible results such as the capture of 130,000 Italian prisoners in a single battle. Using Operation Compass as a case study does, however, have a major pitfall: the Italian Army, which could be argued to be a second rate military power. The Italians have received phenomenal criticism in all aspects of warfare: poorly equipped, poorly led, poorly trained and lacking in both fighting spirit and ability in general. National stereotyping has again been unkind to the Italians placing Italian military prowess below that of the French who have received equally severe criticism.<sup>9</sup> The success of Operation Compass, and the sheer scale of the victory, has been attributed by a number of historians, including Julian Thompson, to any one of the aforementioned defects in the Italian Army. Although the weaknesses in the Italian Army did contribute to the British victory they were most certainly not the cause of it. The Italians possessed an incredible numerical superiority in terms of

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<sup>5</sup> Holden Reid, Brian. Hobart, Sir Percy Cleghorn Stanley (1885–1957), *army officer and military reformer*, Oxford Dictionary of National Biography, available:

<<http://www.oxforddnb.com/view/article/33899?docPos=1>> accessed 22/04/12

<sup>6</sup> David French, *Doctrine and Organisation in the British Army, 1919-1932*, The Historical Journal, Vol. 44, No. 2 (Cambridge University Press: June 2001), pp. 497-498

<sup>7</sup> The War File DVD Video, *Tanks, Fighting the Iron Fist: The Churchill Tank: Britain Fights Back*, Pegasus Entertainment, 15<sup>th</sup> August 2005

<sup>8</sup> The War File DVD Video, *Tanks, Fighting the Iron Fist: The Cromwell Tank: A British Heavyweight*, Pegasus Entertainment, 15<sup>th</sup> August 2005

<sup>9</sup> Ian W. Walker, *Iron Hulls Iron Hearts: Mussolini's Elite Armoured Divisions in North Africa*, (Marlborough, The Crowood Press: 2006), p. 6

infantry, armour, artillery and aircraft, outnumbering the British almost 8:1. By way of comparison the Red Army, during the early stages of fighting on the Eastern Front, suffered from the same limitations as the Italian Army but was able to use its weight in numbers to defeat the German Wehrmacht.<sup>10</sup> There must be, therefore, another reason why the British were able to defeat the Italians. It shall be the purpose of this dissertation to assess whether through Sir Basil Henry Liddell Hart's strategy of the 'Indirect Approach' the British mechanised forces were indeed the deciding factor in the outcome of Operation Compass during the opening phase of the North African campaign 1940-1941.

In order to comprehend the complexities of modern armoured warfare, the origins and *raison d'être* must first be discussed. Small arms technology had rapidly accelerated during the 19<sup>th</sup> and early 20<sup>th</sup> century. The introduction of the minie ball, and repeating rifles, led to far greater infantry firepower which culminated in Robert Lebel's self contained cartridge.<sup>11</sup> The self contained cartridge increased the rate of fire of small arms but also created a great deal of excess gasses. American inventor Hiram Maxim utilised the blowback from the cartridge to chamber another round of ammunition, the end result was the world's first fully automatic machine gun.<sup>12</sup> During the same period artillery pieces began to change: denser alloy, rifling and breech loading all combined to allow for more rapid and accurate fire.<sup>13</sup> When the world next went to war in 1914 the devastating combination of automatic weapons and sustained heavy artillery fire created a battlefield under which conditions exposed

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<sup>10</sup> The World at War, *Barbarossa: June-December 1941*, November 21<sup>st</sup> 1973, Thames Television, written & published by Peter Batty

<sup>11</sup> Mat Hodgson, *Weaponology: Sniper Rifles*, January 15<sup>th</sup> 2007

<sup>12</sup> Modern Firearms: *Maxim M1910/30*, available < <http://world.guns.ru/machine/rus/maxim-m1910-30-e.html> > accessed 31/05/12

<sup>13</sup> Mat Hodgson, *Weaponology: Artillery*, 2007

infantry could not survive. Winston Churchill, the then Lord of the Admiralty, established the Land Ships Committee which was headed by Tennyson d'Eyncourt, Director of Naval Construction.<sup>14</sup> This committee designed a vehicle that would be able to cross no-mans land, whilst protecting the crew inside, and destroy enemy defensive positions. It was decided that to achieve the best possible mobility an all round caterpillar track should be applied. By using this track layout, however, it negated the possibility of using a turret without making a machine with an excessively high silhouette. The solution that the Committee came up with was to house the main armament in what sailors termed as 'sponsons' mounted on the sides of the vehicle and able to fire down into trenches.<sup>15</sup> The first completed machine was HMLS *Centipede* and subsequent vehicles were built to its design parameters and called land ships. For security reasons the land ships were re-designated as water tanks so as not to raise the suspicions of the Germans. Their rhomboidal shape suited the title but eventually the term tank was adopted. The tank first saw action in small numbers on the Somme in 1916 where it finally became apparent to the British high command that the infantry-artillery tactics being used at the time created unsustainable casualty rates and changes had to be made. The tank, though an innovative design, suffered from a number of flaws which reduced its fighting effectiveness and ultimately relegated the tanks involvement in the war to nothing more than a novelty, or a show-piece of British engineering.<sup>16</sup> The tank of the First World War was slow, mechanically unreliable and severely limited by the terrain of the Western Front. At Cambrai, however, it showed what could be achieved by massed mechanized formations and

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<sup>14</sup> B. H. Liddell Hart, *The Tanks Volume I: 1914 – 1939*, (London, Cassell & Co Ltd: 1959), p. 31

<sup>15</sup> Liddell Hart, *The Tanks*, p. 34

<sup>16</sup> G. Sheffield, *Forgotten Victory The First World War: Myths and Realities*, (London, Headline Book Publishing: 2001), pp. 176-177

inspired a number of armoured theorists to draw up novel plans surrounding the role of the tank in future armed conflict.

One such armoured theorist was Sir Basil Henry Liddell Hart. A Captain in the British Army he was highly critical of the British involvement in the First World War. He published a book which he claimed was based on the traditional role of the British Armed Forces entitled *The British Way in Warfare*.<sup>17</sup> The argument within stated that Britain's traditional role in armed conflict had been to use the Royal Navy's command of the seas to transport a British land force to strike at the point where a hostile power was most vulnerable. The *Indirect Approach* was the final refinement of the British Way in Warfare, which was described as a 'close cousin, or evil twin'<sup>18</sup> by Alex Danchev, and is the core focus of this dissertation. Liddell Hart wrote his great work based on the type of warfare he himself had witnessed and, in this respect, can be compared with Carl Von Clausewitz. Both men formulated their theories having witnessed different types of warfare and as such their conclusions were radically different. Clausewitz wrote *On War*<sup>19</sup> having served in the Prussian Army during the Napoleonic wars where Britain had attempted to engage the French in a number of small diversionary campaigns and to conduct economic warfare against Napoleon. These attacks enjoyed some success, as in the Peninsular War, but they could not bring France to her knees. France was only defeated by a number of large scale battles, not by small raiding operations or other indirect means, culminating in the Battle of Waterloo. Clausewitz, having realised that the direct approach was the key to victory against Napoleon, concluded that the best way to defeat a nation was to

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<sup>17</sup> Liddell Hart, Basil Henry, *The British Way in Warfare*, (Middlesex, Penguin Books: 1942)

<sup>18</sup> Alex Danchev, *Liddell Hart and the Indirect Approach*, *The Journal for Military History*, Vol. 63, No. 2, (Society for Military History: April 1999), p. 313

<sup>19</sup> C. Von Clausewitz, *On War*, (New York, Everyman's Library: 1993)

annihilate its armed forces and break its will to fight. Clausewitz summed up the futility of using less violent means in the following statement:

‘Kind-hearted people might of course think there was some ingenious way to disarm or defeat an enemy without too much bloodshed, and might imagine this is the true goal of the art of war. Pleasant as it sounds, it is a fallacy that must be exposed: war is such a dangerous business that the mistakes which come from kindness are the very worst.’<sup>20</sup>

In comparison when Liddell Hart came to write *Strategy: the Indirect Approach* his judgement was influenced, perhaps even clouded, by the experiences of the First World War. Richard Crossman wrote that ‘There is a streak of pacifism in every intelligent European soldier whose character was shaped by the Western Front in the First World War,’<sup>21</sup> a viewpoint shared by Danchev who suggested that ‘Liddell Hart overreacted to the...bloodletting of 1914 – 1918.’<sup>22</sup> Not only did Liddell Hart overreact to the First World War but, in the ‘Indirect Approach’, committed what Danchev termed as ‘one of the great heresies of strategic theory.’<sup>23</sup> Referring to the following passage from the *Indirect Approach* cited from Danchev’s journal article:

‘In other words the strategy of Indirect Approach is not so much to seek battle as to seek a strategic situation so advantageous that if it does not of itself produce the decision, its continuation by a battle is sure to achieve this... Strategy...has for its purpose the reduction of fighting to the

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<sup>20</sup> C. Von Clausewitz, *On War*, (New York, Everyman’s Library: 1993), pp. 83 - 84

<sup>21</sup> Alex Danchev, *Liddell Hart and the Indirect Approach*, *The Journal for Military History*, Vol. 63, No. 2, (Society for Military History: April 1999), p. 323

<sup>22</sup> Alex Danchev, *Liddell Hart and the Indirect Approach*, *The Journal for Military History*, Vol. 63, No. 2, (Society for Military History: April 1999), p. 320

<sup>23</sup> Alex Danchev, *Liddell Hart and the Indirect Approach*, *The Journal for Military History*, Vol. 63, No. 2, (Society for Military History: April 1999), p. 317

slenderest possible proportions...The perfection of strategy would be, therefore, to produce a decision without any serious fighting.'<sup>24</sup>

By proposing such a radical idea Liddell Hart challenged Clausewitz and his disciples who, not unjustifiably, have been somewhat sceptical that such an approach is feasible.<sup>25</sup> Operation Compass, it shall be argued, was not only a perfect example of the Indirect Approach in action but also an example of what Clausewitz claimed to be impossible and what Danchev claimed to be a heresy. To ensure his work was practicable Liddell Hart created eight maxims for his Indirect Approach which affected both strategy, and grand strategy, six of which he classified as positive and two as negative. The positive maxims were as follows:

'1. Adjust your end to your means...2. Keep your object always in mind...3. Choose the line (or course) of least expectation...4. Exploit the line of least resistance...5. Take a line of operation which offers alternative objectives...6. Ensure that both plan and dispositions are flexible – adaptable to circumstances.'<sup>26</sup>

What these six elements to strategy demonstrated was the weight placed on deception, confusion, surprise and flexibility<sup>27</sup> all of which are ideally suited to highly mobile armoured warfare. The two negative maxims further stressed the importance of the aforementioned surprise and flexibility: '7. Do not throw your weight into a stroke whilst your opponent is on guard...8. Do not renew an attack along the same line (or in the same form) after it has once failed.'<sup>28</sup> From these negative maxims Liddell

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<sup>24</sup> Alex Danchev, *Liddell Hart and the Indirect Approach*, The Journal for Military History, Vol. 63, No. 2, (Society for Military History: April 1999), p. 317

<sup>25</sup> Alex Danchev, *Liddell Hart and the Indirect Approach*, The Journal for Military History, Vol. 63, No. 2, (Society for Military History: April 1999), pp. 326 - 327

<sup>26</sup> B. H. Liddell Hart, *Strategy: The Indirect Approach*, (London, Faber & Faber Ltd: 1941), pp. 348 - 349

<sup>27</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 349

<sup>28</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 349

Hart's agenda becomes clear, the desire to prevent casualties: 'Of what use is decisive victory in battle if we bleed to death as a result of it?'<sup>29</sup>

Whilst men such as Liddell Hart were questioning military theory the British Army was wrestling with reality as to what role tanks should play in future warfare. In 1927 His Majesty's Stationery Office published the latest version of the British Army's *Field Service Regulations*. Revealed within the book was the confusion surrounding the role of the tank and its place on the battlefield. It would seem that some lessons from the First World War had been learned in regards to armoured warfare: in that tanks should be used en-masse and on suitable terrain.<sup>30</sup> Other more unfortunate lessons from the First World War, such as mechanical unreliability and poor mobility, resulted in the tank being relegated to support duties: '...tanks will be divided into forward units detailed to capture certain objectives in co-operation with the infantry.'<sup>31</sup> The cavalry on the other hand 'must make the fullest use of its mobility and fire power and be prepared to seize any opportunity that may occur for exploiting a local or general success. It will be prepared to push boldly forward to secure objectives beyond the reach of slower moving troops.'<sup>32</sup> The retention of cavalry, and subsequent roles assigned, in the *Field Service Regulations* belong to a previous generation and were, as Liddell Hart described, based on the only successful application of cavalry in the First World War: under Allenby in Palestine.<sup>33</sup> The Battle of Meggido was Allenby's crowning achievement in Palestine when his cavalry, after

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<sup>29</sup> Alex Danchev, *Liddell Hart and the Indirect Approach*, *The Journal for Military History*, Vol. 63, No. 2, (Society for Military History: April 1999), p. 317

<sup>30</sup> HMSO, *Field Service Regulations Vol. II (Operations) 1929*, (London, His Majesty's Stationery Office: 1929), p. 124

<sup>31</sup> HMSO, *Field Service Regulations Vol. II (Operations) 1929*, (London, His Majesty's Stationery Office: 1929), p. 124

<sup>32</sup> HMSO, *Field Service Regulations Vol. II (Operations) 1929*, (London, His Majesty's Stationery Office: 1929), p. 126

<sup>33</sup> Liddell Hart, *The Tanks*, p. 200

the infantry and artillery had broken the Turkish lines, exploited the breach and rode on toward Aleppo.<sup>34</sup> Such a great achievement was only possible due to the poor condition of the Turkish Army during this period which was racked by disease and severely outnumbered.<sup>35</sup> ‘Megiddo marked the swansong of cavalry, and the end of the era of the horse as a decisive weapon of war,’<sup>36</sup> or should have done. Serving on Allenby’s staff in Palestine was Archibald Percival Wavell, a brevet lieutenant colonel, who would later take over from his mentor in the Middle East. Prior to taking on the role of Commander-in-Chief Middle East, Wavell commanded the 3<sup>rd</sup> Infantry Division which took part in experiments surrounding the mechanization of the British Army. ‘The most significant part of Wavell’s work . . . was his close association with the birth and early trials of the first mechanized formation in the world, the Experimental Armoured Force of 1927-8...the mother of all armoured divisions.’<sup>37</sup> Wavell was actively involved in the interwar experiments and, it shall be argued, was this experience which enabled him to crush the Italians during Operation Compass.

This dissertation will present an alternative argument to the opinions of Martin Kitchen who, in his book *Rommel’s Desert War*, wrote that ‘the British had invented the tank, but apart from a few interesting experiments in the late 1920’s had not found a way to integrate the weapon.’<sup>38</sup> He goes on to comment that the British were ‘painfully slow to learn and only prevailed due to sheer guts and an

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<sup>34</sup> Matthew Hughes, *Allenby, Edmund Henry Hynman, first Viscount Allenby of Megiddo*, (1861 – 1936), ODNB Article, available <<http://www.oxforddnb.com/view/article/30392?docPos=1>> accessed 14/04/12

<sup>35</sup> Matthew Hughes, *Allenby, Edmund Henry Hynman, first Viscount Allenby of Megiddo*, (1861 – 1936), ODNB Article, available <<http://www.oxforddnb.com/view/article/30392?docPos=1>> accessed 14/04/12

<sup>36</sup> Matthew Hughes, *Allenby, Edmund Henry Hynman, first Viscount Allenby of Megiddo*, (1861 – 1936), ODNB Article, available <<http://www.oxforddnb.com/view/article/30392?docPos=1>> accessed 14/04/12

<sup>37</sup> John Connell, *Wavell: Scholar and Soldier* (London: Collins, 1964), p. 155.

<sup>38</sup> M. Kitchen, *Rommel’s Desert War*, (Cambridge, Cambridge University Press: 2009), p.8

overwhelming superiority in men and materiel'<sup>39</sup>. Though there may well be merit in this statement when applied to later periods in the Second World War, when Britain was suitably re-armed, it does not account for the British success in Operation Compass. When Benito Mussolini entered the war and launched a massive invasion of British held Egypt the Italians had a force of some 250,000 troops.<sup>40</sup> This invasion failed catastrophically in its objective and the Italian forces were routed by a British force of 30-35,000 men.<sup>41</sup> Such figures provide overwhelming evidence to the contrary of Martin Kitchen's argument as the British did not possess 'overwhelming superiority in men and materiel'<sup>42</sup> but were in fact outnumbered roughly 8:1. It shall be argued that the British were successful precisely because the officers involved in Operation Compass had in fact found a way to integrate the tank and were able to use it decisively.

This dissertation has been structured to best deal with each of the above topics through two main chapters. The first shall discuss the development of British armoured doctrine, and the mechanisation of the British Army, with particular attention being paid to its key figures and supporters, Liddell Hart's indirect approach in comparison with Carl Von Clausewitz and the more *direct* approach which he and his disciples adhere to, will also be addressed including experimentation: the Experimental Mechanised Force, and Experimental Armoured Force, of the late 1920s and those officers involved not only in the experiments but who would later be involved in, or have some form of influence over, Operation Compass such as Wavell and Hobart. Having assessed Liddell Hart's theory against that of Clausewitz, and

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<sup>39</sup> M. Kitchen, *Rommel's Desert War*, (Cambridge, Cambridge University Press: 2009), p.9

<sup>40</sup> J. Thompson, *Forgotten Voices: Desert Victory*, (Great Britain, Ebury House: 2011), p.3

<sup>41</sup> Third Supplement to The London Gazette, 11<sup>th</sup> June 1946: *Operations in the Middle East from August, 1939 to November, 1940*. Issue no. 37609, p.2997.

<sup>42</sup> M. Kitchen, *Rommel's Desert War*, (Cambridge, Cambridge University Press: 2009), p.9

commented upon its use in the armoured experiments of the late 1920s, this dissertation shall analyse the British governmental policy regarding mechanisation of the armed forces and re-armament. The first chapter shall conclude by assessing Britain's readiness for war in 1939.

The second chapter shall introduce Operation Compass within the historical context by discussing the opening phases of the Second World War before focusing on the Italian war aims and declaration of war on June 10<sup>th</sup> 1940.<sup>43</sup> The British forces, their commander, his responsibilities and available resources will be contrasted with those of the Italians. The immediate precursor to Operation Compass, the Italian invasion of Egypt, whilst being nothing more than an opening skirmish, shall serve as background to Operation Compass, the main focal point of this dissertation, which was referred to by Julian Thompson as the 'Forgotten Victory.'<sup>44</sup>

The selection of Operation Compass for the focus of this dissertation was in answer to popular culture of the North African campaign which is constantly centred on the famous duel in the desert between Rommel and Montgomery.<sup>45</sup> It seems to this author that historians, and the general public, have become so blinkered that they fall in line with Winston Churchill's grandiose, but incorrect, statement that 'before El Alamein we never had a victory.'<sup>46</sup> This statement could not be more wrong. General Wavell during Operation Compass, the British counter-offensive, inflicted a greater number of casualties against the enemy than did Montgomery at El Alamein.

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<sup>43</sup> John Sweet, *Iron Arm* p. 152

<sup>44</sup> J. Thompson, *Forgotten Voices: Desert Victory*, (Great Britain, Ebury House: 2011), p.1

<sup>45</sup> The World at War, Episode 8 *The Desert: North Africa 1940-1943*, December 19<sup>th</sup> 1973, Thames Television, written & published by Peter Batty

<sup>46</sup> D. Knowles, *How El Alamein changed the war*, available <<http://news.bbc.co.uk/1/hi/uk/2347801.stm>> accessed 3/12/11

Furthermore Wavell accomplished this despite being heavily outnumbered.<sup>47</sup> The current historiography fails to explain how this decisive British victory came about. This oversight shall be addressed by this dissertation and argue that Liddell Hart's strategy of the Indirect Approach coupled with superior British armoured fighting vehicles and doctrine was the reason for victory in the Western Desert 1940 – 1941.

In order to accomplish the objectives of this dissertation a large number of resources have had to be drawn upon from multiple locations. As anticipated there have been no shortages of secondary literature and online resources which focused upon the Second World War, North Africa or Armoured Warfare. The only issue encountered regarding secondary literature, as mentioned above, has been the lack of detail surrounding Operation Compass in the various books which have dealt with the North African theatre. This minor problem was easily circumvented by simply gathering a wider collection of resources from which to draw upon. In terms of primary resources there have been three large collections from which to gather relevant information. The National Archives at Kew possesses the official histories of each of the large campaigns of the Second World War, with a large collection relating to the North African campaign, which is also available online along with the Cabinet papers which relate to inter-war period rearmament and defence policy. The Liddell Hart Centre for Military Archives (LHCMA), located at King's College London, possessed a large amount of personal communiqués between high ranking and influential British Army officers which were found to be particularly helpful in providing information which related to both the mechanisation of the British Army,

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<sup>47</sup> About.com Military History World War II: Operation Compass, available <<http://militaryhistory.about.com/od/worldwarii/p/compass.htm>> accessed 07/12/11  
About.com Military History World War II: Second Battle of El Alamein, available <<http://militaryhistory.about.com/od/worldwarii/p/2ndelalamein.htm>> accessed 07/12/11

and the experiences of officers which took part in Operation Compass. The final collection, and most valuable, was the archive and research library of Bovington Tank Museum. The documents held at Bovington related purely to mechanisation, and tank production of the British Army in the inter-war period, but also possessed the war diaries of each of the Royal Tank Corps (RTC) units which fought during the war. The only issue with these collections was that on occasion the documents were incomplete. The National Archives, LHCMA and the Tank Museum each hold information which related to other information in another location. For example, when researching the Experimental Mechanised Force (EMF) the LHCMA held the private dispatches and reports of officers which took part, the National Archives held the organisational and government papers relating to the EMF and Bovington held the diaries, and a handful of reports in tank journals, relating to the exercises resulting in incomplete records. The respective archivists were unaware of what was held in the other archives and as such, the majority of information relating to the EMF came from a single secondary source published by Bovington Tank Museum's head archivist in an attempt to rectify the problem.

The development of armoured forces by the Italians was initially planned to be included toward the end of the first chapter for comparative purposes, however, it should be mentioned at this juncture that such information cannot be included owing to the lack of secondary and accessible primary resources. This restriction was highlighted by John Sweet who encountered these obstacles when attempting to conduct research for his book *Iron Arm*, in which he discovered that the majority of Italian documents were either destroyed in combat, or lost whilst en-route to Berlin,

after they were seized by the Germans after the Italian armistice.<sup>48</sup> Those documents that survived were later seized by the British and Americans and are located in Washington, but are not legible, or, in small, incomplete volumes, in Oxford.<sup>49</sup> As such the withdrawal of the Italian section from this dissertation has allowed for greater focus to be placed upon British mechanisation and answering the challenges of those historians who have been overly critical of the British armoured forces. This also provides a better opportunity to delve deeper into the work of Liddell Hart and Clausewitz in attempt to measure the feasibility of the ‘Indirect Approach’ and the bloodless victory which Clausewitz, and Danchev to name but a few, believed to be impossible.

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<sup>48</sup> John Sweet, *Iron Arm: The Mechanization of Mussolini's Army, 1920 – 40*, (Mechanicsburg, Stackpole Books: 2007), p. xii

<sup>49</sup> John Sweet, *Iron Arm* p. xii

**Chapter I:**

**The Inter-War Years & British Tank Development**

*'The present position as regards design and production of tanks in this country is  
disappointing.'*

War Office spokesman.

This chapter looks to place into context the political manoeuvring of the interwar years and the impact tank experimentation played in potential future engagements. The armistice of 1918, and the subsequent Treaty of Versailles, allowed the victorious Allies to dictate peace terms to the vanquished Germans and Austro-Hungarians. The treaty was as harsh and as hard as the fighting conditions of the Western Front had been. Germany, the nation that had fought the hardest on all fronts of the war, having humiliated the French in 1870 and dared to challenge the supremacy of the Royal Navy, suffered the most. The French president, Georges Clemenceau, was determined to crush Germany and was at first resisted by both the British Prime Minister, David Lloyd-George, and American President, Woodrow Wilson. Lloyd-George was in favour of merely accepting the German surrender and recognizing the valour of the vanquished.<sup>50</sup> This attitude was not popular and, with an election imminent, changed to support Clemenceau in exacting maximum reparations from Germany and wanting to put the Kaiser on trial.<sup>51</sup> It was not, however, just the defeated nations that suffered under the terms of the Treaty of Versailles. The Japanese, despite being allied to Britain, were discriminated against on account of race and denied the spoils of war. Similarly Italy, a young and relatively minor power, sought to assert itself in European affairs but was denied by the major powers.<sup>52</sup> Each of these nations were ambitious and had only recently achieved a period of stability, or unification, and found that after the Treaty of Versailles, the conservative established order of continental powers had once again reverted to a policy of maintaining the status quo.

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<sup>50</sup> Peter Beale, *Death by Design: British Tank Development in the Second World War*, (Stroud, The History Press: 2009), p. 1

<sup>51</sup> Beale, *Death by Design*, p. 1

<sup>52</sup> Ian W. Walker, *Iron Hulls Iron Hearts: Mussolini's Elite Armoured Divisions in North Africa*, (Marlborough, Crowood Press: 2003), p. 9

A feeling of contempt was harboured in each of these nations both for the treaty and for those who had wrote it.<sup>53</sup>

In the aftermath of the First World War Britain demobilised its enlarged wartime Army and reverted to colonial policing in its overseas territories. Given financial constraints placed on the Armed Forces in the United Kingdom the requirement to protect the home islands, the Empire and the communication routes between them meant that priority was given to the Royal Navy and the fledgling Royal Air Force. The Army would garrison each area and provide internal security and defence against hostile incursion, it was a role that had been carried out for many years across the Empire and was described as ‘real soldiering’<sup>54</sup> part of a ‘back to 1914’<sup>55</sup> attitude. During the inter-war period the general attitude of the electorate, various governments and the military was one of pacifism given the terrible carnage of the First World War. Unsurprisingly during this period, the military theorist came to the fore in search of a *better way*. Sir Basil Liddell Hart modified one of his earlier theories, *The British Way in Warfare*, to fulfil this role of experimentation with the end result being *Strategy: The Indirect Approach*. Liddell Hart was himself a self professed pacifist<sup>56</sup> who, according to Robert H. Larson, throughout his life attempted to limit ‘the destructiveness of modern war.’<sup>57</sup> It was his belief that the lessons of the history of warfare had been ignored by the leaders that waged war in 1914-1918 who had become absorbed by the more recent Napoleonic Wars, and the influence of Carl Von Clausewitz, whom Liddell Hart blamed for the resultant heavy casualties of

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<sup>53</sup> Walker, *Iron Hulls Iron Hearts*, p. 9

<sup>54</sup> Liddell Hart, *The Tanks*, p. 199

<sup>55</sup> Liddell Hart, *The Tanks*, p. 200

<sup>56</sup> Alex Danchev, Liddell Hart and the Indirect Approach, *The Journal for Military History*, Vol. 63, No. 2, (Society for Military History: April 1999), p. 323

<sup>57</sup> Robert H. Larson, B. H. Liddell Hart: Apostle of Limited War, *Military Affairs*, Vol. 44, No. 2, (Society for Military History: April 1980), p. 70

attritional warfare. One of the greatest drawbacks which Liddell Hart identified with modern warfare was the large conscript armies of the time and likened to ‘prehistoric monsters who had tremendous muscle power but primitive nervous systems: once they began to charge, they could overwhelm any lesser creature in their path, but they were incapable of shifting course rapidly or meeting threats from unexpected quarters.’<sup>58</sup> Prior to the First World War, professional armies relied on the ability to out-manoeuvre an opponent, to fight on ground of their choosing which played to their strengths and led to relatively little collateral damage.<sup>59</sup> Using a number of examples where victory had been achieved through manoeuvre, or without great loss of life, such as Hannibal at Cannae, Moltke at Sedan or Napoleon at Ulm,<sup>60</sup> Liddell Hart stated that the true aim of strategy was: ‘...to diminish the possibility of resistance, and it seeks to fulfil this purpose by exploiting the elements of movement and surprise.’<sup>61</sup> By relying on these principles, surprise and movement, it was Liddell Hart’s hope to fulfil one of the oldest principles of war as laid down by Sun Tzu; ‘Ultimate excellence lies not in winning every battle but in defeating the enemy without ever fighting.’<sup>62</sup> The large conscript armies of the Napoleonic, and post Napoleonic era, possessed immense destructive power and, as witnessed in the First World War, when these armies met inflicted great casualties.<sup>63</sup> If a battle was won, it was won at a high price which often resulted in the occupied ground being recaptured by a counter attack. Such futile attritional warfare was summed up by Liddell Hart in 1924: ‘...Of what use is decisive victory in battle if we bleed to death as a result of

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<sup>58</sup> Robert H. Larson, *B. H. Liddell Hart: Apostle of Limited War*, Military Affairs, Vol. 44, No. 2, (Society for Military History: April 1980), p. 70

<sup>59</sup> Robert H. Larson, *B. H. Liddell Hart: Apostle of Limited War*, Military Affairs, Vol. 44, No. 2, (Society for Military History: April 1980), p. 71

<sup>60</sup> Robert H. Larson, *B. H. Liddell Hart: Apostle of Limited War*, Military Affairs, Vol. 44, No. 2, (Society for Military History: April 1980), pp. 70- 71

<sup>61</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 337

<sup>62</sup> Sun Tzu, *The Art of War*, Edited & Translated by John Minford, (London, Penguin: 2003), p. 14

<sup>63</sup> Robert H. Larson, *B. H. Liddell Hart: Apostle of Limited War*, Military Affairs, Vol. 44, No. 2, (Society for Military History: April 1980), p. 70

it?’<sup>64</sup> In an attempt to limit the casualties of the First World War the British introduced the tank which Liddell Hart looked to to replace the mass conscript armies of the time. The tank protected its crew with armour plate and could carry a far greater amount of heavy equipment than the infantry, thus large numbers of tanks could match the firepower of entire armies whilst maintaining superior mobility. Furthermore a mechanised force which was opposed by a massed conscript or infantry force would be able to penetrate deep into the enemy command, and communication system, and threaten the supply lines because of the enemy lack of mobility.<sup>65</sup> The immense cost of mechanisation, and the complicated operation of the machines, would require governments of the industrial nations to revert to smaller professional armies which would render the *old fashioned* nation at arms redundant and limit the destructiveness of modern warfare.<sup>66</sup> When Sun Tzu and Carl Von Clausewitz were writing their theories on warfare the technology did not exist to fully implement Liddell Hart’s indirect approach. With the advent of mechanised warfare, however, it became possible to challenge the influential Clausewitzian school of military theory. In Liddell Hart’s work he cited a number of historical examples of bloodless victories but was realised that these were exceptions as was the form of warfare proposed by Sun Tzu. For this reason therefore, Liddell Hart proposed something of a compromise which would place a reliance on manoeuvrability to achieve, if possible, a bloodless victory or alternatively force an engagement which an opponent cannot hope to win. ‘...Hence his true aim is not to seek battle as to seek a strategic situation so advantageous that if it does not of itself produce the decision, its continuation by a

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<sup>64</sup> Alex Danchev, *Liddell Hart and the Indirect Approach*, The Journal for Military History, Vol. 63, No. 2, (Society for Military History: April 1999), p. 317

<sup>65</sup> Robert H. Larson, *B. H. Liddell Hart: Apostle of Limited War*, Military Affairs, Vol. 44, No. 2, (Society for Military History: April 1980), p. 71

<sup>66</sup> Robert H. Larson, *B. H. Liddell Hart: Apostle of Limited War*, Military Affairs, Vol. 44, No. 2, (Society for Military History: April 1980), p. 71

battle is sure to achieve this.’<sup>67</sup> To any student of military history, what Liddell Hart proposed was, as stated by Alex Danchev, ‘heresy’ and though this statement may well have been correct prior to the First World War with the dawn of mechanised warfare Liddell Hart’s theory became possible.

Britain conducted a number of experiments during the interwar period to investigate the potential of armoured units in a future war. Peter Beale and Gordon Corrigan, both British Army veterans, have been highly critical of the tactical employment, and development, of British armour in the Second World War. Peter Beale referred to tank crews being ‘murdered’<sup>68</sup> by poorly designed vehicles, insufficient training and a lack of purpose which created confusion in the ranks as to what they were supposed to do with their tanks.<sup>69</sup> Similarly Gordon Corrigan voiced his opinions in a history documentary stating that the British Army simply didn’t know how to use their tanks whereas the Germans did.<sup>70</sup> This negated the advantages held by some British tanks which were, on paper, superior to the early German panzer’s by possessing superior guns and heavier armour.<sup>71</sup> David Fletcher wrote, quite correctly, that whilst possessing superior firepower or armour can be important these advantages ‘could all be counted as worthless if, when the time came to put it to the test, the techniques of handling them [tanks] in battle did not match up to what they were capable of.’<sup>72</sup> The obvious solution was military exercises and in this respect Britain led the world when in 1927 the Experimental Mechanised Force, ‘the

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<sup>67</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 339

<sup>68</sup> Beale, *Death by Design*, p. vii

<sup>69</sup> Beale, *Death by Design*, p. vii

<sup>70</sup> The War File DVD Video, *Killer Tanks Fighting the Iron Fist, The Cromwell Tank: A British Heavyweight*, (Pegasus Entertainment, 15<sup>th</sup> August 2005)

<sup>71</sup> See Appendix 1.

<sup>72</sup> David Fletcher, *Mechanised Force: British Tanks Between the Wars*, (London, HMSO: 1991), p. 61

mother of all armoured forces'<sup>73</sup> was created. Prior to the founding of this unit, exercises with tanks were carried out but were conducted with extreme bias in favour of the conventional forces, the infantry and cavalry, as pointed out by Liddell Hart who criticised the War Office umpiring which stated that: '...any tank, travelling at less than 6 mph, when within 600 yards of an anti-tank gun would automatically be declared knocked out when two rounds had been fired at it.'<sup>74</sup> This absurd rule was made all the more so when gunnery trials at Larkhill found that 'on average 22 rounds had to be fired at a tank before it could definitely be claimed that it had been destroyed.'<sup>75</sup> The unfair umpiring led to little being accomplished during the exercises but they did cause a number of officers to see the potential of armoured forces. Brigadier Collins, who commanded both the EMF and the EAF, highlighted the main issues involved in handling large formations of armoured forces: terrain and reliability, the same drawbacks suffered by First World War tanks, which he experienced during the first year of EMF exercises.<sup>76</sup> The 1927 exercises revealed the need for better communications and logistics owing to the obsolescence of dispatch riders.<sup>77</sup> In 1928 the EMF was renamed Experimental Armoured Force and featured a dedicated signals unit and radio communications in place of despatch riders.<sup>78</sup> Attached to the *traditional forces* during these exercises was Colonel, later General and Commander-in-Chief Middle East, A. P. Wavell, who served on the staff of the 3<sup>rd</sup> Infantry Division. He concluded that armour possessed significant advantages over traditional forces, especially infantry, both physically and psychologically.<sup>79</sup>

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<sup>73</sup> Dr Harold E. Raugh Jr, review, *The British Army and the Theory of Armored Warfare, 1918-1940*, by Robert H. Larson, available <<http://www.hraugh.com/docs/thebritisharmy.html>> accessed, 28/05/12

<sup>74</sup> Fletcher, *Mechanised Force*, p. 62

<sup>75</sup> Fletcher, *Mechanised Force*, p. 62

<sup>76</sup> Fletcher, *Mechanised Force*, p. 64

<sup>77</sup> Fletcher, *Mechanised Force*, p. 63

<sup>78</sup> Fletcher, *Mechanised Force*, p. 63

<sup>79</sup> Fletcher, *Mechanised Force*, p. 64

‘Not knowing where it was, or when it might attack, introduced an air of caution, along with frustration at the virtual impossibility of hitting back.’<sup>80</sup> The experience gained by officers who took part in these exercises was invaluable and, in Wavell, there was one man who seemed, in his own writings, to almost mirror Liddell Hart and having concluded the armoured experiments of 1927-8 wrote that ‘...From mechanized forces...may be born a David to slay a Goliath.’<sup>81</sup> In 1938 Brigadier Percy Hobart was ordered to train a newly formed Mobile Division in Egypt. This was the only mechanised force to be formed outside of the United Kingdom and thus shows the importance of that country in the grand strategy of the British government. The selection of Hobart was by no means an accident: he had developed a reputation for being both unorthodox and outspoken when serving as a sapper and later in the Royal Tank Corps.<sup>82</sup> An example of Hobart’s outspokenness was when he vehemently opposed the directive put forward by the Director of Military Training who wrote that tanks should be remain stationary when firing in order to achieve better accuracy. Hobart objected to this and trained his Mobile Division to fire on the move so as to make best use of the inherent mobility and firepower of an armoured formation.<sup>83</sup> The force commanded by Hobart would later be renamed the 7<sup>th</sup> Armoured Division, the famous Desert Rats, and played an important role in Operation Compass as it served as the bulk of the British mechanised forces available at the outset of the war with Italy and comprised of the following:

‘Mechanised Cavalry Brigade...7<sup>th</sup> Hussars in light tanks, 8<sup>th</sup> Hussars in trucks (later...light tanks), and 11<sup>th</sup> Hussars in armoured cars, a Tank Group of two RTC Battalions in light and medium tanks and the

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<sup>80</sup> Fletcher, *Mechanised Force*, p. 64

<sup>81</sup> R. H. Kiernan, *Wavell*, (London, George G. Harrap & Company Ltd: 1945), p. 112

<sup>82</sup> John Keegan, *Churchill’s Generals*, (London, Abacus: 1990), p. 243

<sup>83</sup> Brian Bond, *Fallen Stars: Eleven Studies of Twentieth Century Military Disasters*, (London, Brassey’s: 1991), p. 93

Pivot Group of 3<sup>rd</sup> Regiment Royal Horse Artillery and a single infantry battalion.’<sup>84</sup>

Prior to the outbreak of war in 1939 Hobart was relieved of his command due to a number of character flaws: he was quick tempered, self-opinionated and regarded non-mechanised forces with disdain.<sup>85</sup> That having been said however, even those who criticised Hobart regarded him as an ‘excellent trainer of an armoured formation.’<sup>86</sup> Lieutenant General Richard O’Connor, who would command Hobart’s men during Operation Compass, was one such man who praised the high quality and training of the men under his command.<sup>87</sup>

To return to an earlier point, Peter Beale, a veteran of the 9<sup>th</sup> Battalion Royal Tank Regiment, wrote that: ‘...Tank crews were ill equipped, undertrained, badly led, uncertain what they should be doing.’<sup>88</sup> The men of the Mobile Division were well trained. The officers who took part in the EMF and EAF experiments realised the potential of armoured fighting vehicles but not all British officers, or troops, were uncertain of what they should be doing nor were they all badly trained. The statement made by Beale, though valid in part, is too broad sweeping and does not encompass men such as Hobart, Wavell and O’Connor, though this author finds himself in agreement that such men were in the minority, there can be no denying that a minority did in fact exist. As for the British troops being poorly equipped and uncertain as to how to use tanks the British were at a distinct disadvantage to the German, and even the Italian, tank crews at the outset of the war. As mentioned, the British interwar experiments had been umpired unfairly and had been subject to extreme bias by those

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<sup>84</sup> Bond, *Fallen Stars*, p. 97

<sup>85</sup> Bond, *Fallen Stars*, p. 98

<sup>86</sup> Bond, *Fallen Stars*, p. 99

<sup>87</sup> Bond, *Fallen Stars*, p. 101

<sup>88</sup> Beale, *Death by Design*, p. vii

in positions of authority whereas the Germans and Italians had, by 1939, combat experience from the Spanish Civil War and, in Italy's case, Abyssinia whilst British troops had nothing but manoeuvres to rely upon.<sup>89</sup> In regards of the quality of the tanks that were available to British forces at the outset of the war, many were actually superior to the German tanks and the finest tank used by the Germans in 1939 was in fact of Czech origin.<sup>90</sup> Of most importance to the mechanisation of the British Army was the governmental policy and way in which that policy was carried out by the Army with all financial considerations having been taken into account. British government spending was severely hampered by the need to maintain her vast overseas empire. The earliest, and arguably most damaging governmental policy to be laid down after the Armistice, was the so called ten-year rule which decreed that the Armed Forces should not anticipate fighting a major war for another ten years nor should new defence contracts be invested in too heavily, so as not to burden the treasury.<sup>91</sup> This policy was followed by the Washington Naval Treaty which, though severely damaging the Royal Navy, also had consequences for the British Army in that the munitions and steel workers were rapidly laid off owing to a lack of demand for their services.<sup>92</sup> When Britain finally began to re-arm, a lack of skilled labour severely limited the production of modern weapons and Britain's manufacturing base had declined due to over a decade of neglect.<sup>93</sup> This, combined with the low priority of Army needs against those of the other forces, resulted in the Army being the most

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<sup>89</sup> History World International, *The Spanish Civil War*, available < [http://history-world.org/spanish\\_civil\\_war.htm](http://history-world.org/spanish_civil_war.htm) > accessed 05/06/12

<sup>90</sup> See Appendix 1.

<sup>91</sup> The National Archives, The Cabinet Papers: The ten-year rule and disarmament, available < <http://www.nationalarchives.gov.uk/cabinetpapers/themes/10-year-rule-disarmament.htm> > accessed 05/06/12

<sup>92</sup> The National Archives, The Cabinet Papers: The ten-year rule and disarmament, available < <http://www.nationalarchives.gov.uk/cabinetpapers/themes/10-year-rule-disarmament.htm> > accessed 05/06/12

<sup>93</sup> The National Archives, The Cabinet Papers: End of disarmament and defence requirements, available < <http://www.nationalarchives.gov.uk/cabinetpapers/themes/end-of-disarmament-defence-requirements.htm> > accessed 05/06/12

ill-prepared of the three services when war broke out. The Navy and Air Force were the first and second line of defence for the home islands whereas the Army was tasked with increasing its available anti-aircraft stocks, and weapons for coastal defence, which included doubling the Territorial Army and introducing conscription.<sup>94</sup> In regards to the armoured forces there was, as suggested by Peter Beale, a sense of confusion surrounding their purpose. Percy Hobart, for example, one of the most ardent supporters of armoured warfare and armoured theorist, saw no future role for non-mechanised forces and found the success of Erwin Rommel's combined tank and anti-tank gun strategy baffling.<sup>95</sup> Hobart was one of the finest armoured officers in the British Army yet he failed to grasp the importance of the all arms battle which had proven to be so important in the First World War.<sup>96</sup>

British war planning had theorised that should another European war break out it would be fought along similar lines as that of the First World War. The memories and horrors of the previous war were still fresh in the minds of the public and politicians who sought to distance themselves from any sort of military commitment to continental Europe.<sup>97</sup> Indeed war planners only envisaged the need for five divisions, the same size of the BEF of the First World War, which may be committed in defence of Imperial possessions. This situation only began to change after 1936 when re-armament began in earnest. This having been said however, war with Germany was still not anticipated; a situation which only changed in 1938.<sup>98</sup> An official government paper written in defence of government interwar policy read:

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<sup>94</sup> The National Archives, The Cabinet Papers: Rearmament Plans, available <<http://www.nationalarchives.gov.uk/cabinetpapers/themes/rearmament-plans.htm>> accessed 05/06/12

<sup>95</sup> Keegan, *Churchill's Generals*, p. 101

<sup>96</sup> Keegan, *Churchill's Generals*, p. 101

<sup>97</sup> RAC Tank Museum Bovington, 355.6 Tank Board E 2005.16231 Development of A.F.V Equipment,

<sup>98</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

‘...As this was the attitude of the electorate and successive governments until 1938 no blame can be attached to the individual members of the Cabinet or War Office up to that time.’<sup>99</sup> This statement, and the attitude of the interwar governments, has been roundly criticised both during and after the Second World War. One such critic was Richard Rapier Stokes MP for Ipswich and a former Royal Tank Corps Officer who write that:

‘Thousands of the boys who went out to fight for us are not coming home again because our Ministry of Defence failed, through stupidity and weakness, in the department of weapons...from the first shot to the last our soldiers have never been equipped with a tank equal to the German best in gun, armour and reliability...Because of this...armies of our young men, always handicapped in action, were needlessly sacrificed.’<sup>100</sup>

Had Britain focused all of her industrial output purely on the re-armament of the Army then perhaps the British Expeditionary Force would have been better prepared, and equipped, than they were when sent to France, but this was not the case. The Government decreed that ‘...re-armament should not interfere with the spontaneous recovery of industry from the slump of 1929-1931.’<sup>101</sup> To complicate matters further, the Government decided that defence orders should be placed with specific firms as opposed to ordering vehicles from multiple locations.<sup>102</sup> This slowed production and prevented the armoured forces building up a capacity of new or reserve and spare

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<sup>99</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production, E 2010.3630, Tank Production 1938/1939

<sup>100</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production E 2010.3633, ‘Some Amazing Tank Facts’ Sensational Indictment by a Serving Officer by R. R. Stokes MP for Ipswich

<sup>101</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>102</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

equipment. To compound this problem was a severe lack of funding. Liddell Hart observed that mechanised forces would, owing to their complex mechanical nature, be highly expensive to create and maintain.<sup>103</sup> The War Office estimated that an Infantry Division cost £3 million to equip and £342,000 to maintain, whereas an Armoured Division cost £7.5 million to equip and £895,000 to maintain each month.<sup>104</sup> To meet these costs the Treasury allocated a meagre £22.7 million in May 1938.<sup>105</sup> Government policy of preventing interference with industrial recovery was incredibly flawed as it was large scale defence contracts which eventually caused an industrial revival of British factories. Industrial, however, had an adverse effect on tank design in that engineers sought employment in private industry as opposed to government projects which paid far less.<sup>106</sup> As a result, those men tasked with tank design were Army engineers who were amateurs by comparison having no more than two years training on an Army apprenticeship. Civilian engineers, however, undertook far lengthier and more detailed apprenticeships with years of theoretical study before embarking on practical projects.<sup>107</sup> The inexperienced military engineers and technicians often created imperfect designs which could only be improved through trial and error<sup>108</sup> and such experimentation was severely limited by financial constraints. For example, annual funds for experimental tanks varied from £22,500 to £93,750 which was an insufficient amount considering a single experimental tank

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<sup>103</sup> Robert H. Larson, *B. H. Liddell Hart: Apostle of Limited War*, Military Affairs, Vol. 44, No. 2, (Society for Military History: April 1980), p. 71

<sup>104</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>105</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>106</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>107</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>108</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

could cost as much as £30,000.<sup>109</sup> This lack of resources resulted in a lack of thorough investigations into the capability of experimental machines. Furthermore new components were often tested on obsolete tank chassis which corrupted the result of the trial.<sup>110</sup> The British governmental policy of maintaining tank production as a non commercial project added to the limitations placed on experimentation by the Treasury. It did so by reducing competition between leading designers who saw no benefit or investment opportunities in the projects.<sup>111</sup> One final impact of financial constraints was on the employment of talented workers which during the economic slump of the interwar period saw a number of workers made redundant. In particular there was a shortage of skilled draughtsmen capable of designing the complex machines.<sup>112</sup> The most skilled men were those with the most experience who were in constant demand and quite old. The death of these men has been used by the War Office 'as an explanation of industry's inability to design.'<sup>113</sup> The design for the Matilda Mk II infantry tank for example, carried out by the Vulcan Foundry, was carried out by just two draughtsmen. Similarly, in 1939 Harland and Wolff were forced to use just four draughtsmen to design the A. 20 infantry tank. Such a small team of designers often attempted to re-use familiar or tried and tested components in new designs which often resulted in the new designs being limited by old or ineffective components.<sup>114</sup>

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<sup>109</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>110</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>111</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>112</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>113</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>114</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

Peter Beale wrote that British tank crews did not know what they were supposed to do with their tanks although as has been mentioned, this was corrected by proper training. Beale was, however, correct in that a sense of confusion did exist but it was at the highest level: the General Staff. The production of a tank was a time consuming process which required the General Staff to draw up a set of specifications, parameters which the designers must adhere to, which would give the tank a tactical definition.<sup>115</sup> With this done, a design would be created which met the specifications and was within the budget allocated by the Treasury. From the design board an experimental machine would be created, any design flaws corrected, and finally the tank would enter production. Such a process took time and production could be hindered by the General Staff altering the design specifications during the production process which frequently occurred.<sup>116</sup> The only design parameters which were not altered were those for the role of light tanks which were to fulfil the roles formerly occupied by the cavalry.<sup>117</sup> The uninterrupted production of light tanks explains why Britain was equipped with so many of these machines at the outbreak of the Second World War compared to other more capable tanks.<sup>118</sup> The chart below provides a comparison between the numbers of armoured fighting vehicles available to the British Army in September 1939 which shall highlight the chronic production shortfalls caused by interference from the General Staff.

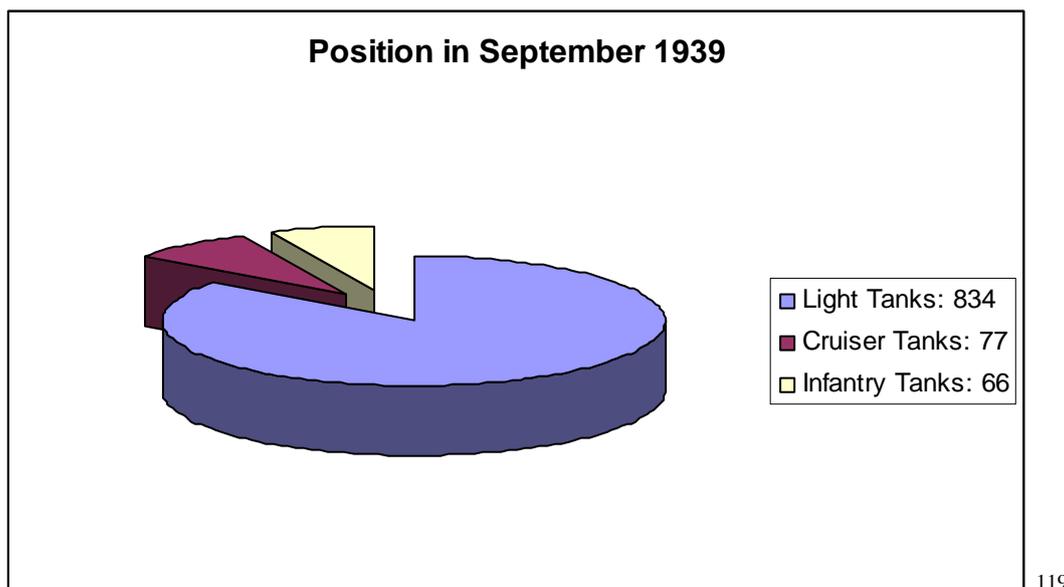
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<sup>115</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>116</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>117</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>118</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks



British war planners had not anticipated a major European war and for this reason light tanks and armoured cars were the mainstay of British armoured formations. Such vehicles acted in a cavalry role in that they could move at high speed to any threatened area. The light armour protection and superior firepower of these vehicles meant that they were better suited to Imperial policing duties than the more vulnerable cavalry. Furthermore the lack of a modern army, one equipped with armoured vehicles or anti-tank guns, meant that the armoured forces could act with relative impunity.<sup>120</sup> The realisation that a European war was increasingly likely led to a drastic change in the priorities of British armoured fighting vehicles. Light tanks, when facing a modern force, were merely reconnaissance vehicles and were largely replaced by the Cruiser tank with thicker armour and superior firepower yet still able to maintain relatively high speeds. By 1936 there were two Cruiser tanks ready for production, the A 9 and A 10, which suffered from severe mechanical problems

<sup>119</sup> RAC Tank Museum Bovington, 355.6 Tank Board E 2005. 16232, Section 'A' Position in September 1939

<sup>120</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

resulting from an inadequate engine.<sup>121</sup> The solution to the mechanical problems was either a reduction in armour protection, reducing the overall weight of the tank, which left the crew vulnerable in tank on tank combat. The second option open to the designers, was to put the tank into production with a reduced speed, which was considered by the War Office inadequate for the primary vehicle for engaging enemy tanks.<sup>122</sup> By 1939 the most common German tank in service was the Panzer II which, when compared to the A 9, was equipped with roughly the same armour protection, in the A, B and C models, but was outgunned by the A 9.<sup>123</sup> The British cruiser tanks, despite being superior to the standard German battle tank the Panzer II, were viewed with contempt by the War Office and Royal Tank Corps, because of the shortcomings of the design, and as such were not prepared to put the tanks into large scale production.<sup>124</sup> Of all British tanks, however, it is the opinion of this author that the greatest lack of tactical definition surrounded the infantry tank. The infantry tank was designed to fulfil an assault role but it had not been decided whether the tank should protect the infantry during their advance, or be a heavily armoured weapon capable of taking greater battle damage than the cruiser tanks.<sup>125</sup> To provide an example of the confused design of this class of vehicle the armament of the Matilda Mk II in particular seemed to encompass both the cruiser and infantry support role. The primary armament was a 2-pounder anti-tank gun which was not capable of firing high explosive shells, and could not efficiently destroy enemy defensive positions such as machine gun emplacements and anti-tank guns.<sup>126</sup> The armament of the tank,

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<sup>121</sup> J. P. Harris & F. N. Toase, *Armoured Warfare*, (Kent, Batsford Ltd: 1990), pp. 40-41

<sup>122</sup> J. P. Harris & F. N. Toase, *Armoured Warfare*, pp. 40-41

<sup>123</sup> See Appendix 1.

<sup>124</sup> J. P. Harris & F. N. Toase, *Armoured Warfare*, pp. 40-41

<sup>125</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>126</sup> The War File DVD Video, *Tanks, Fighting the Iron Fist: The Churchill Tank: Britain Fights Back*, Pegasus Entertainment, 15<sup>th</sup> August 2005

designed to support infantry, could only support advancing troops from close range using its co-axial machine gun. It did, however, mean that the Matilda Mk II was capable of defending infantry from enemy tank attack which became the justification for the design.<sup>127</sup> The need for a main gun that could fire both high explosive, and anti-tank rounds, should have been recognised by the General Staff as this would have solved the complex design requirements in British tank production in that a general purpose tank, which encompassed the tank killing and infantry support role, could have been fulfilled by a single vehicle. At the very least the Army could have fielded a vehicle comparable to the Panzer IV infantry support tank.

To provide an example of the inadequacy of British armour designs, a report was written after the fall of France to review the performance of the combat capability of enemy machines and the effectiveness of friendly vehicles currently in service. The report returned three points in regard to British machines: firstly only Cruiser Mk IV (A 13) was well liked by the cavalry because of its speed, but not its mechanical reliability, which ‘must be uniform and great.’<sup>128</sup> Secondly ‘the minimum thickness of armour for any A.F.V should be 40 mm...Anything less than 30 mm was a waste of lives and material.’<sup>129</sup> The main anti-tank weapon used by the Germans was the 37 mm which at a range of 400 yards could be protected against by 40 mm armour. This information was known to designers in 1940, however the first British Cruiser tank to accommodate 40 mm armour was the Crusader which entered service in 1942 armed with a 2 pounder which was, by that time, obsolete. Comparable

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<sup>127</sup> The War File DVD Video, *Tanks, Fighting the Iron Fist: The Churchill Tank: Britain Fights Back*, Pegasus Entertainment, 15<sup>th</sup> August 2005

<sup>128</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>129</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

German tanks had, by 1942, been both up-gunned and up-armoured mounting a 50 mm, in the Panzer III, or 75 mm gun, in the Panzer IV, with armour as thick as 57 and 50 mm respectively. This meant that the latest British tank could not engage German machines from long range, as the 2 pounder was unable to penetrate the frontal armour of a Panzer III or IV except at very close range whilst the Germans could easily destroy the Crusader. The final finding of the report related to the Infantry tank of which two were in service with the British Army, the Matilda I and II, the former was armed with a single machine gun whilst the latter was armed with an anti-tank gun incapable of engaging infantry. The report stated that ‘...It will be a grave error if any Infantry tank of the future is not equipped with at least a 75 mm shell firing weapon.’<sup>130</sup> The last, and greatest, of the British Infantry tanks, the Churchill, was, in its definitive version, armed with a 6 pounder weapon. The 6 pounder was nearing obsolescence in 1942 and could not engage the Panzer IV on equal terms as it was armed with a 75 mm weapon.<sup>131</sup> The Churchill fought on mainland Europe after D-Day still armed with a 6 pounder with which they were expected to engage Panzer IV, Panther and Tiger tanks against which the Churchill was utterly outclassed.<sup>132</sup> The only British tanks which possessed adequate firepower were the Comet, which entered service in late 1944, and the Black Prince which was an experimental machine only.<sup>133</sup>

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<sup>130</sup> RAC Tank Museum Bovington, 355.6 Tank Supply & Production Box 2, E 1992.204.18.33 Design and Production of British Tanks

<sup>131</sup> The War File DVD Video, *Tanks, Fighting the Iron Fist: The Churchill Tank: Britain Fights Back*, Pegasus Entertainment, 15<sup>th</sup> August 2005

<sup>132</sup> The War File DVD Video, *Tanks, Fighting the Iron Fist: The Churchill Tank: Britain Fights Back*, Pegasus Entertainment, 15<sup>th</sup> August 2005

<sup>133</sup> The War File DVD Video, *Tanks, Fighting the Iron Fist: The Churchill Tank: Britain Fights Back*, Pegasus Entertainment, 15<sup>th</sup> August 2005

From this it can be seen that the development of British tanks during the interwar years was handicapped by a severe lack of funds which in turn caused tanks to be developed with relatively poor components. Furthermore, the capabilities of the tanks designed suffered from an uncertain purpose which in turn led to the development of multiple machines for multiple purposes. The construction of so many vehicles also put great strain on Britain's manufacturing base and was highly inefficient compounded by a lack of skilled workers who had been laid off during the economic crises of the 1930s and resultant neglect of British industry. The tanks that Britain went to war with in 1939 were in some respects equal, or in some cases superior, to the German machines but even in the Battle of France the need for thicker armour and heavier weaponry was realised. The sad truth of British tank development was that though the shortcomings of British tanks were realised, they were never corrected. Britain was not prepared for war in 1939 and what little headway had been made was nullified with the abandonment of all heavy equipment after the withdrawal to Dunkirk forcing Britain to re-arm for a second time. This time-lag caused British tank development to always be one step behind the Germans.<sup>134</sup>

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<sup>134</sup> The War File DVD Video, *Killer Tanks Fighting the Iron Fist, The Cromwell Tank: A British Heavyweight*, (Pegasus Entertainment, 15<sup>th</sup> August 2005)

**Chapter II:**

**The Italian Invasion of Egypt & Operation Compass**

*'Never was so much surrendered by so many to so few'*

Anthony Eden.

Marshal Foch, speaking after the Treaty of Versailles had been finalised, stated that 'This is not peace. It is an armistice for twenty years.'<sup>135</sup> Sixty five days from when Foch declared the armistice would end, the Second World War began. The new motorised form of warfare, which theorists had predicted, smashed the stunned defenders of Poland, Holland and Belgium before finally turning on France. It has been well recorded that the Allies were caught off guard by the German onslaught but the same was true of Hitler's ally. Italy was not prepared for a modern war having left a large amount of its equipment in Spain. With the fall of France all but guaranteed, and the British Army evacuating from Dunkirk, Mussolini could not afford to squander the opportunity of guaranteed spoils when France finally surrendered. Mussolini hoped to realise some of the ambitions of his country, which slipped by after Versailles and on the 10<sup>th</sup> of June 1940, six days after the British began to evacuate and four days before Paris surrendered, he declared war on the Allies.<sup>136</sup> Mussolini's declaration of war was opportunistic; France was all but defeated and experts predicted that Britain, standing alone with the British Expeditionary Force and the majority of war materiel lost, would soon sue for peace.<sup>137</sup> The pre-war planning that had been carried out by the Italian theorists did not envisage a war against France and Britain, her historic Allies, but rather against Austria with whom she was now allied to.<sup>138</sup> Furthermore the Italian armed forces were not respected by their adversaries due to the opportunistic circumstances of their declaration, a lack of respect which has endured to the present day in historical literature. The Italian

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<sup>135</sup> Great War Heroes Weblog, *Some famous (and not so famous) quotes from WWI*, available <<http://worldwarone.wordpress.com/2011/02/28/some-famous-and-not-so-famous-quotes-from-ww1/>> accessed 23/04/12

<sup>136</sup> Ian W. Walker, *Iron Hulls Iron Hearts: Mussolini's Elite Armoured Divisions in North Africa*, (Marlborough, The Crowood Press: 2003), pp. 24-25

<sup>137</sup> Walker, *Iron Hulls Iron Hearts*, p. 25

<sup>138</sup> John Joseph Timothy Sweet, *Iron Arm: The Mechanization of Mussolini's Army, 1920-40*, (Mechanicsburg, Stackpole Books: 2007), p. 152

people had not expected to become embroiled in the war, certainly not so early on, and as such they had no cause to fight and lacked motivation. The affect of this was that when the Italian soldier went to war he did so not knowing the reason and was therefore disillusioned.<sup>139</sup> The quality of the Italian troops, their resolve, was an unknown, a mystery, to the British but whatever was lacking in quality was made up for, and feared, in quantity.

The defeat of France rendered the first line of defence for the British forces in North Africa, the Royal Navy, in a dangerous situation. The initial defence of the Mediterranean was to be shared between the French Fleet, operating from Toulon, to cover the Western Mediterranean and the Royal Navy, operating from Alexandria, to cover the Eastern Mediterranean. Acting as a combined force the Allies could outnumber the Italian Fleet operating out of Taranto which stood poised to sever the Mediterranean shipping lanes. The fall of France, however, rendered this plan useless and granted the Italians local numerical superiority over the British who were obliged to send reinforcements to protect the Suez Canal.<sup>140</sup>

Prior to the fall of France the Allies controlled forces in Syria, Egypt, Sudan, Djibouti, British Somaliland, Kenya and French North Africa (Algeria and Oran). By possessing these territories the Italian troops located in Libya, Abyssinia, Eritrea and East Somaliland were contained or surrounded. With the fall of France, however, the strategic situation in Africa shifted dramatically. British Somaliland was surrounded and Egypt was flanked by strong Italian garrisons in Libya and Abyssinia: see Figure 1. To compound these matters the British land and air forces were reliant upon the

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<sup>139</sup> Walker, *Iron Hulls Iron Hearts*, p. 25

<sup>140</sup> Paul Sargent, *Wavell's 30,000*, Imperial War Museum, Film and Video Archive, DD Video, 2002

Royal Navy to keep them supplied.

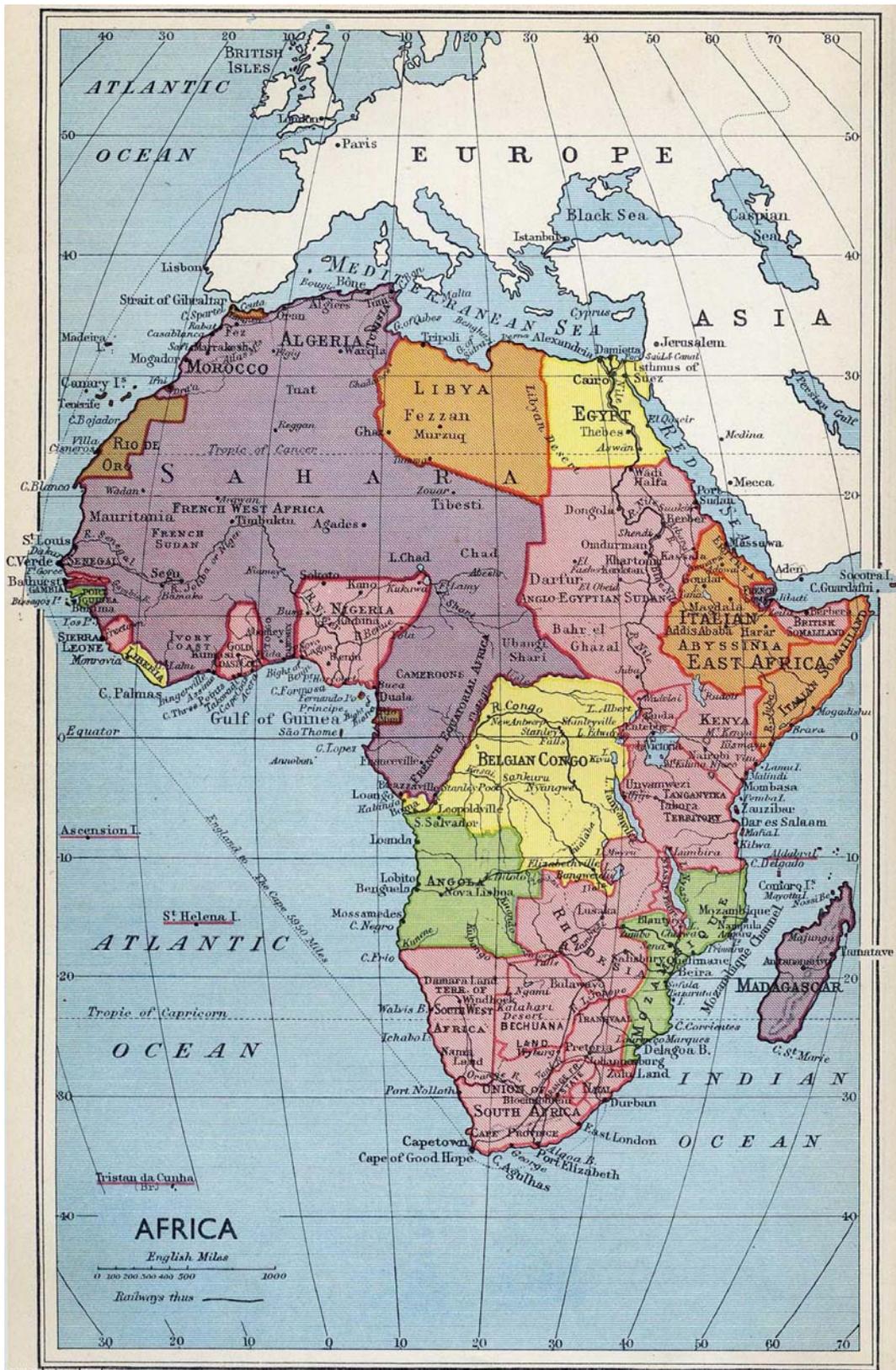


Figure 1, Map of Africa in 1940.<sup>141</sup>

<sup>141</sup> The Internet Map Archive, available

The collapse of France resulted in the closure of French ports along the North African coast leaving British supply convoys with just three friendly ports open to them: Gibraltar, Malta and Alexandria all spread out over 2000 miles of sea. Of these three bases, Malta was at risk from long range aerial bombardment from the Italian mainland and Sicily as well as Italian attack vessels operating from Pantellaria. Alexandria was also at risk as it was in range of hostile aircraft operating from the Dodecanese.<sup>142</sup>

From an Air Force viewpoint there were an insufficient amount of aircraft and too high a demand placed on those that were available. The RAF had to protect the Eastern Mediterranean from Alexandria to Malta, ward off enemy air raids from any of the aforementioned Italian colonies whilst also conducting raids and reconnaissance missions of their own and in co-operation with other services.<sup>143</sup> This almost untenable position was overseen by Commander-in-Chief Middle East General Archibald Wavell who was ordered to hold out until reinforcements could arrive.<sup>144</sup> The exact composition of British forces shall be provided in Appendix 2 of this dissertation, but in total the British Middle East Command was able to despatch to North Africa a total of three divisions of regular army troops including one armoured division with '175 light tanks, seventy three cruiser tanks and fifty Matilda II infantry tanks.'<sup>145</sup> This hastily assembled force numbered approximately 36,000 men and was designated as the Western Desert Force and placed under the command of Lieutenant General Richard O'Connor.

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<<http://www.probertencyclopaedia.com/photolib/maps/Map%20of%20Africa%201940.htm>> accessed 06/06/12

<sup>142</sup> Sargent, *Wavell's 30,000*

<sup>143</sup> Sargent, *Wavell's 30,000*

<sup>144</sup> Sargent, *Wavell's 30,000*

<sup>145</sup> Walker, *Iron Hulls Iron Hearts*, p. 61

Italy fought alongside the Allies during the First World War and suffered 650,000 casualties as a result. For such a high cost Italy expected to receive compensation at the negotiating table. Whilst some concessions were granted from Austria-Hungary they fell far short of expectations. The German Imperial possessions were divided between Britain and France whilst Italy was left with only Libya, which had been under Italian control since 1911, a relatively unimportant colony. Italy sought more lucrative prizes. In Africa, however, there were little prizes to be had as the most valuable areas were already controlled by the two great colonial powers, Britain and France. Italy suffered initial setbacks in her attempts to create an empire when 10,000 Italians were slaughtered in Abyssinia.<sup>146</sup> With the coming to power of Benito Mussolini Italy began to grow more militant and re-arm. The ambitions that had gone unfulfilled after the Treaty of Versailles were to become an obsession with Mussolini. Italy first conquered Abyssinia with a modern force of over 100,000 men. This was, however, a minor victory as Mussolini's ultimate aim was to turn the Mediterranean into what he termed 'mare nostrum,' or our sea. Mussolini wanted to rebuild the Roman Empire and to claim the territory which was denied to Italy after 1918 despite promises of 'territorial accretion'<sup>147</sup> made by Britain and France.<sup>148</sup> Mussolini longed to seize Egypt, a gateway to the Middle East and Far East via the Suez Canal. The seizure of Egypt would grant vast resources and open the possibility of capturing the rich oil fields of the Persian Gulf. With Germany moving east to the Balkans and Japan planning to move west Italy could claim a large area in the centre

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<sup>146</sup> Walker, *Iron Hulls Iron Hearts*, pp. 10-11

<sup>147</sup> H. R. Tate, The Italian Colonial Empire, *Journal of the Royal African Society*, Vol 40, No. 159 (Oxford University Press: April 1941), p. 151

<sup>148</sup> H. R. Tate, The Italian Colonial Empire, *Journal of the Royal African Society*, Vol 40, No. 159 (Oxford University Press: April 1941), p. 151

taking advantage of the British weakness in the area.<sup>149</sup> The forces available to the Italians to conduct an invasion of Egypt were vast. The exact figures of Italian troops stationed throughout Africa vary from source to source from as low as 80,000 troops<sup>150</sup> to as high as 250,000. A general consensus would appear to place a total of ten Italian divisions in Libya numbering the full 250,000 but it would seem that not all of these forces were involved in the initial invasion. For the purposes of this dissertation, the Italian Army stationed in Abyssinia under the command of the Duke of Aosta shall not be discussed as it took no part in the invasion of Egypt or in Operation Compass. To add to the understanding of the strategic situation however, it should be mentioned that the Duke of Aosta had at his command an equally sizable force of roughly 250-300,000 men.<sup>151</sup> The exact composition of the Italian 10<sup>th</sup> Army in Libya is included in Appendix 2.

The Italian invasion of Egypt began on the 13<sup>th</sup> of September 1940 during the period when the Battle of Britain was at its most fierce. The date of the offensive was designed to catch the British at a moment when their morale would be lowest owing to the news from home.<sup>152</sup> The forward element of the Italian 10<sup>th</sup> Army, under the command of General Berti, was ordered forward by Marshal Rodolfo Graziani, Commander-in-Chief Libya.<sup>153</sup> Graziani, however, was in no hurry to advance, despite possessing an overwhelming superiority in men and materiel, and it took Mussolini's personal insistence to act that finally forced Graziani's hand.<sup>154</sup> The

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<sup>149</sup> Peter Batty, *The World at War: The Desert: North Africa 1940-1943*, (London, Thames Television: 1973)

<sup>150</sup> Keegan, *Churchill's Generals*, p. 183

<sup>151</sup> Robert Woollcombe, *The Campaigns of Wavell 1939-1943*, (London, Cassell: 1959), p. 17

<sup>152</sup> Peter Batty, *The World at War: The Desert: North Africa 1940-1943*, (London, Thames Television: 1973)

<sup>153</sup> Keegan, *Churchill's Generals*, p. 183

<sup>154</sup> Correlli Barnett, *The Desert Generals*, (London, Phoenix: 2007), p. 28

Italian invasion of Egypt involved very little combat. The British knew that Graziani had two possible routes of advance open to him: firstly the desert route from Benghazi through the Siwa Oasis to Cairo or secondly the coastal route which utilised the recently constructed coastal road from Benghazi, Derna, Tobruk and on to Sidi Barrani.<sup>155</sup>

In Liddell Hart's 'Indirect Approach' a number of rules or guidelines pertaining to certain scenarios were briefly discussed in Chapter 1 of this dissertation. Of equal value to understanding the relevancy of the 'Indirect Approach' to Operation Compass was what Liddell Hart termed as limited aim. This was when a government, or in this case a commander, 'appreciates that the enemy has the military superiority in general or in a particular theatre, it may wisely enjoin a strategy of limited aim.'<sup>156</sup> This was the very situation with which the British, and especially General Wavell, were faced in 1940. To better understand limited aim and how this complemented the indirect approach a definition was offered by Liddell Hart who wrote that:

'The more usual reason for adopting a strategy of limited aim is that of awaiting a change in the balance of force – a change often sought by and achieved by draining the enemy's force, weakening him by pricks instead of risking blows. The essential condition of such a strategy is that the drain on him should be disproportionately greater than on oneself. The object may be sought by raiding his supplies; by local attacks which annihilate or inflict disproportionate loss on parts of his force; by luring him into unprofitable attacks; by causing an excessively

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<sup>155</sup> Paul Sargent, *Wavell's 30,000*

<sup>156</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 334

wide distribution of his force; and, not least, by exhausting his moral and physical energy.’<sup>157</sup>

The above was quoted directly from Liddell Hart’s ‘Indirect Approach’ and it should be immediately clear from reading that the situation in North Africa was precisely as he described by. To provide a more detailed understanding, however, each point raised by Liddell Hart shall be analysed in turn. The orders given to Wavell were to hold and await reinforcements<sup>158</sup> which would, inevitably, create the ‘change in the balance of force’<sup>159</sup> suggested. As the Italian forces moved forward the British began to ‘drain the enemy’s force’<sup>160</sup> by using light mechanised forces to harry the enemy advance. Such tactics were comparable to the mechanised raids proposed by Colonel Fuller in the First World War. Liddell Hart cited the principles of such raids in his work ‘The Tanks Volume I’: ‘to destroy the enemy’s personnel and guns, to demoralise and disorganise him.’<sup>161</sup> Any form of raid must also be achieved rapidly, not lasting more than 12 hours ‘so that little or no concentration of the enemy may be effected for counter-attack.’<sup>162</sup> Such a strategy conformed to that suggested by Liddell Hart, who wrote that the purpose of strategy was to lessen the possibility of resistance by ‘exploiting the elements of movement and surprise.’<sup>163</sup> The majority of raiding was conducted by the 7<sup>th</sup> and 11<sup>th</sup> Hussars which raided the Italian forward positions of Fort’s Capuzzo and Maddalena taking over 200 prisoners. Similar patrols were reported to have taken a further 160 prisoners and to have destroyed over a dozen tanks and a further two dozen soft skinned vehicles.<sup>164</sup> With hindsight it is now

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<sup>157</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 335

<sup>158</sup> Sargent, *Wavell’s 30,000*

<sup>159</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 335

<sup>160</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 335

<sup>161</sup> Liddell Hart, *The Tanks Volume I: 1914-1939*, p. 130

<sup>162</sup> Liddell Hart, *The Tanks Volume I: 1914-1939*, p. 130

<sup>163</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 337

<sup>164</sup> The London Gazette, 11<sup>th</sup> June 1946: *Operations in the Middle East from August, 1939 to November, 1940*. Issue no. 37609, p. 3000

known that the opening skirmishes of the Italian invasion of Egypt resulted in some 3,500 Italian dead and a further 700 captured along with large numbers of enemy materiel destroyed or captured. In contrast with these figures, the Western Desert Force suffered initial casualties which amounted to no more than 150.<sup>165</sup> ‘the drain on him should be disproportionately greater than on oneself’<sup>166</sup>. The Italian 10<sup>th</sup> Army advanced along the coast road and penetrated 60 miles into Egypt and halted their advance 80 miles short of the British defensive positions at Mersa Matruh.<sup>167</sup>

Graziani fortified his position at Sidi Barrani with a string of defensive positions; see Figure 2, which again relates to the limited aim advocated by Liddell Hart: ‘causing an excessively wide distribution of his force’<sup>168</sup>. The relatively unopposed Italian advance and the decision not to assault the British defences frustrated O’Connor who, during the period of Italian indecision, had prepared a defensive position and a counter-offensive.<sup>169</sup> ‘We hoped he would try and advance to the neighbourhood of Matruh, as we had prepared a full-dress counter-stroke with all our armour...I was greatly disappointed that he never came far enough to put it into practice.’<sup>170</sup>

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<sup>165</sup> Woollcombe, *The Campaigns of Wavell 1939-1943*, p. 24

<sup>166</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 335

<sup>167</sup> Correlli Barnett, *The Desert Generals*, pp. 28-29

<sup>168</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 335

<sup>169</sup> Correlli Barnett, *The Desert Generals*, pp. 28-29

<sup>170</sup> Correlli Barnett, *The Desert Generals*, p. 29

Figure 2, positions of Italian fortified camps.<sup>171</sup>

One of the earliest writers of military strategy, Sun Tzu, stated that ‘I have heard that in war haste can be folly; but have never seen delay that was wise’<sup>172</sup> Graziani delayed long enough for the British to not only prepare defences but also to prepare for a counter attack. The RAF had been far more aggressive than the Italian Air Force and were able to achieve air supremacy, whilst at sea the Royal Navy struck Taranto crippling the largest warships in the Italian fleet and granting the Western Desert Force a brief window of opportunity where supplies could arrive and a counter attack could be made.<sup>173</sup> During this period Britain was under constant air attack by the Germans, the Blitz, and desperately needed a victory after the evacuations from Dunkirk and Norway to lift the spirits of the general public. Wavell, under pressure from Churchill, ordered O’Connor to conduct a five day raid with the possibility of widening the raid into an offensive if the circumstances permitted.<sup>174</sup>

The codename given for this attack was Operation Compass. To attempt to analyse

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<sup>171</sup> Africa Axis – Allied, available < <http://www.africaaxisallied.com/blog/archive-201104/>> accessed 07/06/12

<sup>172</sup> John Minford, *The Art of War*, (London, Penguin Books: 2003), p. 123

<sup>173</sup> Paul Sargent, *Wavell’s 30,000*

<sup>174</sup> WO 106/2148 Libya Operations Report by Lt General R. N O’Connor

each engagement of Operation Compass would not be feasible, therefore, a number of examples have been selected which represent the larger and more significant battles.

The initial plan of attack, as proposed by General Wavell, was for a two pronged attack but this was later altered by General O'Connor who did not wish to split the already overstretched British forces.<sup>175</sup> O'Connor's compromise was to take advantage of the Italian dispositions and to pass the entire Western Desert Force through the gap between the Italian camps at Sofafi and Nibiewa before swinging North to the coast and attacking each camp from the rear: see Figure 3.

Figure 3 British route of advance.<sup>176</sup>

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<sup>175</sup> Victoria Schofield, *Wavell: Soldier & Statesman*, (Great Britain, John Murray: 2007), p. 155

<sup>176</sup> The Queen's Royal Surrey's, Chapter 1 the Fog of War , the Battle of Sidi Barrani, available < [http://www.queensroyalsurreys.org.uk/ww2/middle\\_east/qme006.shtml](http://www.queensroyalsurreys.org.uk/ww2/middle_east/qme006.shtml)> accessed 07/06/12

In strategy, the ultimate aim is to achieve a victory under the most favourable of circumstances, those which are the quickest, safest and least costly.<sup>177</sup> The true aim of strategy therefore 'is not so much to seek battle as to seek a strategic situation so advantageous that if it does not of itself produce the decision, its continuation by a battle is sure to achieve this.'<sup>178</sup> The real aim of strategy to Liddell Hart was not to annihilate, but to 'dislocate.'<sup>179</sup> The means by which to achieve a dislocation in the physical sense, or in the 'logistical'<sup>180</sup> sense, was defined by Liddell Hart as:

'...a move which (a) upsets the enemy's dispositions and, by compelling a sudden 'change of front,' dislocates the distribution and organisation of his forces; (b) separates his forces; (c) endangers his supplies; (d) menaces the route or routes by which he could retreat in case of need and re-establish himself in his base or homeland.'<sup>181</sup>

In order to achieve a psychological dislocation of the enemy, the easier of the two, can be achieved by leading an enemy to believe that he is at a distinct disadvantage and is powerless to respond: in other words the enemy must feel trapped and must realise this quickly for the maximum psychological damage to be inflicted. The method to achieve a physical dislocation is to take the 'line of least resistance'<sup>182</sup> which is mirrored in the psychological sphere by taking the 'line of least expectation.'<sup>183</sup> In the case of Operation Compass the British Generals, Wavell and O'Connor, believed the Italian dispositions to be unsound. The Italians had, as shown

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<sup>177</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 339

<sup>178</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 339

<sup>179</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 339

<sup>180</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 339

<sup>181</sup> Liddell Hart, *Strategy: The Indirect Approach*, pp. 339-340

<sup>182</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 341

<sup>183</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 341

in Figure 3, already aided the British in dispersing their forces over a wide area which negated the Italian overwhelming numerical superiority.<sup>184</sup>

One of the best examples of the 'Indirect Approach' occurred at the Italian fortified camp at Nibeiwa. The Italian fortified camps were each protected by minefields, barbed wire, anti-tank ditches and field artillery. At Nibeiwa alongside the 2,500 Libyan infantry was also based the Maletti Group. This was 2 Armoured Battalion commanded by General Pietro Maletti, the only forward based Italian armoured force, made up of thirty five M11/39 medium tanks and a further thirty five L3/35 light tanks.<sup>185</sup> Full technical schematics of these vehicles are provided in Appendix 1 though it is important to briefly mention the weaknesses of these vehicles. The Carro Veloce L3/35 was a tankette, a two man machine gun carrier, based on the British Carden Lloyd tankette from 1929<sup>186</sup> but when it entered service in 1935 it was already obsolete. The vehicle possessed no turret and as such the entire vehicle had to be manoeuvred in order to fire the main weapon which was nothing more than a pair of machine guns. The main drawback of this vehicle, however, was its armour which could be penetrated by even the 0.55 calibre Boys anti-tank rifle.<sup>187</sup> The M11/39 was a more capable machine but still suffered from a number of drawbacks, chief of which was the hull configuration, similar the American Lee/Grant, which placed the main armament, a 37 mm cannon, in the hull and its secondary armament, two 8 mm machine guns, in a turret. As with the L3/35, however, armour protection was poor, the M11/39 had been designed to withstand

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<sup>184</sup> Walker, *Iron Hulls Iron Hearts*, p. 61

<sup>185</sup> Walker, *Iron Hulls Iron Hearts*, p. 62

<sup>186</sup> Nicola Pignato, *Italian Armoured Vehicles of World War Two*, (Carrollton, Squadron/Signal Publications: 2004), pp. 7-8

<sup>187</sup> Pignato, *Italian Armoured Vehicles of World War Two*, pp. 7-8

nothing more than impacts from 20 mm rounds.<sup>188</sup> The British forces used to attack Nibeiwa consisted of the 4<sup>th</sup> Indian Division and the 7<sup>th</sup> Royal Tank Regiment with the 11<sup>th</sup> Indian Infantry Brigade in support.<sup>189</sup> The British used forty eight Matilda Mk II heavy infantry, or 'I', tanks of the 4<sup>th</sup> Indian Division in the assault on the camp supported by a further group of A9 and A10 Cruiser tanks of the 7<sup>th</sup> RTR. The vanguard of the British assault was the infantry tank and to this weapon the Italians had no reply. The 70 mm of armour rendered the Matilda Mk II impervious to every weapon in the Italian arsenal. The British Cruiser, or medium, tanks were also superior to the Italian M11/39's in that their main weapon was in a fully traversable turret which gave an edge in tank on tank combat.<sup>190</sup> The British plan of attack was reliant upon the element of surprise. To achieve this, the British were to pass through the gap between the Italian camps on the height of the escarpment and those below. The attack was to be carried out at dawn after the attacking forces had been marshalled at night. British aerial reconnaissance had shown vehicle tracks entering the camp from the North which seemed to suggest that this area was free of mines.<sup>191</sup> This was later confirmed and was to show that the machine and anti-tank gun emplacements faced outward in every direction except from the North West corner. Similarly the anti-tank ditches and sangars were also absent from the North West corner which clearly revealed that this was the area where the enemy were not expecting an attack to come.<sup>192</sup> To further assist the British in achieving surprise the Desert Air Force flew round the clock at low level to mask the noise of the advancing

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<sup>188</sup> Pignato, *Italian Armoured Vehicles of World War Two*, p. 30

<sup>189</sup> Liddell Hart Centre for Military Archives, 15/4/21 - Extracts from O'Connor's report on first Libyan campaign, p. 2

<sup>190</sup> See Appendix 1.

<sup>191</sup> Correlli Barnett, *The Desert Generals*, p. 34

<sup>192</sup> John Strawson, *The Battle for North Africa*, (Barnsley, Pen & Sword Books Ltd: 2004), p. 35

British tanks.<sup>193</sup> The attack on Nibeiwa achieved a physical victory but did so by using psychological means. Liddell Hart wrote in the 'Indirect Approach' that 'psychological dislocation fundamentally springs from this sense of feeling trapped.'<sup>194</sup> It was achieved by what Stonewall Jackson termed as the ability to 'mystify, mislead, and surprise'<sup>195</sup> which Liddell Hart clarified as distraction which was essential to achieve surprise: the very nature of dislocation.<sup>196</sup> When applied to the battle at Nibeiwa camp, the distraction was obtained by the use of British aircraft drowning out the sound of the advance which assisted in creating the element of surprise obtained through attacking from the line of least expectation, which was also therefore the line of least resistance. The sense of entrapment was achieved by the use of the Matilda tank which was impervious to the Italian weaponry and was able to destroy the Maletti Group in just ten minutes which left the infantry helpless and unable to defend themselves. One of the few historians to have written a work based on the Italian perspective, Ian W. Walker, wrote of Nibeiwa that:

'They struck twenty three M11/39 tanks of the Maletti Group, which had been deployed to guard the unmined entrance to the camp... They were slaughtered and their vehicles destroyed by the British in less than ten minutes. The Italian artillery fought on valiantly, firing on Matildas and recording many hits... but none penetrated their 70mm of armour. The remaining Italian tanks were captured intact, and the Libyan infantry, left practically defenceless, quickly surrendered.'<sup>197</sup>

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<sup>193</sup> Liddell Hart Centre for Military Archives, 15/4/21 - *Extracts from O'Connor's report on first Libyan campaign*, p. 4

<sup>194</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 340

<sup>195</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 341

<sup>196</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 341

<sup>197</sup> Walker, *Iron Hulls Iron Hearts*, p. 62

The removal of the Maletti Group was a significant victory for the British because at the opening engagement of Operation Compass they had removed the only forward operating armoured unit in the whole of the Italian Army which could have mounted any form of resistance.<sup>198</sup>

Analysing the significance of such action in regards to this dissertation is threefold: firstly the removal of Italian armoured units rendered the remaining Italian Army extremely vulnerable.<sup>199</sup> The large infantry force was exactly the type of army the Liddell Hart had condemned pre-war as being a prehistoric monster of immense strength but a very unwieldy force. The smaller, more mobile British Western Desert Force, however, was able to eliminate this threat with minimal loss: at Nibeiwa for example only fifty six British troops were lost compared with 3,000 Italians. Secondly the victories at Nibeiwa, and other Italian camps, proved General Wavell's parallel pre-war assertion correct in that '...from mechanised forces...may be born a David to slay a Goliath.'<sup>200</sup> This first point closely relates to the second in that through the first engagement of Operation Compass alone it should appear obvious that a war of limited aim, which grants substantial gain for minimal cost, can be achieved along the lines which Liddell Hart proposed. This does not, however, prove that Carl Von Clausewitz was wrong in what he wrote:

'Kind-hearted people might of course think there was some ingenious way to disarm or defeat an enemy without too much bloodshed, and might imagine this is the true goal of the art of war. Pleasant as it sounds, it is a fallacy that must be exposed.'<sup>201</sup>

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<sup>198</sup> Walker, *Iron Hulls Iron Hearts*, p. 62

<sup>199</sup> Walker, *Iron Hulls Iron Hearts*, p. 62

<sup>200</sup> R. H. Kiernan, *Wavell*, (London, George G. Harrap & Company Ltd: 1945), p. 112

<sup>201</sup> C. Von Clausewitz, *On War*, (New York, Everyman's Library: 1993), pp. 83 - 84

What can be suggested, however, is that the technology did not exist to implement Liddell Hart's theory at that time. With the beginning of the Second World War, armoured forces had grown from the embryonic force of the First World War to a more mechanically reliable and efficient weapon which, when used correctly, could achieve startling results. The third and final point to be made in regard of the aims of this dissertation relates to the handling and quality of the British armoured forces involved in the attack. One aim of this dissertation was to offer a counterbalance to the thus far decidedly uneven criticism of British armoured vehicles and doctrine. Regarding this aim the superiority of British tanks to those used by the Italian Army clearly show that during the early war years, Britain could produce highly capable machines which were more than a match for anything the Axis powers could field. The gun-armour combination of the Matilda made it a formidable foe for the German Panzer Mk III and was superior to even the late war Italian tanks.<sup>202</sup>

The attack on Nibeiwa was followed by attacks against the three Tummar camps, Rabia, Sofafi and Maktila each with the same plan of attack as that used at Nibeiwa and all with the same outcome. The division of Italian forces allowed the British to overwhelm each strongpoint by focusing their meagre forces at one point so as to gain local numerical superiority. After destroying the forward Italian positions the British were free to manoeuvre as the Italians had no second line of defences. The retreating Italians therefore had to improvise defensive positions in towns or near natural barriers. The largest battles in Operation Compass, following the early fall of the Italian fortifications, occurred at Sidi Barani, the main Italian forward base,

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<sup>202</sup> See Appendix 1.

Bardia, a fortified town, Tobruk, a vital supply port, and finally at Beda Fomm where the Italians were ultimately trapped.

Having neutralised the Italian camps, Sidi Barrani was the only location in the immediate vicinity for Italian troops to retreat to and for Italian officers to arrange an effective defensive position. From a British perspective the capture of Sidi Barrani could allow for the effective destruction of the entire Italian Army in Egypt. As shown in Figure 3 the British route of advance during Operation Compass was a long drive to the coast which destroyed each Italian camp in turn. If the British could position an armoured force across the Sidi Barrani - Buq Buq road whilst besieging the town then the Italians would have no escape route. The attack on Sidi Barrani was launched by the now tried and tested Matilda tanks which once again proved impervious to Italian fire. The Royal Navy assisted in the British assault by providing long range naval bombardment to offset the British lack of heavy artillery. The overall outcome of the assault was the destruction of two Divisions.<sup>203</sup>

Of most relevance to this dissertation, however, were the events that occurred shortly after the fall of Sidi Barrani specifically the fate of the Catanzaro Division. To place this event in context the Italians had crossed into Egypt with six Divisions, of these, three were deployed in the Italian forward camps situated near Sidi Barrani. General Gallina commanded two divisions, one Libyan and one Blackshirt, with General Maletti holding the right flank with the Italian armoured force. By December 10<sup>th</sup> the forward divisions had been destroyed or forced to surrender. The Italian reserve, two divisions under the command of General's Bergonzoli and Berti,

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<sup>203</sup> Kiernan, *Wavell*, pp. 139-140

remained in their positions whilst the Catanzaro Division, under General Amico, had been ordered forward.<sup>204</sup> The sole aim of Liddell Hart was to create the means by which victory could, if necessary, be achieved through ‘mobility and surprise over mass and attrition.’<sup>205</sup> To accomplish this Liddell Hart advocated the creation of an all arms mechanised force centred around large numbers of tanks which would match the firepower of traditional conscript armies whilst providing superior mobility and protection. Such a force could, therefore;

‘...strike deep into the vitals of the enemy who, because of his immobility, would be unable to respond effectively. Communications and supply lines would be severed, and the enemy would be reduced to an ineffective mob which could be rounded up at will and at little cost to oneself.’<sup>206</sup>

After the completion of the 1927/1928 armoured experiments, General Wavell wrote of the psychological advantage possessed by armoured forces over the infantry who had no effective means to combat tanks. ‘Not knowing where it was, or when it might attack, introduced an air of caution, along with frustration at the virtual impossibility of hitting back.’<sup>207</sup> This quotation, and that of Liddell Hart above, were of particular relevance to the fate of the Catanzaro Division. General Wavell wrote in a report that: ‘...On the afternoon of the 11<sup>th</sup> December 7<sup>th</sup> Armoured Brigade made contact with a long enemy column between Buq Buq and Sollum. It promptly attacked and by dusk had secured 14,000 prisoners, 68 guns and other material.’<sup>208</sup>

The Italian Division consisted of infantry with no mechanised force for protection

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<sup>204</sup> Kiernan, *Wavell*, p. 137

<sup>205</sup> Robert H. Larson, B. H. Liddell Hart: Apostle of Limited War, *Military Affairs*, Vol. 44, No. 2, (Society for Military History: April 1980), p. 71

<sup>206</sup> Robert H. Larson, B. H. Liddell Hart: Apostle of Limited War, *Military Affairs*, Vol. 44, No. 2, (Society for Military History: April 1980), p. 71

<sup>207</sup> Fletcher, *Mechanised Force*, p. 64

<sup>208</sup> WO 106/2133 Operations in the Western Desert, despatch by Wavell

only a number of field artillery which took time to deploy. R. H. Kiernan wrote that ‘...attacked on the line of march the Italian column was overwhelmed...the whole front position opposed to Wavell had now collapsed. The disorganised enemy could not get away and was rounded up in hundreds.’<sup>209</sup> The image below, (Figure 4), captured scenes of the surrender of the Catanzaro Division which, in the words of Liddell Hart, had been ‘reduced to an ineffective mob which could be rounded up at will.’<sup>210</sup>

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Image 4, Italian prisoners of war.

The initial orders sent by Wavell called for a five day raid with potential to widen the operation if circumstances permitted. The successful capture of Sidi Barrani and the destruction of the Italian forward camps was a significant victory which warranted a further advance by O’Connor. The second phase of Operation

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<sup>209</sup> Kiernan, *Wavell*, p. 140

<sup>210</sup> Robert H. Larson, B. H. Liddell Hart: Apostle of Limited War, *Military Affairs*, Vol. 44, No. 2, (Society for Military History: April 1980), p. 71

<sup>211</sup> On War, *Chronology of World War II: Wednesday December 11<sup>th</sup> 1940*, available <<http://www.onwar.com/chrono/1940/dec40/f11dec40.htm>> accessed 09/06/12

Compass was the pursuit of the Italian Army which fought a number of holding actions during their retreat. The culmination of Operation Compass was the Battle of Beda Fomm which was only made possible by British mechanised forces. The Italian Army had advanced along a coastal road from Tripoli through Agedabia, Benghazi, Tobruk and Bardia before halting at Sidi Barrani. The large Italian force was totally immobile and could not therefore cross difficult terrain at any great speed. This restriction forced the Italians to travel around the near impassable Jebel Akhdar which was a longer but safer route. The British forces, however, used captured lorries, armoured cars and tracked vehicles to advance, with some difficulty, across country and outflank the Italians. The map below, Figure 5, shows the route of the British advance, black dotted lines, and maps the route of the coastal road in white used by the Italians.

Figure 5, route of British advance.<sup>212</sup>

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<sup>212</sup> Engagements 1941, Bardia and Tobruk, available, <<http://www.btinternet.com/~ian.a.paterson/battles1941.htm>> accessed, 15/06/12

The map does not, however, show the full route of the British advance. A small British detachment, the 6<sup>th</sup> Australian Division, pursued the Italians along the coastal road to drive the Italians westward toward Agedabia. Crucial to the success of the operation was the British armoured forces as the 7<sup>th</sup> Armoured Division and 4<sup>th</sup> Armoured Brigade outflanked the Italian Army supported by artillery and infantry blocked the coastal road and encircled the Italian force. The Italian Army did not travel in one single formation but in separate columns. The first such column numbered approximately 5,000 men and was an all arms force with substantial artillery.<sup>213</sup> Captured documents revealed that the Italians did not expect to encounter any hostile forces so far South and as such the Italians advanced ‘unconcernedly without taking any particular precautions to the East or South.’<sup>214</sup> The British advance force had set up a battery of anti-tank guns across the main road and shielded these with a screening force of armoured cars which were more than a match for the immobile Italian infantry. The Battle of Beda Fomm became the final use of Italian armoured forces during Operation Compass when the reserve forces were committed to battle. The flawed design of the M 13 tanks, hull mounted main armament, led to a large number of these vehicles being destroyed. The British had estimated that the Italians could field roughly 60-70 such vehicles but these estimates were too low.<sup>215</sup> General Wavell wrote that 86 Italian tanks were knocked out during the fighting and 120 were captured. In regards of the infantry, once again deprived of armoured support, roughly 25,000 prisoners were taken along with hundreds of trucks and artillery pieces.<sup>216</sup>

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<sup>213</sup> WO 106/2133 Operations in the Western Desert, despatch by General Wavell, p. 14

<sup>214</sup> Liddell: 15/4/21 Extracts from O’Connor’s Report on First Libyan Campaign, p. 17

<sup>215</sup> Liddell: 15/4/21 Extracts from O’Connor’s Report on First Libyan Campaign, p. 18

<sup>216</sup> WO 106/2148 Libya Operations Report by Lt General R. N O’Connor

With the conclusion of the Battle of Beda Fomm there was no organised resistance ahead of the British forces. If Tripoli could be captured before the arrival of Italian reinforcements then the campaign in the Western Desert would be over. Such an operation would have required the full co-operation of all three services and the government. Winston Churchill, however, was determined to aid Greece in their fight against the Italians as early as January 1941, which would have cut short Operation Compass, but were unable to do so because of the objections of Greek Prime Minister General Metaxas.<sup>217</sup> After Metaxas died in 1927 the new Greek prime minister asked for British support and Churchill began to strip the necessary resources away from General Wavell's command.<sup>218</sup> Some of the earliest forces to be withdrawn were RAF fighters and bombers which left just a single fighter squadron left in support of the Western Desert.<sup>219</sup> As the British were preparing to aid Greece, German forces had begun to be diverted to the area in an attempt to save the remnants of the Italian Army before their sole ally was totally defeated. The first German forces to arrive were aircraft stationed in Sicily which had an immediate, and profound, effect sinking multiple ships and crippling the aircraft carrier *Illustrious* which left O'Connor, now devoid of RAF assistance, no support by air or sea.<sup>220</sup> Wavell was faced with a dilemma: British forces were being diverted to Greece, General Alan Cunningham began an offensive against the Italian forces in East Africa and O'Connor was requesting permission to continue the advance toward Tripoli.<sup>221</sup> The demands of the Government convinced Wavell to transfer men to aid the Greeks. This decision was influenced by two factors, the first was that Ultra intelligence indicated that the German ground forces, which had begun to arrive in Tripoli in

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<sup>217</sup> Keegan, *Churchill's Generals*, p.77

<sup>218</sup> WO 106/2148 Libya Operations Report by Lt General R. N O'Connor

<sup>219</sup> WO 106/2148 Libya Operations Report by Lt General R. N O'Connor

<sup>220</sup> Kiernan, *Wavell*, p. 157

<sup>221</sup> Keegan, *Churchill's Generals*, p.78

February 1941, were not going to be combat ready until May.<sup>222</sup> The second factor was an inaccurate assessment of the strength of the Greek Army at the Aliakmon defensive line provided by intelligence reports, and Greek assurances, which created a false impression amongst the British. The combination of these two factors, and mounting pressure from the government, convinced Wavell that a forward, or aggressive, defence was the only option to aid the Greeks and defeat the Italians there.<sup>223</sup> The decision to aid Greece was a catastrophic mistake. Operation Compass had been intended to secure Egypt from the Italians, a five day raid, which by February 9<sup>th</sup> had 'routed ten Italian divisions, advanced 500 miles and taken 130,000 prisoners, about 400 tanks and 1,200 guns.'<sup>224</sup> The same day that the last battle was fought, at Beda Fomm, Rommel arrived in Tripoli. The decision to aid Greece stripped the Western Desert of the most combat experienced British infantry and armoured units available which left a small ill-equipped force to guard not just Egypt, but also the newly acquired 500 miles of Italian territory. Had this course of action not been taken, and all resources been focused on the capture of Tripoli, then there may not have been a North African campaign.

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<sup>222</sup> Keegan, *Churchill's Generals*, p.78

<sup>223</sup> Keegan, *Churchill's Generals*, pp.78-79

<sup>224</sup> Keegan, *Churchill's Generals*, p. 77

## **Summary & Conclusion**

*'Failure has had the healthy effect of once more compressing Italian claims to within the natural boundaries of Italian capabilities.'*

Adolf Hitler.

In combat, opposing armies look for innovative ways to defeat each other. During the Middle Ages most European armies were equipped with roughly equal weaponry and often used the same tactics. When such forces met in battle the casualties were high and command and control was all but impossible. The key to victory was either through outmanoeuvring an opponent or by equipping friendly forces with superior weaponry. Throughout history there have been milestones reached in the advancement of weapons technology, the crossbow for example, yet from the first introduction of firearms en-masse by Gustavus Adolfus to the Napoleonic Wars there were few advances made. The only advance made in firearms prior to the American Civil War was the change from matchlock to flintlock muskets and the introduction of rifling characteristics. During the latter half of the 19<sup>th</sup> Century small arms advanced rapidly: the percussion cap increased the rate of fire, the minie ball improved the range and accuracy of firearms whereas repeating, revolving and gatling weapons granted far greater amounts of firepower to the infantry. The evolution of small arms technology, especially that relating to munitions, culminated in the development of the self contained rifle cartridge, the 8mm Lebel cartridge, which paved the way for the introduction of magazine fed rifles and automatic weapons.. The advances in infantry weapons paralleled the developments made in artillery firepower such as rifling and the explosive shell. In 1914 the combination of sustained rifle and machine gun fire with that of long range artillery fire created a situation so hostile to human life that the only option left open to the exposed infantry was to dig in and seek cover. For the next four years infantry-artillery tactics dominated the battlefields of Western Europe often with high, and indeed unsustainable, casualty rates. The high casualties of the First World War were a result not just of the advancements in weapons

technology, but the insistence of Generals to use the same tactics of the Napoleonic Wars namely the infantry assault and cavalry charge. This was the damaging legacy of Carl Von Clausewitz and decisive battle or direct approach.

In one of the most well known and most influential books on the topic of military theory Carl Von Clausewitz wrote that:

‘Kind-hearted people might of course think there was some ingenious way to disarm or defeat an enemy without too much bloodshed, and might imagine this is the true goal of the art of war. Pleasant as it sounds, it is a fallacy that must be exposed.’<sup>225</sup>

This short statement was to have a profound effect on military planners, theorists and historians for years to come and in so doing create a lasting and devastating legacy.

The influence of Clausewitz, and the subsequent writers who adhered to his writings, had in an instant forgotten one of the earliest rules of warfare laid down by Sun Tzu.

‘Ultimate excellence lies not in winning every battle but in defeating the enemy without ever fighting.’<sup>226</sup> Zhang Yu explained this in almost the first words as those used by Liddell Hart centuries later: ‘Victory through battle entails great loss of life.

That is why it is not excellent.’<sup>227</sup> The writings of Sun Tzu were not widely read in the West and an English translation was only made available in 1910.<sup>228</sup> Liddell

Hart’s work used Sun Tzu’s maxim and kept it at the very core of his writings. The Indirect Approach was, simply put, a method by which an opponent may be defeated without ever fighting. This dissertation set out to assess the validity of Liddell Hart’s theory and in doing so challenge the work of the master military theorist; Carl Von

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<sup>225</sup> C. Von Clausewitz, *On War*, (New York, Everyman’s Library: 1993), pp. 83 - 84

<sup>226</sup> Sun Tzu, *The Art of War*, Edited & Translated by John Minford, (London, Penguin: 2003), p. 14

<sup>227</sup> Sun Tzu, *The Art of War*, p. 14

<sup>228</sup> Art of War, available <<http://www.marxists.org/reference/archive/sun-tzu/works/art-of-war/index.htm>> accessed 11/06/12

Clausewitz. Liddell Hart's theory called for maximum mobility which could only be granted by mechanised forces. After the destruction of the Italian forces Marshal Rodolfo Graziani wrote to Mussolini and, in explanation of the failure in the Western Desert, stated that '...In this theatre of operations a single armoured division is more important than an entire infantry army.'<sup>229</sup> The opinion of Graziani reinforced the prophetic writing of Liddell Hart who wrote: '3. Choose the line (or course) of least expectation...4. Exploit the line of least resistance...'<sup>230</sup> and those of General Wavell in that '...From mechanized forces...may be born a David to slay a Goliath.'<sup>231</sup> A strong analogy can be drawn between the bible story of David and Goliath and to the events of Operation Compass. The story of David and Goliath is well known, the youngest son of a shepherd, David, present at a battle between the Philistines and Israelites answered the calls of the Philistine champion Goliath. After the defeat of Goliath in combat with a stone from a sling at a range from which Goliath could not fight back<sup>232</sup> the remaining soldiers became demoralised and were routed by the Israelite army.<sup>233</sup> David, the weaker of the two warriors, represents the Western Desert Force and Goliath, the large and powerful foe, represents the Maletti Group, the defeat of which led to the remaining Italian infantry being routed. Furthermore the way in which David defeated Goliath, by striking from where Goliath could not, and in a way in which he could not retaliate was the very form of combat accorded by mechanised forces and utilised during Operation Compass. Israeli General Moshe Dayan wrote that '...There is a primitive and leaden logic to warfare; in an open

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<sup>229</sup> John Bierman & Colin Smith, *The Battle of Alamein: Turning Point*, (New York, Viking: 2002), p. 46

<sup>230</sup> Liddell Hart, *Strategy: The Indirect Approach*, p. 348

<sup>231</sup> R. H. Kiernan, *Wavell*, (London, George G. Harrap & Company Ltd: 1945), p. 112

<sup>232</sup> Bible Gateway, New International Version, 1 Samuel 17: David and Goliath, available, <<http://www.biblegateway.com/passage/?search=1+Samuel+17&version=NIV>> accessed, 10/07/12

<sup>233</sup> Bible Gateway, New International Version, 1 Samuel 17: David and Goliath, available, <<http://www.biblegateway.com/passage/?search=1+Samuel+17&version=NIV>> accessed, 10/07/12

engagement between two unequal forces, the strong defeats the weak. The victories of the Davids over the Goliaths are rare indeed in the kingdom of tanks and guns.’<sup>234</sup>

Mechanised forces were the key to success in Operation Compass and served as a perfect example of British mechanised prowess made so by Liddell Hart’s Indirect Approach, in essence a campaign of limited war, and the superb leadership of General’s Wavell and O’Connor. This requirement allowed for this dissertation to address, what was initially believed to be, the overwhelming criticism of British armoured forces and doctrine. Having carefully weighed the historical evidence this author agrees that the Italian army was, as suggested by a number of historians, poorly led, trained, equipped and lacking in fighting spirit. Operation Compass fulfilled the majority of the objectives that this dissertation set out to achieve, however, no amount of personal bias or nationalistic sympathies can escape the fact that Britain was woefully unprepared for war and that British tanks, though more than a match for Italian armour, could not hope to engage German machines on an equal footing. In conducting a thorough investigation into British interwar tank development and providing a case study, in the form of Operation Compass, the views expressed by historians such as Peter Beale could be considered, at the very least, as an exaggeration. The roles given to British tanks, however, the combat performance, opinions of veterans and technical schematics provide overwhelming evidence to the contrary: British tanks were indeed substandard. Britain attempted to create multiple types of armoured fighting vehicle which led to a confused development process. The infantry tank was developed to be heavily armoured to resist enemy artillery and anti-tank weapons whilst providing support to the infantry,

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<sup>234</sup> Warrior Statesman: The Life of Moshe Dayan, p. 243

usually in the form of high explosive ordinance and machine gun fire. The heavy armour of the vehicle would often result in poor mobility, however, which produced a requirement for a faster vehicle. The main British armoured fighting vehicle was classified as the 'cruiser tank' which was to rely on high speed and firepower to offset the lack of armour protection which had been sacrificed in order to achieve better mobility. The development of cruiser tanks had been further complicated after the introduction of the Christie suspension system. This led to two types of cruiser tanks being developed, one with and one without the new system, and separate suspension for the infantry tanks. Such a situation was inefficient and wasted valuable resources on developing multiple forms of vehicle. The greatest limitation for British tank crews was the main armament of their vehicles. The tanks of the First World War were armed with six pounder guns yet British tanks of the Second World War were equipped with two pounder anti-tank guns and were not up-gunned until 1942. This was a severe limitation and particularly affected the effectiveness of the infantry tanks which were unable to provide infantry with the fire support they needed. The treasury was the main obstacle to the Royal Tank Corps which repeatedly denied funds to explore various new areas of development of providing new equipment.<sup>235</sup> One of the most damaging occurrences was the refusal to allow the testing of an aero engine in British tanks after a delegation witnessed the potential of such a powerful engine being installed in Russian tanks. Had this been carried out, British machines may not have suffered from the poor reliability which plagued British tanks until late 1943 when aero engines were finally introduced to British tanks.<sup>236</sup> What this dissertation has shown is that when handled correctly, British armoured forces could prove to be as equally devastating as those of any other nation, although admittedly such cases

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<sup>235</sup> Liddell Hart, *The Tanks*, pp. 371-372

<sup>236</sup> Liddell Hart, *The Tanks*, pp. 371-372

were rare. Furthermore this dissertation has also shown the merit in the writings of Liddell Hart who predicted that mechanisation could render the superior numbers of an infantry force redundant.

The study of the Italian invasion of Egypt and Operation Compass created the opportunity to investigate the many possible reasons for the poor performance of the Italian Army. Many historians had criticised the Italians for being equipped with inferior equipment, poorly led and lacking in fighting spirit. This dissertation in addition to the above also shows that the reason the Italians were defeated by the British was due to a combination of poor decision making at the highest level which sacrificed numerical superiority early on in the campaign by dividing the forward units into separate camps. It has also been shown that the main reason the Italians were defeated, however, was a lack of mobility. Italian pre-war planning had allowed for the creation of three armoured divisions the Ariete, Centauro and Littorio. These forces were to be used against Italy's historical enemies such as Austria and Germany. The pact of steel, however, saw Italy allied to her traditional foes and faced a prospect of fighting across the Alps against the French. For this reason the Italian armoured divisions were not deployed to North Africa but remained in Italy to fight the French. The only armoured force deployed to assist the 10<sup>th</sup> Army was the ad-hoc Maletti Group which was defeated in the opening hour of Operation Compass. As a result the Italian 10<sup>th</sup> Army severely lacked armoured support and mechanised transport and were easily defeated by the highly mobile British Western Desert Force. Liddell Hart expressed his views regarding such large conscript forces during the interwar years and predicted the obsolescence of such an unwieldy force when faced with a more mobile mechanised army. The fact that the Italian Army was rendered

helpless after the destruction of the Maletti Group, the only mechanised force attached to the 10<sup>th</sup> Army, not only confirms Liddell Hart's prophetic writing but also provides an answer for one of the initial aims of this dissertation. The Italian forces operating in the Western Desert were defeated because they divided their forces and were totally immobile. Both of these reasons can be attributed to poor leadership which arose from poor pre-war planning and grand strategy.

In conclusion this dissertation's main objectives, validity of the Liddell Hart approach, were accomplished by a single decisive factor: armoured fighting vehicles. Liddell Hart's Indirect Approach was written in a time when the tank was very much in its infancy. Carl Von Clausewitz on the other hand wrote *On War* when the technology necessary for large scale manoeuvre warfare was unavailable and as such was incapable of foreseeing the type of warfare envisaged by Liddell Hart. Operation Compass was essentially a clash between a Clausewitzian force, large infantry and artillery army, and one of the Liddell Hart school, the British Western Desert Force, which was highly mechanised. Mechanisation was the key to victory during the operation as the armour protection, mobility and firepower of the British vehicles cancelled out Italian numerical superiority. The inability of the Italians to respond to an armoured attack had an instant and devastating morale effect in that the rapidity of the British assault paralysed the Italian command and control and, as assessed, provides a solution to another dissertation objective: the reason for the poor performance of the Italian Army. The Italians were a modern army fighting a modern war, in an old fashioned manner, relying on infantry and artillery. In hindsight this can be viewed as a grave error, as made by every nation in the Second World War. Only Germany had prepared for a new form of warfare, the infamous Blitzkrieg,

whereas France and Britain were preparing for war on similar lines to that of the First World War. As discussed the Italian Army was accustomed to colonial warfare against forces that were not modern but for which their tactics were adequate. Against the British, however, the Italians were not adequately prepared to challenge a mechanised army. When the Italians attempted to defend themselves from the British counter offensive, Operation Compass, they found their weapons had no effect against tanks, were unable to counter the British forces, and therefore unwilling to do so when ordered. As a result of this history has labelled the Italians as lacking in fighting spirit. Though an accurate criticism it failed to address the fact that the Italian soldiers had no effective means to defend themselves. To compound this matter further the Italian leadership made very poor decisions in regards of the deployment of their troops, spreading them out in non-supportive camps, which allowed each forward unit to be overrun separately by the British. It is this authors opinion that had they remained a cohesive unit they may have been able to use their overwhelming numerical superiority to defeat the British.

Analysis from this dissertation has shown that Operation Compass was a great British victory, however, it could have achieved a great deal further had all resources been focused on North Africa and not diverted to Greece. Had the British Government given Operation Compass priority then Tripoli could, as suggested by General O'Connor and supported by the author, have been captured and shortened the war in North Africa. This failure was a result of poor Government policy and pre-war planning. As reviewed, the imbalance in criticism of British tank development and combat performance has shown that the tank is an immensely complex machine to design and produce and is therefore expensive. Economic difficulties, and a pacifist

agenda, resulted in constant delays in rearmament attempts and an insufficient budget which severely limited experimentation with armoured vehicles and theory. The Government failed to define what role the tank would play in future combat operations and instead chose to order a tank for every conceivable purpose, resulting in an inefficient production programme, which forced the outnumbered British in North Africa to use Liddell Hart's strategy as the only effective means to combat a numerically superior enemy. Furthermore the inefficient production of British tanks led to a shortage in the production of spare parts and replacement vehicles which limited the operational range of those vehicles available to Generals Wavell and O'Connor. Had the British Government begun to re-arm earlier, with a clearly defined armoured programme, then more vehicles would have been made available to defend Egypt and counter the Italian invasion. Had these armoured reinforcements, and spare parts, been available then the entire Italian Army could have been destroyed and the Afrika Corps would never have been deployed. This was, however, not the case and instead the desert war raged until 1943, nevertheless Operation Compass was an astounding victory of 30,000 against 300,000. Israeli General Moshe Dayan wrote that '...There is a primitive and leaden logic to warfare; in an open engagement between two unequal forces, the strong defeats the weak. The victories of the Davids over the Goliaths are rare indeed in the kingdom of tanks and guns.'<sup>237</sup>

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<sup>237</sup> Warrior Statesman: The Life of Moshe Dayan, p. 243